



**LOCAL PLANNING AGENCY
OLD LEE COUNTY COURTHOUSE
2120 MAIN STREET, FORT MYERS, FL 33901
BOARD CHAMBERS
MONDAY, DECEMBER 14, 2015
8:30 AM**

AGENDA

1. Call to Order/Review of Affidavit of Publication/Pledge of Allegiance
2. Public Forum
3. Approval of Minutes – October 26, 2015
4. Lee Plan Amendments
 - A. CPA2015-00005 – Bay Harbour Marina Village MPD
 - B. CPA2015-00013 – Pine Island Community Plan Update
5. Pine Island Land Development Code Amendments
6. Other Business
7. Adjournment – Next Meeting Date: January 25, 2016

A verbatim record of the proceeding will be necessary to appeal a decision made at this hearing.

Persons with disabilities who need an accommodation to participate in the Local Planning Agency meeting should contact Janet Miller, 1500 Monroe Street, Fort Myers, FL 33901 (239-533-8583 or jmiller@leegov.com). To ensure availability of services, please request accommodation as soon as possible but preferably five or more business days prior to the event. Persons using a TDD may contact Janet Miller through the Florida Relay Service, 711.

The agenda can be accessed at the following link approximately 7 days prior to the meeting: <http://www.leegov.com/dcd/events>

Direct links to plan amendment documents: [CPA2015-00005](#)
[CPA2015-00013](#)



**COMPREHENSIVE PLAN
AMENDMENT**

**CPA2015-13
PINE ISLAND
COMMUNITY PLAN UPDATE**

County-Initiated Amendment

**Local Planning Agency
Staff Report**

12/14/2015

**LEE COUNTY
DEPARTMENT OF COMMUNITY DEVELOPMENT
PLANNING SECTION**

**STAFF REPORT
COMPREHENSIVE PLAN AMENDMENT
CPA2015-13**

Text Amendment

Map Amendment

This Document Contains the Following Reviews	
<input checked="" type="checkbox"/>	Staff Review
	Local Planning Agency Review and Recommendation
	Board of County Commissioners Hearing for Transmittal
	Staff Response to Review Agencies' Comments
	Board of County Commissioners Hearing for Adoption

Staff Report Publication Date: December 4, 2015

**PART I
APPLICATION SUMMARY**

A. PROJECT NAME:

Pine Island Community Plan Update

B. APPLICANT:

Lee County Board of County Commissioners

C. REPRESENTATIVES:

Lee County Department of Community Development, Planning Section, and Lee County Attorney's Office

D. PROPOSED LEE PLAN AMENDMENTS:

Amend the Lee Plan to incorporate updates to the Pine Island Community Plan. The amendments include changes to the Future Land Use Element, the Transportation Element, the Capital Improvement Element, the Conservation and Coastal Management Element, the Glossary and Tables 1(a), 2(a), and 2(b) of the Lee Plan. The proposed amendments are included as Attachment 1 in strikethrough and underline format.

PART II GREATER PINE ISLAND COMMUNITY PLAN BACKGROUND

In 1989 the Greater Pine Island community conducted a planning study that resulted in the adoption of a Lee Plan goal and subsequent objectives and policies specific to Greater Pine Island. The intent of these amendments was to maintain the Island's unique resources and character and to provide reasonable opportunities to evacuate. More specifically, the amendment:

- Prohibited new artificial channels in natural waterways;
- Required a 50 foot wide vegetated buffer adjoining State designated aquatic preserves and associated natural tributaries;
- Established levels of service standards for Pine Island Road;
- Established the 810 rule, prohibiting rezoning;
- Established the 910 rule; prohibiting residential Development Orders;
- Prohibited bonus density;
- Allowed the storing of fishing equipment at private residences;
- Targeted Pine Island Center for the island's commercial development; and,
- Commercial development in other portions of the island was limited to marinas, fish houses, and minor commercial uses to serve island residents and visitors.

A similar planning effort in 2001 proposed several amendments that were adopted by the Board of County Commissioners on January 9, 2003. These amendments:

- Established the Coastal Rural future land use category;
- Allowed a return to one dwelling unit per acre if 70% of a property's native lands were preserved or if 70% of improved farmland was restored to native habitat;
- Provided exceptions to the 810 rule to allow minor rezoning on infill property; and,
- Lessened the prohibition on residential Development Orders, allowing one-third the density.

A study known as the Hanson Report was completed on August 4, 2004. It indicated that the Coastal Rural future land use category could adversely affect passive and active agriculture. On November 26, 2004, the Board voted to initiate a Special Amendment cycle to address concerns identified in the Hanson Report. An amendment was adopted on October 12, 2005. These amendments:

- Restored the 157 acres designated Coastal Rural back to Outlying Suburban;
- Amended the percentages of preserved or restored uplands required by the Coastal Rural category and further defined restoration standards
- Allowed improved farmland preservation to be used to regain Coastal Rural densities; and,
- Directed staff to evaluate the creation of a transfer of development rights program for Greater Pine Island.

The amendments proposed through the current Greater Pine Island Community Plan Update, discussed in Part III of this staff report, build upon these previous efforts by:

- Updating hurricane evacuation and mitigation requirements;
- Creating a TDR program as directed in the 2005 update to the Community Plan; and,
- Addressing legal issues resulting from implementation of the Greater Pine Island Community Plan.

PART III STAFF DISCUSSION AND ANALYSIS

A. UPDATED DATA AND ANALYSIS:

The basis for the Greater Pine Island Community Plan Update is additional data and analysis provided by experts in the fields of Transportation and Hurricane Evacuation. Memos from these experts explaining the data and analysis are attached. Based on this new information, Lee County staff recommends that the Board of County Commissioners adopt amendments to the Lee Plan as identified in Attachment 1. The update and recommended amendments are generally based on analysis of the following:

Hurricane Evacuation and Transportation Issues - Increasing hurricane evacuation times and road constraints, especially at the Matlacha Bridge are a concern to the Greater Pine Island Community. Lee County Staff, including the Department of Community Development, Department of Transportation, and the Department of Public Safety, worked with traffic consultants and an expert in hurricane evacuation and preparedness to determine evacuation times using current capacity calculations and different land use scenarios to assure that maximum evacuation times in the event of a hurricane would be maintained.

Residential Land Use/Density - This plan update, along with updates proposed to the Land Development Code, establish the Greater Pine Island Transfer of Development Rights (TDR) and Purchase of Development Rights (PDR) programs. These programs have been anticipated since the last Pine Island Community Plan update in 2005 when a policy was adopted that required Lee County to evaluate the creation of TDR and PDR programs. Lee County's existing TDR programs have been underperforming in part because they are difficult to use. The Greater Pine Island TDR program incentivizes the removal of density and preservation on Pine Island without eliminating property rights. In addition, the process for creating and using Transferable Development Rights (TDUs) is simplified, and in certain cases, TDUs can be approved by right or through an administrative process. In addition, the proposed updates will provide property owners with a feasible method to achieve densities of one unit per acre through an Adjusted Maximum Density of the Coastal Rural future land use category.

Additional amendments are identified and summarized in the next subsection of this staff report. These amendments have been reviewed by various County Departments, Pine Island residents and other interested parties.

B. SUMMARY AND DISCUSSION OF RECOMMENDED AMENDMENTS:

The Greater Pine Island Community Plan Update was developed through a coordinated community outreach effort that included input from stakeholders involved in the original Greater Pine Island community plan preparation and subsequent updates; landowners (both large and small); local business owners; residents; and other interested parties.

The stakeholder committee reviewed the first preliminary draft amendments in a meeting with county staff and consultants on June 9, 2015 and again on July 13, 2015. Comments were received from the committee members at the meeting and in subsequent email correspondence. On October 14, 2015, the county and consultant team conducted a community presentation on Pine Island to present the changes to the proposed community plan update based on the comments that were received. There was general consensus that the proposed amendments maintained the adopted community vision for protecting Greater Pine Island's coastal rural character, and created strong incentives for the transfer of density out of the planning community via the proposed TDR program.

The following section of this report generally discusses the proposed amendments to the Lee Plan. These amendments include revisions within Goals 1, 4, 6 and 14 of the Future Land Use Element; Goal 37 of the Transportation Element; Goal 95 of the Capital Improvements Element; and Goal 109 of the Conservation and Coastal Management Element. In addition, staff is recommending amendments to the Glossary, including new and revised definitions, as well as amendments to Tables 1(a), 2(a), and 2(b). The recommended amendments are identified in strike-through, underline format.

Future Land Use Element Amendments

Policies 1.1.2, 1.1.3, 1.1.4, and 1.1.5 address Lee County's Future Urban Area land use categories (Intensive Development, Central Urban, and Urban Community) as well as the Suburban future land use category. The proposed amendments allow densities to be increased above the maximum total density if using Transferable Development Units (TDUs) that are created on lands from within the Greater Pine Island Planning Community. The proposed amendment to Policy 1.1.4 also removes a specific reference to CPA2010-00002, which is for property located within the Village of Estero and no longer subject to the Lee Plan. The recommended amendments to these policies are identified below:

POLICY 1.1.2: The Intensive Development areas are located along major arterial roads in Fort Myers, North Fort Myers, East Fort Myers west of I-75, and South Fort Myers. By virtue of their location, the county's current development patterns, and the available and potential levels of public services, they are well suited to accommodate high densities and intensities. Planned mixed-use centers of high-density residential, commercial, limited light industrial (see Policy 7.1.6), and office uses are encouraged to be developed as described in Policy 2.12.3., where appropriate. As Lee County develops as a metropolitan complex, these centrally located urban nodes can offer a diversity of lifestyles, cosmopolitan shopping opportunities, and specialized

professional services that benefit such a region. The standard density range is from ~~seven~~ eight dwelling units per acre (~~7-8~~ du/acre) to fourteen dwelling units per acre (14 du/acre). Maximum total density is twenty-two dwelling units per acre (22 du/acre). The maximum total density may be increased to thirty dwelling units per acre (30 du/acre) utilizing Greater Pine Island Transfer of Development Units.

POLICY 1.1.3: The Central Urban areas can best be characterized as the “urban core” of the county. These consist mainly of portions of the city of Fort Myers, the southerly portion of the city of Cape Coral, and other close-in areas near these cities; and also the central portions of the city of Bonita Springs, Iona/McGregor, Lehigh Acres, and North Fort Myers. This is the part of the county that is already most heavily settled and which has or will have the greatest range and highest levels of urban service--water, sewer, roads, schools, etc. Residential, commercial, public and quasi-public, and limited light industrial land uses (see Policy 7.1.6) will continue to predominate in the Central Urban area with future development in this category encouraged to be developed as a mixed-use, as described in Policy 2.12.3., where appropriate. This category has a standard density range from four dwelling units per acre (4 du/acre) to ten dwelling units per acre (10 du/acre) and a maximum total density of fifteen dwelling units per acre (15 du/acre). The maximum total density may be increased to twenty dwelling units per acre (20 du/acre) utilizing Greater Pine Island Transfer of Development Units.

POLICY 1.1.4: The Urban Community areas are areas outside of Fort Myers and Cape Coral that are characterized by a mixture of relatively intense commercial and residential uses. Included among them, for example, are parts of Lehigh Acres, San Carlos Park, South Fort Myers, Iona/McGregor, Pine Island, and Gasparilla Island. Although the Urban Communities have a distinctly urban character, they should be developed at slightly lower densities. As the vacant portions of these communities are urbanized, they will need to maintain their existing bases of urban services and expand and strengthen them accordingly. As in the Central Urban area, predominant land uses in the Urban Communities will be residential, commercial, public and quasi-public, and limited light industry (see Policy 7.1.6) with future development in this category encouraged to be developed as a mixed-use, as described in Policy 2.12.3., where appropriate. Standard density ranges from one dwelling unit per acre (1 du/acre) to six dwelling units per acre (6 du/acre), with a maximum total density of ten dwelling units per acre (10 du/acre). The maximum total density may be increased to fifteen dwelling units per acre (15 du/acre) utilizing Greater Pine Island Transfer of Development Units.~~Any bonus densities approved on the properties added to the Urban Community future land use category in conjunction with CPA2010-00002 must be achieved through use of the transfer of development rights program.~~

POLICY 1.1.5: The Suburban areas are or will be predominantly residential areas that are either on the fringe of the Central Urban or Urban Community areas or in areas where it is appropriate to protect existing or emerging residential neighborhoods. These areas provide housing near the more urban areas but do not provide the full mix of land uses typical of urban areas. ~~The standard residential densities are the same as the Urban Community category. Higher densities, Commercial development greater than neighborhood centers, and industrial land uses are not permitted.~~ This category has a standard density range from one dwelling unit per acre (1 du/acre) to six dwelling units per acre (6 du/acre). The maximum total density may

only be increased to eight dwelling units per acre (8 du/acre) utilizing Greater Pine Island Transfer of Development Units. Other forms of bonus densities are not allowed.

Policy 1.4.7 describes the uses and residential densities that are allowable in the Coastal Rural future land use category. The proposed amendments to Policy 1.4.7 modify the Coastal Rural standard maximum density from one dwelling unit per ten acres to one dwelling unit per 2.7 acres. The amendment also replaces the density table that currently exists with the ability to achieve an “Adjusted Maximum Density” of up to one dwelling unit per acre. This is the same density that may be achieved through the existing table identified in Policy 1.4.7. The recommended amendments to this policy are identified below:

POLICY 1.4.7: The Coastal Rural land use category is established for the Greater Pine Island Planning Community to address the area’s predominantly rural character, coastal environment, existing agricultural uses, limited public infrastructure, and its location within and proximity to the Coastal High Hazard Area and Hurricane Vulnerability Zone. areas will remain rural except for portions of properties where residential lots are permitted in exchange for permanent preservation or restoration of native upland habitats or a commitment, in the form of a perpetual easement, to preserve agricultural activity on existing farmland, on the remainder of the property.

The standard maximum density is one dwelling unit per 2.7 acres (1 du/2.7 acres) ten acres (1 DU/10 acres). Maximum densities may will be increased to an “Adjusted Maximum Density” of one dwelling unit per acre (1 du/acre) where 70% of the overall development parcel(s) is: maintained as native habitat; or restored as native habitat; or maintained in agricultural use on those parcels identified as existing farmland on Lee Plan Map 21.as higher percentages of native habitat are permanently preserved or restored on the uplands portions of the site, or a commitment, in the form of a perpetual easement, to preserve agricultural activity on existing farmland, in accordance with the chart below.

Residential developments containing ten (10) or more dwelling units must be approved through the planned development rezoning process and as part of the planned development process must: a) demonstrate the implementation of adopted design standards and development approaches that support and maintain the rural character; b) provide notification to property owners of permitted adjacent agricultural uses and their right to continue operations; and c) provide mitigation for impacts to hurricane evacuation clearance times and shelter needs.

Permitted land uses include agriculture, fill-dirt extraction, conservation uses, minimal non-residential land uses, limited to marinas, fish houses, and minor commercial uses that are necessary to provide basic commercial services to serve the island residents and visitors as set forth in Policy 14.4.5, and low density residential uses up to the following densities. Bonus densities are not allowed in this land use category.

Percentage of the on-site uplands that are preserved or restored native habitats or continued in agricultural use on existing farmland	Maximum density if undeveloped land will be permanently preserved or restored as native habitats	Maximum density if undeveloped land will be continued in agricultural use on existing farmland
0%	1 DU/ 10 acres	1 DU/ 10 acres
5%	1 DU/ 9 acres	
10%	1 DU/ 8 acres	1 DU/ 9 acres
15%	1 DU/ 7 acres	
20%	1 DU/ 6 acres	1 DU/ 8 acres
30%	1 DU/ 5 acres	1 DU/ 7 acres
40%	1 DU/ 4 acres	1 DU/ 6 acres
50%	1 DU/ 3 acres	1 DU/ 5 acres
60%	1 DU/ 2 acres	1 DU/ 3 acres
70%	1 DU/ 1 acres	1 DU/ 2 acres

Existing farmland is depicted on Map 21. Areas for buffers, lakes, and utilities may consist of up to 10% of the upland preserve areas.

Staff recommends amendments to Policies 4.2.4, 4.2.7, and 4.3.8 which address development within the Mixed Use Overlay. The amendments within Goal 4 are to clarify that Transferable Development Units cannot be transferred into the Coastal High Hazard Area, a matter of public health, safety and welfare, and to update outdated cross references. The recommended amendments to these policies are identified below:

POLICY 4.2.4: The Mixed Use Overlay may include areas within the Coastal High Hazard Area when unique public benefits exist. Such benefits may include providing workforce housing options for employees of businesses located on barrier islands when transit is provided between the workforce housing and the employment areas. Bonus densities within the Coastal High Hazard Area may only be achieved through the site-built affordable housing program.

~~**POLICY 4.2.7:** Development located in the Mixed Use Overlay applying Chapter 32—Compact Communities of the Lee County Land Development Code will not be subject to the site location standards listed in Policy 6.1.2 and 6.1.2.7.~~

~~**POLICY 4.3.8:** Properties in a Mixed Use Overlay Zone, not within the Coastal High Hazard Area, will be considered as are preferred receiving areas for Transferable Development Rights (TDRs) and will allow these TDRs to serve as a method for obtaining achieving allowable bonus densities. Projects utilizing Greater Pine Island TDUs are eligible for increased maximum total densities, as set forth in this plan, and additional development incentives to encourage a compact and functional development pattern.~~

Policy 6.1.2 addresses commercial site location standards. The proposed amendments will eliminate commercial site location standards for Lee County’s Urban Areas. Eliminating site location standards in our urban areas will encourage a diverse mix of

commercial and residential development. The Greater Pine Island TDUs can be used for both residential density and commercial intensity. The target receiving areas for the TDUs are in urban areas. Removal of site location standards from the urban areas will add demand for use of Greater Pine Island TDUs. The proposed amendments retain site location standards for Lee County's non-urban future land use categories (Rural, Coastal Rural, DR/GR, Rural Community Preserve, Outer Islands, Open Lands, Conservation Lands, and Wetlands). These amendments will also distinguish between urban and non-urban development patterns. The recommended amendments to this policy are identified below:

POLICY 6.1.2: Commercial development in non-urban future land use categories is limited to minor commercial and located so that the retail use, including buildings and outdoor sales area, is located at the intersection (within 330 feet of the adjoining rights-of-way of the intersecting roads) of arterial and collector roads or two collector roads with direct access to both intersecting roads. Direct access may be achieved with an internal access road to either intersecting roads. On islands, without an intersecting network of collector and arterial roads, commercial development may be located at the intersection of local and collector, or local and arterial, or collector and collector roads. Commercial development must be consistent with the location criteria in this policy except where specifically excepted by this policy or by Policy 6.1.7, or in Lehigh Acres by Policy 32.2.4 or located in the Mixed Use Overlay utilizing Chapter 32—Compact Communities of the Land Development Code.

~~1. Minor Commercial~~

~~a. Major function: Provides for the sale of convenience goods and services.~~

~~b. Location: The retail use, including buildings and outdoor sales area, must be located as follows except where this plan provides specific exceptions (e.g., Policy 6.1.7):~~

~~(1) On or near At the intersection (within 330 feet of the adjoining rights of way of the intersection roads) of local and collector, local and arterial, or collector and collector roads. In Commercial Planned Developments where future road improvements that are included in the Capital Improvement Program will enable the property to qualify for the higher level of commercial development specified in Subsection 2 below, and which are conditioned to allow the increased commercial intensity when the roadway actually functions at the higher level of a collector road, the Minor Commercial use may extend beyond 330 feet of such intersections provided the Master Concept plan specifically indicates the phasing of the development from Minor to Neighborhood Commercial use. Proposed interconnections of future internal access roads or driveways servicing only the subject parcel with an arterial or collector will not comply with the requirements of this section;~~

~~(2) At the intersection (as defined below) of collector and arterial or arterial and arterial roads; or~~

~~(3) Within a residential planned development provided it is located and designed primarily to meet the commercial needs of the residents of the development.~~

~~e. Site Area: Two acres or less.~~

~~d. Range of Gross Floor Area: Less than 30,000 square feet.~~

~~e. When developed as part of a mixed use planned development, and meeting the use limitations, modified setback standards, signage limitations and landscaping provisions, retail uses may deviate from the locational requirements and maximum square footage limitations, subject to conformance with the Estero Community Plan as outlined in Policies 19.2.3 and 19.2.4, and through approval by the Board of County Commissioners.~~

~~2. Neighborhood Commercial~~

~~a. Major function: Provide for the sale of convenience goods and personal services such as food, drugs, sundries, and hardware items.~~

~~b. Typical leading tenants: Supermarket and drug store.~~

~~c. Location: Must be located as follows (except where this plan provides specific exceptions):~~

~~At the intersection of an arterial and a collector or two arterials so that direct access is provided to both intersecting roads. Such direct access may be provided via an internal access road to either intersecting road. On Lee County's islands where there is no intersecting network of collectors and arterials, neighborhood commercial centers may be located using the standards for minor commercial centers.~~

~~d. Site Area: 2 to 10 acres.~~

~~e. Range of Gross Floor Area: 30,000 to 100,000 square feet.~~

~~f. In that portion of North Fort Myers lying between the Cape Coral city limits and the old S.A.L. railroad grade and north of the junction of the 41s, an exception to the strict adherence to the location standards in subsection (c) may be granted upon the approval of an application for Commercial Planned Development rezoning if the Board of County Commissioners makes a formal finding that the proposed project:~~

~~(1) is located on an existing arterial road;~~

~~(2) is located at the intersection of that arterial with a future collector or arterial that is indicated on the Official Trafficways Map; and(3) will provide (or at least not interfere with) an acceptable alignment for the future roadway which is the justification for the approval, relative to both extensions from the point of intersection with the existing road.~~

~~3. Community Commercial~~

- ~~a. Major function: Some functions of neighborhood commercial, in addition to providing for the sale of retail goods such as clothing, variety items, appliances, and furniture.~~
- ~~b. Typical leading tenants: Supermarket, drug store, minor department store, variety store, or discount center.~~
- ~~c. Location: Must be located as follows (except where this plan provides specific exceptions):~~

~~At the intersection of two arterials so that direct access is provided to both intersecting roads. Such direct access may be provided by an internal access road to either intersecting road.~~

- ~~d. Site Area: 10 to 35 acres~~
- ~~e. Range of Gross Floor Area: 100,000 to 400,000 square feet.~~
- ~~f. Notwithstanding prohibitions contained elsewhere in this plan, community commercial development may be granted in a portion of the Suburban land use category in North Fort Myers lying between the Cape Coral city limits and the old S.A.L. railroad grade and north of the junction of the 41s upon the approval of an application for Commercial Planned Development rezoning if the Board of County Commissioners makes a formal finding that the proposed project:
 - ~~(1) is located on an existing arterial road;~~
 - ~~(2) is located at the intersection of that arterial with a future arterial road that is indicated on the Official Trafficways Map; and~~
 - ~~(3) will provide (or at least not interfere with) an acceptable alignment for the future roadway which is the justification for the approval, relative to both extensions of that future roadway from the point of intersection with the existing road.~~~~

~~4. Regional Commercial~~

- ~~a. Major Function: Some functions of community commercial, in addition to providing a full range and variety of shopping goods for comparative shopping (such as general merchandise, apparel, furniture, and home furnishings).~~
- ~~b. Typical leading tenants: One or more full-line department stores.~~
- ~~c. Location: Must be located in such a manner as to provide direct access to two and preferably three arterial roads. Such direct access may be via an internal access road to one or more arterials.~~
- ~~d. Site Area: 35 to 100 acres.~~

- e. ~~Range of Gross Floor Area: 400,000 to 1 million square feet or more.~~
 - f. ~~The Commercial Site location standards described in this policy do not apply to Regional Commercial development approved as a single mixed-use Development of Regional Impact containing regional shopping opportunities on a 483-acre portion of Section 9, Township 47 South, Range 25 East, that is bounded on the west by U.S. 41, on the east by the Seminole Gulf Railroad tracks, on the south by Coconut Road, and on the north by a line located one-half mile north of Coconut Road designated Urban Community, provided that the DRI specifically addresses:
 - 1) ~~Impacts to flow ways,~~
 - 2) ~~Community and Regional Park levels of service,~~
 - 3) ~~Roadway levels of service,~~
 - 4) ~~Public Schools,~~
 - 5) ~~Fire protection services, and~~
 - 6) ~~Affordable housing.~~~~
5. ~~Commercial development at the intersection will extend no more than one-quarter mile from the centerline of the intersection and must include proper spacing of access points, with the following exception: in a commercial development approved under the planned development rezoning process, at the intersection may extend beyond one-quarter mile from the intersection, provided that:~~
- a. ~~direct access is provided to the development within one-quarter mile of the intersection;~~
 - b. ~~an internal access road or frontage road provides access to the intersecting street prior to occupancy of the development; and~~
 - c. ~~all access points meet Land Development Code requirements for safety and spacing.~~
 - d. ~~the retail commercial use, including any outdoor sales, does not extend beyond one-half mile from the centerline of the intersection.~~
6. ~~Any contiguous property under one ownership may, at the discretion of the Board of County Commissioners, be developed as part of the interstate interchange, except in the Mixed Use Interchange district, provided the property under contiguous ownership to be developed as part of the interstate interchange does not extend beyond three-quarters of a mile from the interchange centerpoint. Applications seeking interstate uses outside of the interstate highway interchange area will be evaluated by the Board considering the following factors: percentage of the property within the interstate interchange; compatibility with existing adjacent land uses; and, compatibility with surrounding Future Land Use Categories. This is intended to promote planned developments under unified ownership and control, and to insure proper spacing of access points.~~
7. ~~The location standards specified in Subsections 1-4 will apply to the following commercial developments: shopping centers; free-standing retail or service establishments; restaurants;~~

~~convenience food stores; automobile dealerships; gas stations; car washes; and other commercial development generating large volumes of traffic. These location standards will not apply to the following: banks and savings and loan establishments without drive in facilities; hotels or motels; marinas; general, medical, or professional offices; industrial, warehouse, or wholesale development; clubs, as defined in Chapter 34 of the Land Development Code (commercial clubs excepted); and other similar development. The distinction in this subsection between these two major types of commercial uses does not apply in Lehigh Acres, where commercial uses are permitted in accordance with Policy 32.2.4. These location standards will not apply to property in the Mixed Use Overlay when Chapter 32 Compact Communities of the Land Development Code is applied.~~

- ~~8. The standards specified in Subsections 1-4 for location, floor area and site area will serve as guidelines during the rezoning process (allowing limited discretion by the Board of County Commissioners in special cases in which retail uses are the only reasonable use of the parcel in light of its size, its proximity to arterials and collectors, and the nature of the existing and projected surrounding uses, including but not limited to environmental factors) but are strict requirements during the development order process in the case of zoning that existed prior to the effective date of the Lee Plan (December 21, 1984). The other standards specified in Subsections 1-4 will serve generally to indicate the types of development which are likely to fall within each commercial category. Proposed rezonings to commercial zoning districts that include both uses that are subject to the standards in Subsections 1-4 and uses that are not (see Subsection 7) may be found consistent with the Lee Plan by the Board of County Commissioners even if the subject parcel does not comply with the applicable location standard; provided, however, that no development orders will be issued on any such parcel for any use to which the standards in Subsection 1-4 is applicable, and all such development orders must be consistent with the level of service requirements in Policy 95.1.3.~~
- ~~9. The location standards in this policy are not applicable in the following areas:
 - a. In the Interchange land use category
 - b. In Lehigh Acres where commercial uses are permitted in accordance with Goal 32
 - c. Within the Captiva community in the areas identified by Policy 13.2.1, in Area 9 of the University Community Conceptual Master Plan, or within the Mixed Use Overlay when utilizing Chapter 32 Compact Communities of the Land Development Code.
 - d. In the Density Reduction/Groundwater Resource land use category where some commercial development is permitted under Objective 33.3.~~
- ~~10. The Board of County Commissioners may approve applications for minor commercial centers that do not comply with the location standards for such centers but which are consistent with duly adopted CRA and Community plans.~~

~~11. Uses that must comply with Subsections 1-4 may occur at the outside of a T intersection so long as direct access is provided from at least two points on the adjacent intersecting road, one of which must be an extension of the other intersecting road.~~

~~12. Map 19 illustrates the existing Lee County intersections that are deemed to be consistent with the standards in subsections 2 and 3. Neighborhood and community commercial centers must be located at one of the designated intersections, at another intersection utilizing the list of Functional Classification for Arterial and Collector Roads, or in accordance with one of the exceptions under Goal 6, or in Lehigh Acres in accordance with Policies 1.8.1 through 1.8.3. The map shows some intersections with half circles and others with full circles. Half circles indicate that only the two intersection quadrants shown on the map are deemed to be consistent with the standards. All of the quadrants of intersections designated with full circles are deemed to be consistent with the standards. Proposed neighborhood and community commercial centers that are located at the designated intersections are subject to all of the other Goals, Objectives and Policies of this Plan.~~

~~Functional classifications of new or improved streets will be established in accordance with the definitions of —arterial— and —collector— roads in Rule 9J 5.003. A list of Functional Classification for Arterial and Collector Roads, consisting of roads that meet this criteria, will be maintained by the Department of Transportation, for county maintained roads, and the Division of Development Services, for privately maintained roads. These functional classification lists will be adopted by Administrative Code. For the purpose of determining compliance with the locational standards of Policy 6.1.2, only those roads identified as Major Collector roads will be considered collector roads. Roads identified as Minor Collector or not included on the list will be considered local roads. The map will be revised annually during the county's regular plan amendment cycle.~~

~~13. Freestanding single use commercial retail development of five (5) acres or more does not qualify as a Neighborhood Center as that term is used in the Suburban and Outlying Suburban Future Land Use Categories. (Amended by Ordinance No. 93-25, 94-30, 98-09, 99-15, 99-18, 00-22, 02-02, 07-09, 10-05, 10-16, 10-19, 10-40, 11-18)~~

Staff is recommending some minor amendments to Goal 14, Objective 14.1: Natural Resources and its subsequent policies. These amendments: remove old dates and policies that describe actions that have already been taken; support practices that reduce pollutants entering Greater Pine Island's estuarine and wetland resources; and, support the use of central sanitary sewer on Pine Island. The recommended amendments are identified below:

GOAL 14: GREATER PINE ISLAND. To manage future growth on and around Greater Pine Island so as to: maintain the island's unique natural resources, rural character, and coastal environment; ~~and its support the viable and productive agricultural community and other local businesses~~; and to protect the public health, safety and welfare of insure that island residents and visitors have a reasonable opportunity to evacuate when a hurricane strike is imminent. For the purposes of this plan, the boundaries of Greater Pine Island are indicated on Lee Plan Map 1, Page 2 the Future Land Use Map.

OBJECTIVE 14.1: NATURAL RESOURCES. County regulations, policies, and discretionary actions affecting Greater Pine Island will permit no further degradation of estuarine and wetland resources, and ~~no unnecessary loss of~~ will serve the long-term preservation of native upland vegetation and wildlife habitat.

POLICY 14.1.3: Lee County will, ~~by 1996,~~ explore the possibility of estimating the aerial extent and maturity of mangroves in Greater Pine Island for the purpose of providing baseline data necessary to ensure that the cumulative impact of mangrove alteration does not decrease the combination of aerial extent and maturity of mangroves relative to the baseline data.

~~**POLICY 14.1.8:** The county reclassified all uplands on Pine Island previously designated as Rural to a new Coastal Rural designation on the Future Land Use Map. The purposes of this redesignation was to provide a clearer separation between rural and urban uses on Pine Island, to discourage the unnecessary destruction of native upland habitats, and to avoid placing more dwelling units on Pine Island that can be served by the limited road capacity to the mainland. The Coastal Rural designation is designed to provide land owners with maximum flexibility while accomplishing these public purposes.~~

POLICY 14.1.8: Lee County will support practices that reduce pesticides, fertilizers, animal waste, and other pollutants entering Greater Pine Island's estuarine and wetland resources.

POLICY 14.1.9: Lee County will support the use of central sanitary sewer service to reduce potential contamination to groundwater or the surrounding estuarine systems from on-site septic systems.

Staff is recommending amendments to Objective 14.2: Road Improvements, and its subsequent policies that address hurricane evacuation. Currently the objective addresses hurricane evacuation through an adjusted Level of Service (LOS) requirement which measures two-way traffic. Staff continues to be concerned with hurricane evacuation times within the Hurricane Vulnerability Zone; however, LOS measurements measure two-way traffic, which misrepresents capacity and does not accurately reflect hurricane evacuation procedures. Lee County staff, including the Departments of Public Safety and Community Development, worked with consultants to analyze hurricane evacuation times from Pine Island (data and analysis is attached). Based on this analysis, staff recommends new language to plan for hurricane evacuation in increments of time (hours) instead of the LOS measurement. Staff is also proposing additional policies to address pedestrian safety and transit services on Pine Island.

In addition, the use of traffic concurrency to regulate growth is no longer legally feasible. Amendments to Florida Statutes in 2011 removed the ability of local government to deny applications for new development based on deficient transportation infrastructure. The Lee Plan was amended on April 16, 2014 as a result of the 2011 Florida Statute amendments. Policy 95.1.3 was amended in 2014 to change transportation and parks from being a regulatory standard to a non-regulatory standard, reflective of the 2011 legislative requirements. The amendments to Objective 14.2 are consistent with these 2014 concurrency amendments to the Lee Plan. Recommended amendments to these policies are identified below:

OBJECTIVE 14.2: ROAD IMPROVEMENTS. The county will continually monitor traffic levels ~~within Greater Pine Island to on Pine Island Road to insure that the sum of the current population plus development on previously approved land plus new development approvals will not exceed~~ maintain hurricane evacuation clearance times in accordance with Objective 14.8. ~~the capacity of existing and committed roadways between Pine Island and mainland Lee County.~~

POLICY 14.2.1: Lee County will monitor impacts to the existing transportation infrastructure of Greater Pine Island recognizing the limited access to the community and the seasonal nature of infrastructure demand.

POLICY 14.2.2: Lee County will maintain a maximum hurricane evacuation clearance time of 18 hours for Greater Pine Island in accordance with Objective 14.8. When the evacuation clearance time reaches 16 hours, Lee County will develop mitigation regulations to address transportation deficiencies, sheltering needs, and other public safety measures. When the evacuation clearance time of 18 hours is exceeded, Lee County will impose the additional mitigation measures.

POLICY 14.2.3: Lee County, in conjunction with the Florida Department of Transportation, will identify hurricane evacuation roadway capacity improvements, including critical intersections and manual traffic control provisions, to maintain evacuation clearance time standards for Greater Pine Island.

POLICY 14.2.1: The minimum acceptable level-of-service standard for Pine Island Road between Burnt Store Road and Stringfellow Boulevard is hereby established as LOS D on an annual average peak hour basis and LOS "E" on a peak season, peak hour basis. This standard will be measured at the county's permanent count station on Little Pine Island and using the methodology described in the 1985 Highway Capacity Manual, Special Report 209.

POLICY 14.2.2: In order to recognize and give priority to the property rights previously granted by Lee County for about 6,675 additional dwelling units, the county will keep in force effective development regulations which address growth on Pine Island and which implement measures to gradually limit future development approvals. These regulations will reduce certain types of approvals of at established thresholds prior to the capacity of Pine Island Road 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 reaches 810 peak hour, annual average two-way trips, the regulations will restrict 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 reaches 910 peak hour, annual average two-way trips, the regulations will provide restrictions on the further issuance of residential development~~

~~orders (pursuant to chapters 10 of the Land Development Code), or other measures to maintain the adopted level of service until improvements can be made in accordance with this plan. The effect of these restrictions on residential densities must not be more severe than restricting densities to one third of the maximum density otherwise allowed on that property.~~

~~The 810 and 910 thresholds were based on 80% and 90% of level of service “D” capacity calculated using the 1965 Highway Capacity Manual, as documented in the 2001 Greater Pine Island Community Plan Update. 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.~~

~~**POLICY 14.2.3:** In addition to enforcing the restrictions in Policy 14.2.2, the county will take whatever additional actions are feasible to increase the capacity of Pine Island Road. The following measures will be evaluated:~~

- ~~• The construction of left turn lanes at intersections with local roads in Matlacha.~~
- ~~• 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.~~

~~**POLICY 14.2.4:** The county will make every effort to continue extending the bicycle path to run the entire length of Stringfellow Road. Wherever possible, ~~this~~ path should be designed as a major public amenity similar to the high quality design used for similar to the bicycle path north of Pineland that was completed in 2001.~~

~~**POLICY 14.2.5:** Lee County will investigate the merits of creating a concurrency exception area for a portion of Pine Island Center. The concurrency exception area will promote the expansion of public transportation to and from the Greater Pine Island area.~~

~~**POLICY 14.2.5:** Lee County will continue to evaluate pedestrian safety and circulation, and will seek to minimize pedestrian-vehicular conflicts within the Matlacha Historic District.~~

~~**POLICY 14.2.6:** Lee County will assess the benefits of expanding mass transit services to Greater Pine Island to minimize the number of vehicular trips through Matlacha, and will encourage projects to accommodate bus stops, multi-modal opportunities, ride share lots, water taxis, and/or pedestrian connectivity.~~

Staff is recommending amendments to Objective 14.3: Residential Land Uses, and its subsequent policies. The recommended language clarifies that only Greater Pine Island TDUs may be used on Pine Island and only in the Pine Island Center. The amendments also provide a provision for the transfer of units within the Greater Pine Island Planning Community. Units may be transferred from rural areas to lands with urban future land use categories if the properties on which the transfer occurs have common ownership and meet specific requirements. For the purposes of public health, safety, and welfare, the amendments make clear that lands within the Coastal High Hazard Area are not eligible

for the Adjusted Maximum Density. Also within this Objective, the limitation on building height within Greater Pine Island is proposed to be deleted since it is duplicative of requirements that exist in the Land Development Code. The recommended amendments to these policies are identified below:

OBJECTIVE 14.3: RESIDENTIAL LAND USES. County regulations, policies, and discretionary actions will recognize certain unique characteristics of Greater Pine Island which justify different treatment of existing and future residential areas than in mainland Lee County, as described in the following policies.

POLICY 14.3.1: Due to the constraints on future development posed by the limited road connections to mainland Lee County, ~~bonus densities~~ only Greater Pine Island TDUs of any kind are not permitted in Greater Pine Island consistent with Table 1(a), Note 4. Only the portion of Greater Pine Island defined as Pine Island Center is eligible to receive Greater Pine Island TDUs. This prohibition includes, housing density bonuses, off-site transfers from environmentally critical areas, and transfer from on-site wetlands at rates above the standard density rates for environmentally critical areas.

POLICY 14.3.3: Adjusted Maximum Density is not permitted to be located within Coastal Rural designated lands within the Coastal High Hazard Area.

POLICY 14.3.4: Dwelling units may be transferred from parcels that have a future land use designation of Coastal Rural to parcels with urban future land use categories on Greater Pine Island, subject to the following:

1. The receiving and transferring lands are under the same ownership at the time this policy was adopted, and remain under the same ownership at the time units are transferred;
2. The maximum allowable density that may be transferred from Coastal Rural parcels is limited to one dwelling unit per 2.7 acres (1 du/2.7 acres);
3. The property receiving the additional dwelling units is rezoned to a planned development.
4. Density can be allocated across the planned development-zoned property, including those lands within the planned development that are designated Coastal Rural, provided that the density developed within Coastal Rural designated property does not to exceed 1 dwelling unit per 2.7 acres (1 du/2.7 acres);
5. Development rights for each unit transferred from the transferring parcel are extinguished through a recorded instrument acceptable to the County Attorney's Office and provided to the Department of Community Development with the planned development rezoning application for the receiving parcel;
6. The allowable density on the receiving parcels will be the sum of the allowable densities for the receiving and transferring parcel, subject to the Coastal Rural density limitations set forth in subsection 4 above; and
7. Bona fide agricultural uses on the transferring parcel may continue in accordance with Policy 14.6.1.

~~**POLICY 14.3.3:** The county's Land Development Code will continue to state that no building or structure on Greater Pine Island will be erected or altered so that the peak of the roof exceeds thirty eight (38) feet above the average grade of the lot in question, or forty five (45) feet above~~

~~mean sea level, whichever is the lower. No deviations from these height restrictions may be granted through the planned development process. These height restrictions will not be measured from minimum flood elevations nor will increases in building height be allowed in exchange for increased setbacks. Industrial buildings must also comply with these height restrictions.~~

~~**POLICY 14.3.4:** The county Zoning Regulations will continue to allow storage of commercial fishing equipment at a fisherman's private residence as a permitted use in residential districts on Pine Island. Reasonable restrictions not having the effect of prohibiting such storage may be developed.~~

~~**POLICY 14.3.5:** The county will amend its land development code to provide specific regulations for neighborhood connectivity and walls and gates on Greater Pine Island if an acceptable proposal is submitted by the Greater Pine Island community. These regulations would require interconnections between adjoining neighborhoods wherever feasible and would no longer allow perimeter walls around larger developments.~~

Staff is recommending amendments to Objective 14.4: Commercial Land Uses, and its subsequent policies. The recommended language helps reinforce that commercial development is targeted for the urban areas near the center of Pine Island, where infrastructure currently exists. Staff is also recommending deleting policies that direct Lee County to take actions that have already been completed. The recommended amendments to these policies are identified below:

OBJECTIVE 14.4: COMMERCIAL LAND USES. County regulations, policies, and discretionary actions will recognize certain unique characteristics of Greater Pine Island which justify different treatment of existing and future commercial areas than in mainland Lee County, as described in the following policies.

~~**POLICY 14.4.1:** Future Urban Areas at in Pine Island Center is are targeted for most future commercial and industrial uses as permitted by other portions of this plan. Non-residential developments within Pine Island Center are encouraged to provide employment opportunities; serve the day to day needs of residents and visitors; demonstrate a positive impact on traffic patterns within Greater Pine Island; and reduce the number of vehicular trips through Matlacha.~~

~~**POLICY 14.4.2:** Commercial development at other locations outside on Greater Pine Island Center, but within future urban land use categories (such as Bokeelia, Pineland, Matlacha, and St. James City) should be limited must be sited and designed to minimize impacts to residential and adjacent agricultural uses. Permitted uses should be restricted to the following: to marinas; fish houses; and minor commercial uses to serve the day to day needs of local residents and island visitors. Such development must be sited and designed to minimize disruptive influences to the greatest degree possible.~~

~~**POLICY 14.4.3:** The county will expand the commercial design standards in its land development code to provide specific architectural and site design standards for Greater Pine Island in the Land Development Code if an acceptable proposal is submitted by the Greater Pine Island community. These standards must: would promote but not mandate rehabilitation~~

~~over demolition; require smaller rather than larger buildings address the size and scale of building mass in relationship to the built and natural environment; establish community-specific architectural standards in support of Greater Pine Island's coastal rural character; avoid standardized franchise buildings; preserve mature trees wherever possible; and encourage the location of off-street place most parking to the side and rear of buildings to preserve viewsheds along public roadways; require large windows and forbid most blank walls; and encourage metal roofs and other features of traditional "Old Florida" styles. The new commercial design standards will reflect the different characteristics of Bokeelia, Pineland, Matlacha, and St. James City. Deviations from these standards may not be granted unless the request meets the County approval criteria for variances set forth in Chapter 34 of the Land Development Code.~~

~~**POLICY 14.4.4:** The county will expand its current sign regulations to include specific standards for Greater Pine Island if an acceptable proposal is submitted by the Greater Pine Island community. These standards would reduce the size of ground-mounted signs, discourage or disallow internally lit box signs, allow wall signs on buildings near the right-of-way, and allow small directional signs on Stringfellow Road for businesses not visible from the road.~~

~~**POLICY 14.4.5:** The county will establish a prioritized schedule for an effort to rezone land to zoning districts that properly reflect its development potential under the Lee Plan.~~

~~**POLICY 14.4.65:** In the Coastal Rural future land use category, non-residential development is limited restricted to minor commercial development. ~~New commercial~~ All zoning requests for commercial projects must utilize the ~~P~~planned ~~D~~development rezoning process and be consistent with the following ~~limitations~~:~~

- Total building floor area is limited to 5,000 square feet, unless the development can demonstrate compatibility with adjacent uses, and a positive impact on traffic patterns within Greater Pine Island.
- Development must not exceed two acres of impervious area.
- Uses are limited to those that reflect the Coastal Rural character and unique culture of Greater Pine Island, such as animal clinics, bait and tackle shops, ecotourism, farm and feed supply stores, food stores, lawn and garden supply stores, restaurants (excluding fast food), roadside/produce stands, speciality retail, and plant nurseries.
- Buildings exceeding 5,000 square feet that are lawfully existing or approved as of October 1, 2009 will be deemed vested for the approved and existing square footage for the life of the structure despite a change in use.

~~**POLICY 14.4.7:** During the Comprehensive Plan Evaluation and Appraisal Report process the County will analyze commercial rezoning and commercial development in the Coastal Rural areas and assess their impacts to the Greater Pine Island Community and identify any needed policy modifications.~~

Staff is recommending that Objective 14.6: Agricultural Uses, and its subsequent policies, should be replaced with Objective 14.6: Greater Pine Island Transfer of Development

Rights Program. Currently, Objective 14.6 directs Lee County to evaluate the creation of a TDR and/or PDR program with the intention of encouraging continued agricultural uses within the Greater Pine Island Planning Community. One of the main objectives of these proposed amendments is the establishment of the Greater Pine Island TDR program. creation of the Greater Pine Island TDR Program. Therefore, staff is proposing to delete the objective that directed staff to evaluate the possibility of a TDR program. The recommended amendments to these policies are identified below:

OBJECTIVE 14.6: AGRICULTURAL USES GREATER PINE ISLAND TRANSFER OF DEVELOPMENT RIGHTS PROGRAM. To promote and preserve the rural character of Pine Island Lee County will ~~strive to foster a viable and productive agricultural community on the island. Lee County will pursue the incorporation of Greater Pine Island's incorporate several land use "tools" such as purchase and transfer of development rights programs into the Lee County Land Development Code to preserve agricultural uses on Pine Island.~~

POLICY 14.6.1: Lee County will amend its Land Development Code to implement Transfer of Development Rights (TDR) and Purchase of Development Rights (PDR) programs for Greater Pine Island. The new programs will create incentives for property owners within Greater Pine Island to transfer development rights associated with their parcels to: receiving lands outside of the planning community; future urban areas within the planning community that are targeted for development in accordance with these provisions; or, Lee County. The programs will allow for continued agricultural uses on sending lands, in addition to limited non-residential uses that directly support the agricultural operations.

~~**POLICY 14.6.1:** Lee County will maintain a map (Map 21) of all existing farmland on Pine Island. These mapped existing farmlands and Pine Island lands containing indigenous vegetation are the primary targeted sending areas for the creation of transfer of development rights (TDR) on Pine Island.~~

POLICY 14.6.2: The county will administer the TDR program and will develop clear and concise forum to disseminate program information and records, including but not limited to a: TDR program website that will provide general program information, rules and guidelines; TDU administrative determination application; county-approved form of conservation easement; certified TDU database with ownership information; and, for-sale TDU clearinghouse information for those individuals that request to be included within the TDU clearinghouse program.

~~**POLICY 14.6.23:** Lee County, by 2009, will evaluate creating a Purchase of Development Rights Program with the objective of preserving Pine Island agricultural uses.~~

POLICY 14.6.3: By 2007 Lee County will amend the Lee County Land Development Code to establish a Pine Island Transfer of Development Rights (TDR) program to supplement the existing wetland TDR program. The program will be encouraged for properties depicted on Map 21 as well as other Pine Island lands as promoting reduced densities in the Coastal High Hazard Area.

~~**POLICY 14.6.4:** The property owners of lands designated Intensive Development, Central Urban, or Urban Community are eligible to receive Pine Island TDRs. The property owners of lands designated Suburban and Outlying Suburban are eligible to receive Pine Island TDRs consistent with the Lee Plan's definition of Density and if approved through the planned development rezoning process. The land development code will maintain several approval processes such as by right, administrative and planned development approval. Developments receiving TDR units will be evaluated for the following criteria: compact site design, innovative open space design, well designed pedestrian/bicycle connections to commercial and employment areas, locations on or a walkable distance to mass transit service, and mixed use buildings. Utilization of in-fill and brownfield sites are encouraged. Land Development Code incentives will be given to projects that incorporate concepts from traditional neighborhood design, transit oriented development, and new urbanism principles.~~

~~**POLICY 14.6.5:** Participation in the Pine Island TDR by right and administrative approval processes for receiving sites requires that the subject property be already conventionally zoned in a zoning district that would permit the proposed development consistent with allowable densities and with the zoning district's lot size, setback, open space and height requirements. The by right process will be limited to adding one additional dwelling unit to a receiving parcel that is one acre or less in size. If the receiving parcel is larger than one acre, TDR units may be used to add one dwelling unit per acre by right. The resulting density may not exceed the maximum total density range for the land use category of the subject site.~~

~~**POLICY 1 4.6.6:** Adding Pine Island TDR units in excess of one dwelling unit per acre in conventional zoning districts requires administrative approval. The Lee County Department of Community Development director may administratively approve the use of TDR units to increase the density of a proposed development provided that the proposed development is: in compliance with the Lee Plan; zoned for the type and number of dwelling units proposed to be constructed; designed so that the resulting development does not have substantially increased intensities of land uses along its perimeter, unless adjacent to existing or approved development of a similar intensity; in a location where the additional traffic will not be required to travel through areas with significantly lower densities before reaching the nearest collector or arterial road; in a location outside of the Category 1 Storm Surge Zone for a land falling storm as defined by the October 1991 Hurricane Storm Tide Atlas for Lee County prepared by the Southwest Florida Regional Planning Council; not in a location where existing and committed public facilities are so overwhelmed that a density increase would be contrary to the overall public interest, and; will not decrease required open space, buffering, landscaping and preservation areas or cause adverse impacts on surrounding land uses.~~

~~**POLICY 14.6.7:** The Land Development Code will be amended to specify that Pine Island TDRs may be utilized through the Planned Development approval and amendment rezoning processes for land owners seeking to add additional dwelling units utilizing TDR units. The Code will specify that the application for the rezoning and the request to utilize TDR units may be submitted at the same time for concurrent review.~~

~~**POLICY 14.6.8:** The generation rate for Pine Island TDRs will be limited by the Land Development Code to two Transfer of Development Rights per acre for the Coastal Rural land use category, to six Transfer of Development Rights per acre for the Future Urban land use~~

~~categories, and one Transfer of Development Right per five acres of wetland. The Land Development Code will be amended to establish a creation of development rights process as well as a receiving process.~~

Staff is recommending a new Objective for the Pine Island Community Plan, Objective 14.8: Hurricane Preparedness, Evacuation and Mitigation, and its subsequent policies. These proposed amendments are based on the attached data and analysis and reviewed by the Departments of Public Safety and Transportation. The recommended language is provided below:

OBJECTIVE 14.8: HURRICANE PREPAREDNESS, EVACUATION AND MITIGATION. Lee County will provide for the protection of Greater Pine Island residents, visitors and property from the physical and economic effects of hurricanes and tropical storms. The following policies will supplement Goal 109 of the Conservation and Coastal Management Element of this plan, as it relates to the hurricane preparedness, evacuation, mitigation and sheltering for residents of Greater Pine Island.

POLICY 14.8.1: Lee County will work to maintain hurricane evacuation clearance times for Greater Pine Island, and continue to incorporate those times into the county-wide evacuation decision-making planning.

POLICY 14.8.2: Lee County will continue to include Greater Pine Island specific issues in its Comprehensive Emergency Management Plan (CEMP) and related evacuation planning documents.

POLICY 14.8.3: In the event of a pending hurricane (defined as Categories 1-5) Lee County shall maintain an evacuation clearance time of 18 hours for the resident population of Greater Pine Island. The evacuation clearance time is defined as the time necessary to safely evacuate people from the point when the evacuation order is given until the last evacuee can either leave Greater Pine Island, or arrive at safe shelter within Lee County. In order to maintain the 18-hour evacuation clearance time for residents, mandatory evacuation of non-residents, visitors, recreational vehicles, travel trailers (transient and non-transient) may occur in a phased approach to address evacuation in advance of tropical storm winds in accordance with the CEMP.

POLICY 14.8.4: Lee County will continue to include Greater Pine Island in its year-round public information program focused on disaster preparedness. The program will include information on hurricane risk, the need for timely evacuation, the availability and location of hurricane shelters and the actions necessary to minimize property damage to protect human life.

POLICY 14.8.5: New residential development and redevelopment within, or partially within, the Hurricane Vulnerability Zone must mitigate hurricane sheltering and evacuation impacts in accordance with Chapter 2, Article XI of the Land Development Code.

POLICY 14.8.6: Shelters will not be built on barrier or coastal islands within Greater Pine Island. Where financially feasible, geographically appropriate, and in the interest of public

health, safety and welfare, Lee County will make every effort to construct new public buildings to hurricane shelter standards.

POLICY 14.8.7: Where feasible, Lee County will evaluate the purchase of lands within Greater Pine Island identified as Coastal High Hazard in order to reduce the expansion of new development within vulnerable areas.

POLICY 14.8.8: The county will evaluate alternative mechanisms to improve evacuation clearance times within the planning community, including but not limited to: access control; mandatory evacuation notices; one-way evacuation routes; and the preparation and implementation of community-specific mitigation measures.

POLICY 14.8.9: Deviations relating to setbacks, lot coverage, and density within the Coastal High Hazard Area may not be granted, unless the request meets the County approval criteria for variances set forth in Chapter 34 of the Land Development Code.

Transportation Element and Capital Improvement Element Amendments

Objective 37.1 and Policies 37.1.1, 37.3.1, and 95.1.3 are within the Transportation Element and the Capital Improvement Element of the Lee Plan. The proposed amendments to Objective 37.1 and Policy 37.1.1 provide consistency with amendments to the Capital Improvements Element as the result of CPA2013-06, which addressed Lee County concurrency requirements. Policy 37.1.1 is also being amended to update a cross reference to Objective 14.2 which addresses hurricane evacuation times for Greater Pine Island. Policy 37.3.1 is being amended to remove an outdated reference to the Florida Administrative Code. Policy 95.1.3, in the Capital Improvements Element, is being amended to remove duplicative language that the policy currently shares with Policy 37.1.1. The recommended amendments to these policies are identified below:

OBJECTIVE 37.1: GENERAL STANDARDS. ~~From time of plan adoption, new facilities will be added at a rate equal to growth demands.~~ Establish non-regulatory level of service (LOS) standards on county and state transportation facilities within Lee County. Cooperate with municipalities on the facilities maintained by Lee County within the municipalities and with FDOT on state transportation facilities.

POLICY 37.1.1: ~~The minimum acceptable peak hour, peak season, peak direction roadway levels of service (see also Policy 95.1.3) will be as follows:~~

Minimum Level of Service	Peak Hour/Peak Season/Peak Direction
State & County Maintained Roads (Excluding FHHS, SIS and TRIP Roads)	
Expressways (Limited Access Facilities)	D
Controlled Access Arterials	E
Arterials	E
Major Collectors	E
Minor Collectors	E
FHHS Roads⁽¹⁾	
I 75	
Collier County to SR 78	D

SR 78 to Charlotte County	C
SR 80 (Palm Beach Boulevard)	
I 75 to Werner Dr.	D
Werner Dr. to Hendry County	C
SIS Roads	
SR 82 (Immokalee Road)	
Lee Boulevard to Commerce Lakes Dr.	D
Commerce Lakes Dr. to Hendry County	C
Airport Connector	
I 75 to Ben Hill Griffin Parkway	D
TRIP Funded Roads	
Colonial Boulevard	
I 75 to Lee Boulevard	D
Imperial Parkway	
E. Terry Street to Bonita Bill Dr.	D
Six Mile Cypress Parkway	
Daniels Parkway to Winkler Avenue	D

~~(4) The County may seek variances to the level of service standards for the FIHS facilities as authorized under Section 120.542, F.S. If granted, the level of service standards for I 75 and SR 80 will be as approved by FDOT in the Order Granting Petition for Variance.~~

LOS “E” is the minimum acceptable LOS for principal and minor arterials, and major collectors on county-maintained transportation facilities. Level of service standards for the State Highway System during peak travel hours are “D” in urbanized areas and “C” outside urbanized areas.

The minimum acceptable level of service as ~~specified above~~ for Pine Island Road between Burnt Store Road and Stringfellow Boulevard is also subject to Objective 14.2 Policies 14.2.1 and 14.2.2.

For minimum acceptable levels of service determination, the peak season, peak hour, peak direction condition will be defined as the 100th highest volume hour of the year in the predominant traffic flow direction. The 100th highest hour approximates the typical peak hour during the peak season. Peak season, peak hour, peak direction conditions will be calculated using K-100 factors and “D” factors from the nearest, most appropriate county permanent traffic count station.

POLICY 37.3.1: Lee County will measure traffic volumes and capacity on all roads on a roadway segment-by-segment basis, except for constrained roads and where alternatives are established pursuant to Chapter 163.3180, F.S., ~~and Rule 9J 5.0055, F.A.C.~~ Transportation for Pine Island will be governed by the policies under Objective 14.2 of this comprehensive plan.

POLICY 95.1.3: MINIMUM ACCEPTABLE LEVEL-OF-SERVICE STANDARDS: Level of- service (LOS) standards will be the basis for planning the provision of required public facilities within Lee County. Some of these standards will be the basis for determining the adequacy of public facilities for the purposes of permitting new development. The "Minimum Acceptable Level of Service" will be the basis for facility design, for setting impact fees, and (where applicable) for the operation of the Concurrency Management System (CMS).

Two classes of standards are established. "Regulatory" standards are those which apply to facilities identified in state law or inter-local agreements as being essential to support development. These consist of facilities for the provision of public schools, potable water, sanitary sewer, disposal of solid waste, and stormwater management. (It is the intent of this element that these standards will be the same as those established in the various relevant plan elements. If there are discrepancies between standards contained in the elements and standards as set forth herein, the standards as set forth herein will govern.) The second class, "non-regulatory" standards, are those which apply to other facilities for which the county desires to set standards for its own use. These consist of facilities for the provision of community and regional parks, and transportation. Compliance with non-regulatory standards will not be a requirement for continued development permitting, but will be used for facility planning purposes.

No changes to numbers 1 through 6

7. Roadway Facilities:

Los "E" is the standard LOS for principal and minor arterials, and major collectors on county-maintained transportation facilities. Level of service standards for the State Highway System during peak travel hours are D in urbanized areas and C outside urbanized areas.

Due to scenic, historic, environmental, aesthetic, and right-of-way characteristics and considerations, Lee County has determined that certain roadway segments will not be widened. Therefore, reduced peak hour levels of service will be accepted on those constrained roads within unincorporated Lee County as a trade-off for the preservation of the scenic, historic, environmental, and aesthetic character of the community. These constrained roads are defined in Table 2(a).

~~The minimum acceptable level of service for Pine Island Road between Burnt Store Road and Stringfellow Boulevard is subject to Policies 14.2.1 and 14.2.2.~~

~~For minimum levels of service determination, the peak season, peak hour, peak direction condition will be defined as the 100th highest volume hour of the year in the predominant traffic flow direction. The 100th highest hour approximates the typical peak hour during the peak season. Peak season, peak hour, peak direction conditions will be calculated using K-100 factors and "D" factors from the nearest, most appropriate county permanent traffic count station.~~

Conservation and Coastal Management Element Amendments

Policies 109.1.1, 109.1.2, 109.1.4, and 109.1.5 are within the Conservation and Coastal Management Element and address hurricane evacuation within the Coastal High Hazard Area and the Hurricane Vulnerability Zone. These policies are being updated to supplement and be consistent with Objective 14.8 of the Pine Island Plan. The recommended amendments to these policies are identified below:

GOAL 109: EVACUATION AND SHELTER. To provide evacuation and shelter capabilities adequate to safeguard the public against the effects of hurricanes and tropical storms

POLICY 109.1.1: The county will assess the impact of all new residential development upon the projected hurricane evacuation network and upon projected hurricane evacuation times, and will require mitigation either through structural (on-site, off-site shelter) provisions or through non-structural methods or techniques. Pursuant to Policy 14.8.4, all new residential development and redevelopment within the Hurricane Vulnerability Zone in Greater Pine Island must mitigate hurricane sheltering and evacuation impacts in accordance with Chapter 2, Article XI of the Land Development Code.

POLICY 109.1.2: ~~By 1995,~~ Periodic updates of the hurricane evacuation portion of the Comprehensive Emergency Management Plan will be coordinated with computer transportation modeling to identify critical roadway links.

POLICY 109.1.4: New or replacement bridges on evacuation routes spanning major or marked navigable waterways will be designed, constructed, and operated to adequately accommodate the safe and timely evacuation needs of both motor vehicle and marine traffic. For the purposes of accommodating hurricane evacuation, a new bridge to Pine Island is strongly discouraged due to the costs, design constraints, and potential impacts to growth patterns within Greater Pine Island.

POLICY 109.1.5: Comprehensive plan amendments that increase density within coastal high hazard areas must meet one of the following criteria in accordance with Section 163.3178(9), F.S.:

1. The proposed amendment will not exceed a 16 hour out of county hurricane evacuation time for a category 5 storm event; or
2. Maintain a 12 hour evacuation time to shelter for a Category 5 storm event and ensure shelter space is available to accommodate the additional residents of the development allowed by the proposed comprehensive plan amendment; or
3. Provide appropriate mitigation to satisfy the provisions of either of the previous two paragraphs, which may include without limitation, the payment of money, contribution of land, or construction of hurricane shelters and transportation facilities. The developer must enter into a binding agreement to memorialize the mitigation plan prior to adoption of the plan amendment.
4. Any comprehensive plan amendment that increases density within Coastal High Hazard Areas in Greater Pine Island must meet one of the above criteria, in addition to the community-specific requirements set forth in Goal 14 of this plan.

Glossary Amendments

Staff recommends that the Glossary of the Lee Plan be updated due to the proposed amendments discussed in this staff report. Staff proposes to add definitions to the Glossary for Community, Minor, Neighborhood, and Regional Commercial Development, which were previously described in Policy 6.1.2. Staff is also proposing an amendment to the definition for density, which provides clarification to the way density is calculated, and

to update the definitions for Coastal High Hazard Area and Hurricane Vulnerability Zone to be consistent with the definitions used elsewhere in Lee County's Land Development Code. The recommended amendments to the Glossary are identified below:

COASTAL HIGH HAZARD AREA – The area below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model and delineated by Map 5 of the Lee Plan as Future Land Use Map Series required by Chapter 163.3177(6)(a)10.c.(VI), F.S.

COMMERCIAL DEVELOPMENT,

MINOR- Commercial development that provides for the sale of convenience goods and services and contains less than 30,000 square feet of gross floor area.

NEIGHBORHOOD- Commercial development that provides for the sale of convenience goods and personal services, such as food, drug, sundries, and hardware items and has a gross floor area range of 30,000 to 100,000 square feet.

COMMUNITY- Commercial development that provides for the sale of retail goods such as clothing, variety items, appliances, and furniture as well as goods that may be found in a neighborhood commercial development and has a gross floor area range of 100,000 to 400,000 square feet.

REGIONAL- Commercial development that provides some functions of community commercial, in addition to providing a full range and variety of shopping goods for comparative shopping (such as general merchandise, apparel, furniture, and home furnishings) and has a gross floor area range of 400,000 to 1 million square feet.

DENSITY – The number of residential dwelling or housing units per gross acre (du/acre). Densities Specified in this plan are gross residential densities. For the purpose of calculating gross residential density, the total acreage of a development includes those lands to be used for residential uses, and includes land within the development proposed to be used for streets and street rights of way, utility rights-of-way, public and private parks, recreation and open space, schools, community centers, and facilities such as police, fire and emergency services, sewage and water, drainage, and existing man-made waterbodies contained within the residential development. When the calculation of the gross density of a development results in a fractional density, 0.50 of a dwelling unit or greater shall be rounded up to the next whole number and fractions less than 0.50 shall be rounded down. No further rounding is permitted. Fractional density rounding may not be applied to parcels subject to the Gasparilla Island Conservation District Act of 1980 (as amended) or existing, undersized parcels that would require a determination through the Single Family Residence provision of the Lee Plan, Chapter XIII to permit one single-family residence on said parcel. Fractional density rounding may not be applied to parcels of land created (subdivided or combined) after [DATE OF ADOPTION] in a manner that would permit greater gross density than that was permitted (with fractional density rounding) prior to creation of the new parcel. Lands for commercial, office, industrial uses natural water bodies, and other non-residential uses must not be included, except within areas identified on the Mixed Use Overlay Map (Future Land Use Map Series Map 1 page 6 of 8) that

have elected to use the process described in Objective 4.2 and except within areas identified as Mixed-Use Communities as identified on Map 17 where development rights are concentrated or transferred using the process described under Objective 33.3. Within the Captiva community in the areas identified by Policy 13.2.1, commercial development that includes commercial and residential uses within the same project or the same building do not have to exclude the commercial lands from the density calculation. For true mixed use developments located on the mainland areas of the County, the density lost to commercial, office and industrial acreage can be regained through the utilization of TDRs that are either created from Greater Pine Island Coastal Rural future land use category or previously created TDRs. True mixed use developments must be primarily multi-use structures as defined in this Glossary as a mixed use building. If development is proposed in accordance with Policy 2.12.3, residential densities are calculated using the total land area included in the mixed use portion of the development.

HURRICANE VULNERABILITY ZONE - The areas delineated by the area below the elevation of the category 3 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. requiring evacuation in the event of a specified event (hurricane) as determined by the SLOSH computer model (see the October 1991, Hurricane Storm Tide Atlas for Lee County, prepared by the Southwest Florida Regional Planning Council). This zone is subdivided into maximum areas subject to flooding by each of the five storm categories.

PINE ISLAND CENTER – Central Urban-designated lands that are generally located at the arterial intersection of Pine Island Road and Stringfellow Road within the Greater Pine Island Planning Community.

Amendments to Lee Plan Tables

Staff is recommending amendments to Table 1(a), Summary of Residential Densities; Table 2(a), Constrained Roads; and Table 2(b), Recommended Operational Improvements on Constrained Roads. The proposed amendments to Table 1(a) will allow for the increased Maximum Total Densities when using Greater Pine Island TDUs in the Intensive Development, Central Urban, and Urban Community future land use categories consistent with the proposed amendments to the Future Land Use Element. The proposed amendments to Table 2(a) and Table 2(b) identify Stringfellow Road as a constrained road and provide some recommended operational improvements which include turn lanes and bicycle and pedestrian improvements. The recommended amendments to the tables are included in Attachment 1.

PART IV

CONCLUSIONS, FINDINGS OF FACT, AND RECOMMENDATION

A. CONCLUSIONS:

The Greater Pine Island Community Plan was adopted in the Lee Plan as a mechanism to: manage future growth on and around Greater Pine Island; maintain the island's unique natural resources, character and its viable and productive agricultural community; and ensure that island residents and visitors are able to evacuate when a hurricane strike is imminent.

The proposed amendments maintain much of the existing Greater Pine Island Community Plan's intent and preserves the original vision developed by the Greater Pine Island community. The proposed amendments are only to those portions of the current plan that are supported by new data and analysis, or needed to create the Greater Pine Island TDR program, as directed in Objective 16.3 as it currently exists.

The proposed amendments discussed in this staff report and provided in Attachment 1 support and implement the vision of the Greater Pine Island community while also benefiting development in appropriate urban areas of mainland Lee County.

B. BASIS AND RECOMMENDED FINDINGS OF FACT:

- The Greater Pine Island Community Plan update was initiated by the Board of County Commissioners on March 17, 2015.
- Lee County Staff and consultants met with Greater Pine Island residents to discuss the proposed amendments on June 9, 2015, July 13, 2015 and October 14, 2015.
- The Pine Island Community Plan was first included in the Lee Plan in 1989 and was updated in 2003 and 2005.
- The amendments proposed as part of the current update establish the Greater Pine Island TDR and PDR programs. Pine Island Objective 14.6 which was adopted during the 2005 Pine Island Community Plan update directed Lee County to evaluate the creation of a Pine Island TDR/PDR program.
- TDUs created through the Greater Pine Island TDR program will be directed to areas within Lee County that are currently served by adequate public services.
- The proposed amendments require that Lee County maintain maximum hurricane evacuation times for Greater Pine Island of 18 hours.
- The Adjusted Maximum Density identified in the proposed amendments is one unit per acre, the same as the 1 unit per acre that can currently be achieved through Policy 1.4.7. Therefore, the allowable densities within the Coastal Rural future land use category will remain the same.
- The requirements to achieve the Adjusted Maximum Density have been revised to provide property owners with a feasible method to achieve 1 unit per acre under Policy 1.4.7.

C. RECOMMENDATION:

Staff recommends that the Board of County Commissioners *transmit* the proposed amendments as identified in Attachment 1.

**PART IV - LOCAL PLANNING AGENCY
REVIEW AND RECOMMENDATION**

DATE OF PUBLIC HEARING: December 14, 2015

A. LOCAL PLANNING AGENCY REVIEW:

**B. SUMMARY OF LOCAL PLANNING AGENCY RECOMMENDATION AND FINDINGS
OF FACT:**

1. RECOMMENDATION:

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

C. VOTE:

NOEL ANDRESS

TIMOTHY BROWN

DENNIS CHURCH

JIM GREEN

RICK JOYCE

DAVID MULICKA

GARY TASMAN

Text Amendments:**Future Land Use Element:**

POLICY 1.1.2: The Intensive Development areas are located along major arterial roads in Fort Myers, North Fort Myers, East Fort Myers west of I-75, and South Fort Myers. By virtue of their location, the county's current development patterns, and the available and potential levels of public services, they are well suited to accommodate high densities and intensities. Planned mixed-use centers of high-density residential, commercial, limited light industrial (see Policy 7.1.6), and office uses are encouraged to be developed as described in Policy 2.12.3., where appropriate. As Lee County develops as a metropolitan complex, these centrally located urban nodes can offer a diversity of lifestyles, cosmopolitan shopping opportunities, and specialized professional services that befit such a region. The standard density range is from ~~seven~~ eight dwelling units per acre (7–8 du/acre) to fourteen dwelling units per acre (14 du/acre). Maximum total density is twenty-two dwelling units per acre (22 du/acre). The maximum total density may be increased to thirty dwelling units per acre (30 du/acre) utilizing Greater Pine Island Transfer of Development Units.

POLICY 1.1.3: The Central Urban areas can best be characterized as the “urban core” of the county. These consist mainly of portions of the city of Fort Myers, the southerly portion of the city of Cape Coral, and other close-in areas near these cities; and also the central portions of the city of Bonita Springs, Iona/McGregor, Lehigh Acres, and North Fort Myers. This is the part of the county that is already most heavily settled and which has or will have the greatest range and highest levels of urban service--water, sewer, roads, schools, etc. Residential, commercial, public and quasi-public, and limited light industrial land uses (see Policy 7.1.6) will continue to predominate in the Central Urban area with future development in this category encouraged to be developed as a mixed-use, as described in Policy 2.12.3., where appropriate. This category has a standard density range from four dwelling units per acre (4 du/acre) to ten dwelling units per acre (10 du/acre) and a maximum total density of fifteen dwelling units per acre (15 du/acre). The maximum total density may be increased to twenty dwelling units per acre (20 du/acre) utilizing Greater Pine Island Transfer of Development Units.

POLICY 1.1.4: The Urban Community areas are areas outside of Fort Myers and Cape Coral that are characterized by a mixture of relatively intense commercial and residential uses. Included among them, for example, are parts of Lehigh Acres, San Carlos Park, South Fort Myers, Iona/McGregor, Pine Island, and Gasparilla Island. Although the Urban Communities have a distinctly urban character, they should be developed at slightly lower densities. As the vacant portions of these communities are urbanized, they will need to maintain their existing bases of urban services and expand and strengthen them accordingly. As in the Central Urban area, predominant land uses in the Urban Communities will be residential, commercial, public and quasi-public, and limited light industry (see Policy 7.1.6) with future development in this category encouraged to be developed as a mixed-use, as described in Policy 2.12.3., where appropriate. Standard

density ranges from one dwelling unit per acre (1 du/acre) to six dwelling units per acre (6 du/acre), with a maximum total density of ten dwelling units per acre (10 du/acre). The maximum total density may be increased to fifteen dwelling units per acre (15 du/acre) utilizing Greater Pine Island Transfer of Development Units. ~~Any bonus densities approved on the properties added to the Urban Community future land use category in conjunction with CPA2010 00002 must be achieved through use of the transfer of development rights program.~~

POLICY 1.1.5: The Suburban areas are or will be predominantly residential areas that are either on the fringe of the Central Urban or Urban Community areas or in areas where it is appropriate to protect existing or emerging residential neighborhoods. These areas provide housing near the more urban areas but do not provide the full mix of land uses typical of urban areas. ~~The standard residential densities are the same as the Urban Community category. Higher densities, Commercial development greater than neighborhood centers, and industrial land uses are not permitted. This category has a standard density range from one dwelling unit per acre (1 du/acre) to six dwelling units per acre (6 du/acre). The maximum total density may only be increased to eight dwelling units per acre (8 du/acre) utilizing Greater Pine Island Transfer of Development Units. Other forms of bonus densities are not allowed.~~

POLICY 1.4.7: The Coastal Rural land use category is established for the Greater Pine Island Planning Community to address the area's predominantly rural character, coastal environment, existing agricultural uses, limited public infrastructure, and its location within and proximity to the Coastal High Hazard Area and Hurricane Vulnerability Zone. ~~areas will remain rural except for portions of properties where residential lots are permitted in exchange for permanent preservation or restoration of native upland habitats or a commitment, in the form of a perpetual easement, to preserve agricultural activity on existing farmland, on the remainder of the property.~~

The standard maximum density is one dwelling unit per 2.7 acres (1 du/2.7 acres) ~~ten acres (1 DU/10 acres)~~. Maximum densities may will be increased to an "Adjusted Maximum Density" of one dwelling unit per acre (1 du/acre) where 70% of the overall development parcel(s) is: maintained as native habitat; or restored as native habitat; or maintained in agricultural use on those parcels identified as existing farmland on Lee Plan Map 21. ~~as higher percentages of native habitat are permanently preserved or restored on the uplands portions of the site, or a commitment, in the form of a perpetual easement, to preserve agricultural activity on existing farmland, in accordance with the chart below.~~

Residential developments containing ten (10) or more dwelling units must be approved through the planned development rezoning process and as part of the planned development process must: a) demonstrate the implementation of adopted design standards and development approaches that support and maintain the rural character; b) provide notification to property owners of permitted adjacent agricultural uses and their right to continue operations; and c) provide mitigation for impacts to hurricane evacuation clearance times and shelter needs.

Permitted land uses include agriculture, fill-dirt extraction, conservation uses, minimal non-residential land uses, limited to marinas, fish houses, and minor commercial uses that ~~are necessary to provide basic commercial services to~~ serve the island residents and visitors as set forth in Policy 14.4.5, and low density residential uses up to the following densities. Bonus densities are not allowed in this land use category.

Percentage of the on-site uplands that are preserved or restored native habitats or continued in agricultural use on existing farmland	Maximum density if undeveloped land will be permanently preserved or restored as native habitats	Maximum density if undeveloped land will be continued in agricultural use on existing farmland
0%	1 DU/ 10 acres	1 DU/ 10 acres
5%	1 DU/ 9 acres	
10%	1 DU/ 8 acres	1 DU/ 9 acres
15%	1 DU/ 7 acres	
20%	1 DU/ 6 acres	1 DU/ 8 acres
30%	1 DU/ 5 acres	1 DU/ 7 acres
40%	1 DU/ 4 acres	1 DU/ 6 acres
50%	1 DU/ 3 acres	1 DU/ 5 acres
60%	1 DU/ 2 acres	1 DU/ 3 acres
70%	1 DU/ 1 acres	1 DU/ 2 acres

~~Existing farmland is depicted on Map 21. Areas for buffers, lakes, and utilities may consist of up to 10% of the upland preserve areas.~~

POLICY 4.2.4: The Mixed Use Overlay may include areas within the Coastal High Hazard Area when unique public benefits exist. Such benefits may include providing workforce housing options for employees of businesses located on barrier islands when transit is provided between the workforce housing and the employment areas. Bonus densities within the Coastal High Hazard Area may only be achieved through the site-built affordable housing program.

~~**POLICY 4.2.7:** Development located in the Mixed Use Overlay applying Chapter 32—Compact Communities of the Lee County Land Development Code will not be subject to the site location standards listed in Policy 6.1.2 and 6.1.2.7.~~

POLICY 4.3.8: Properties in a Mixed Use Overlay ~~Zone, not within the Coastal High Hazard Area,~~ will be considered as are preferred receiving areas for Transferable Development Rights (TDRs) and will allow these TDRs to serve as a method for ~~obtaining~~ achieving allowable bonus densities. Projects utilizing Greater Pine Island TDUs are eligible for increased maximum total densities, as set forth in this plan, and additional development incentives to encourage a compact and functional development pattern.

POLICY 6.1.2: Commercial development in non-urban future land use categories is limited to minor commercial and located so that the retail use, including buildings and outdoor sales area, is located at the intersection (within 330 feet of the adjoining rights-of-way of the intersecting roads) of arterial and collector roads or two collector roads with direct access to both intersecting roads. Direct access may be achieved with an internal access road to either intersecting roads. On islands, without an intersecting network of collector and arterial roads, commercial development may be located at the intersection of local and collector, or local and arterial, or collector and collector roads. Commercial development must be consistent with the location criteria in this policy except where specifically excepted by this policy or by Policy 6.1.7, or in Lehigh Acres by Policy 32.2.4 or located in the Mixed Use Overlay utilizing Chapter 32 Compact Communities of the Land Development Code.

~~1. Minor Commercial~~

~~a. Major function: Provides for the sale of convenience goods and services.~~

~~b. Location: The retail use, including buildings and outdoor sales area, must be located as follows except where this plan provides specific exceptions (e.g., Policy 6.1.7):~~

~~(1) On or near At the intersection (within 330 feet of the adjoining rights-of-way of the intersection roads) of local and collector, local and arterial, or collector and collector roads. In Commercial Planned Developments where future road improvements that are included in the Capital Improvement Program will enable the property to qualify for the higher level of commercial development specified in Subsection 2 below, and which are conditioned to allow the increased commercial intensity when the roadway actually functions at the higher level of a collector road, the Minor Commercial use may extend beyond 330 feet of such intersections provided the Master Concept plan specifically indicates the phasing of the development from Minor to Neighborhood Commercial use. Proposed interconnections of future internal access roads or driveways servicing only the subject parcel with an arterial or collector will not comply with the requirements of this section;~~

~~(2) At the intersection (as defined below) of collector and arterial or arterial and arterial roads; or,~~

~~(3) Within a residential planned development provided it is located and designed primarily to meet the commercial needs of the residents of the development.~~

~~c. Site Area: Two acres or less.~~

- ~~d. Range of Gross Floor Area: Less than 30,000 square feet.~~
- ~~e. When developed as part of a mixed use planned development, and meeting the use limitations, modified setback standards, signage limitations and landscaping provisions, retail uses may deviate from the locational requirements and maximum square footage limitations, subject to conformance with the Estero Community Plan as outlined in Policies 19.2.3 and 19.2.4, and through approval by the Board of County Commissioners.~~

~~2. Neighborhood Commercial~~

- ~~a. Major function: Provide for the sale of convenience goods and personal services such as food, drugs, sundries, and hardware items.~~
- ~~b. Typical leading tenants: Supermarket and drug store.~~
- ~~c. Location: Must be located as follows (except where this plan provides specific exceptions):~~

~~At the intersection of an arterial and a collector or two arterials so that direct access is provided to both intersecting roads. Such direct access may be provided via an internal access road to either intersecting road. On Lee County's islands where there is no intersecting network of collectors and arterials, neighborhood commercial centers may be located using the standards for minor commercial centers.~~

- ~~d. Site Area: 2 to 10 acres.~~
- ~~e. Range of Gross Floor Area: 30,000 to 100,000 square feet.~~
- ~~f. In that portion of North Fort Myers lying between the Cape Coral city limits and the old S.A.L. railroad grade and north of the junction of the 41s, an exception to the strict adherence to the location standards in subsection (c) may be granted upon the approval of an application for Commercial Planned Development rezoning if the Board of County Commissioners makes a formal finding that the proposed project:
 - ~~(1) is located on an existing arterial road;~~
 - ~~(2) is located at the intersection of that arterial with a future collector or arterial that is indicated on the Official Traffieways Map; and~~
 - ~~(3) will provide (or at least not interfere with) an acceptable alignment for the future roadway which is the justification for the approval, relative to both extensions from the point of intersection with the existing road.~~~~

~~3. Community Commercial~~

- ~~a. Major function: Some functions of neighborhood commercial, in addition to providing for the sale of retail goods such as clothing, variety items, appliances, and furniture.~~
- ~~b. Typical leading tenants: Supermarket, drug store, minor department store, variety store, or discount center.~~
- ~~c. Location: Must be located as follows (except where this plan provides specific exceptions):~~

~~At the intersection of two arterials so that direct access is provided to both intersecting roads. Such direct access may be provided by an internal access road to either intersecting road.~~

~~d. Site Area: 10 to 35 acres~~

~~e. Range of Gross Floor Area: 100,000 to 400,000 square feet.~~

~~f. Notwithstanding prohibitions contained elsewhere in this plan, community commercial development may be granted in a portion of the Suburban land use category in North Fort Myers lying between the Cape Coral city limits and the old S.A.L. railroad grade and north of the junction of the 41s upon the approval of an application for Commercial Planned Development rezoning if the Board of County Commissioners makes a formal finding that the proposed project:~~

~~(1) is located on an existing arterial road;~~

~~(2) is located at the intersection of that arterial with a future arterial road that is indicated on the Official Trafficways Map; and~~

~~(3) will provide (or at least not interfere with) an acceptable alignment for the future roadway which is the justification for the approval, relative to both extensions of that future roadway from the point of intersection with the existing road.~~

~~4. Regional Commercial~~

- ~~a. Major Function: Some functions of community commercial, in addition to providing a full range and variety of shopping goods for comparative shopping (such as general merchandise, apparel, furniture, and home furnishings).~~
- ~~b. Typical leading tenants: One or more full line department stores.~~
- ~~c. Location: Must be located in such a manner as to provide direct access to two and preferably three arterial roads. Such direct access may be via an internal access road to one or more arterials.~~

- ~~d. Site Area: 35 to 100 acres;~~
 - ~~e. Range of Gross Floor Area: 400,000 to 1 million square feet or more.~~
 - ~~f. The Commercial Site location standards described in this policy do not apply to Regional Commercial development approved as a single mixed-use Development of Regional Impact containing regional shopping opportunities on a 483-acre portion of Section 9, Township 47 South, Range 25 East, that is bounded on the west by U.S. 41, on the east by the Seminole Gulf Railroad tracks, on the south by Coconut Road, and on the north by a line located one half mile north of Coconut Road designated Urban Community, provided that the DRI specifically addresses:
 - ~~1) Impacts to flow ways,~~
 - ~~2) Community and Regional Park levels of service,~~
 - ~~3) Roadway levels of service,~~
 - ~~4) Public Schools,~~
 - ~~5) Fire protection services, and~~
 - ~~6) Affordable housing.~~~~
- ~~5. Commercial development at the intersection will extend no more than one quarter mile from the centerline of the intersection and must include proper spacing of access points, with the following exception: in a commercial development approved under the planned development rezoning process, at the intersection may extend beyond one quarter mile from the intersection, provided that:~~
- ~~a. direct access is provided to the development within one quarter mile of the intersection;~~
 - ~~b. an internal access road or frontage road provides access to the intersecting street prior to occupancy of the development; and~~
 - ~~c. all access points meet Land Development Code requirements for safety and spacing.~~
 - ~~d. the retail commercial use, including any outdoor sales, does not extend beyond one half mile from the centerline of the intersection.~~
- ~~6. Any contiguous property under one ownership may, at the discretion of the Board of County Commissioners, be developed as part of the interstate interchange, except in the Mixed Use Interchange district, provided the property under contiguous ownership to be developed as part of the interstate interchange does not extend beyond three-quarters of a mile from the interchange centerpoint. Applications seeking interstate uses outside of the interstate highway interchange area will be evaluated by the Board considering the following factors: percentage of the property within the interstate interchange; compatibility with existing adjacent land uses; and,~~

~~compatibility with surrounding Future Land Use Categories. This is intended to promote planned developments under unified ownership and control, and to insure proper spacing of access points.~~

- ~~7. The location standards specified in Subsections 1-4 will apply to the following commercial developments: shopping centers; free-standing retail or service establishments; restaurants; convenience food stores; automobile dealerships; gas stations; car washes; and other commercial development generating large volumes of traffic. These location standards will not apply to the following: banks and savings and loan establishments without drive-in facilities; hotels or motels; marinas; general, medical, or professional offices; industrial, warehouse, or wholesale development; clubs, as defined in Chapter 34 of the Land Development Code (commercial clubs excepted); and other similar development. The distinction in this subsection between these two major types of commercial uses does not apply in Lehigh Acres, where commercial uses are permitted in accordance with Policy 32.2.4. These location standards will not apply to property in the Mixed Use Overlay when Chapter 32—Compact Communities of the Land Development Code is applied.~~
- ~~8. The standards specified in Subsections 1-4 for location, floor area and site area will serve as guidelines during the rezoning process (allowing limited discretion by the Board of County Commissioners in special cases in which retail uses are the only reasonable use of the parcel in light of its size, its proximity to arterials and collectors, and the nature of the existing and projected surrounding uses, including but not limited to environmental factors) but are strict requirements during the development order process in the case of zoning that existed prior to the effective date of the Lee Plan (December 21, 1984). The other standards specified in Subsections 1-4 will serve generally to indicate the types of development which are likely to fall within each commercial category. Proposed rezonings to commercial zoning districts that include both uses that are subject to the standards in Subsections 1-4 and uses that are not (see Subsection 7) may be found consistent with the Lee Plan by the Board of County Commissioners even if the subject parcel does not comply with the applicable location standard; provided, however, that no development orders will be issued on any such parcel for any use to which the standards in Subsection 1-4 is applicable, and all such development orders must be consistent with the level of service requirements in Policy 95.1.3.~~
- ~~9. The location standards in this policy are not applicable in the following areas:
 - ~~a. In the Interchange land use category~~
 - ~~b. In Lehigh Acres where commercial uses are permitted in accordance with Goal 32~~
 - ~~c. Within the Captiva community in the areas identified by Policy 13.2.1, in Area 9 of the University Community Conceptual Master Plan, or within the Mixed Use Overlay when utilizing Chapter 32—Compact Communities of the Land Development Code.~~~~

- ~~d. In the Density Reduction/Groundwater Resource land use category where some commercial development is permitted under Objective 33.3.~~
- ~~10. The Board of County Commissioners may approve applications for minor commercial centers that do not comply with the location standards for such centers but which are consistent with duly adopted CRA and Community plans.~~
- ~~11. Uses that must comply with Subsections 1-4 may occur at the outside of a T-intersection so long as direct access is provided from at least two points on the adjacent intersecting road, one of which must be an extension of the other intersecting road.~~
- ~~12. Map 19 illustrates the existing Lee County intersections that are deemed to be consistent with the standards in subsections 2 and 3. Neighborhood and community commercial centers must be located at one of the designated intersections, at another intersection utilizing the list of Functional Classification for Arterial and Collector Roads, or in accordance with one of the exceptions under Goal 6, or in Lehigh Acres in accordance with Policies 1.8.1 through 1.8.3. The map shows some intersections with half circles and others with full circles. Half circles indicate that only the two intersection quadrants shown on the map are deemed to be consistent with the standards. All of the quadrants of intersections designated with full circles are deemed to be consistent with the standards. Proposed neighborhood and community commercial centers that are located at the designated intersections are subject to all of the other Goals, Objectives and Policies of this Plan.~~

~~Functional classifications of new or improved streets will be established in accordance with the definitions of arterial and collector roads in Rule 9J-5.003. A list of Functional Classification for Arterial and Collector Roads, consisting of roads that meet this criteria, will be maintained by the Department of Transportation, for county maintained roads, and the Division of Development Services, for privately maintained roads. These functional classification lists will be adopted by Administrative Code. For the purpose of determining compliance with the locational standards of Policy 6.1.2, only those roads identified as Major Collector roads will be considered collector roads. Roads identified as Minor Collector or not included on the list will be considered local roads. The map will be revised annually during the county's regular plan amendment cycle.~~

- ~~13. Freestanding single use commercial retail development of five (5) acres or more does not qualify as a Neighborhood Center as that term is used in the Suburban and Outlying Suburban Future Land Use Categories. (Amended by Ordinance No. 93-25, 94-30, 98-09, 99-15, 99-18, 00-22, 02-02, 07-09, 10-05, 10-16, 10-19, 10-40, 11-18)~~

GOAL 14: GREATER PINE ISLAND. To manage future growth on and around Greater Pine Island so as to: maintain the island's unique natural resources, rural character, and coastal environment; and its support the viable and productive agricultural community and other local

businesses; and to protect the public health, safety and welfare of ~~insure that~~ island residents and visitors ~~have a reasonable opportunity to evacuate when a hurricane strike is imminent.~~ For the purposes of this plan, the boundaries of Greater Pine Island are indicated on Lee Plan Map 1, Page 2 the Future Land Use Map.

OBJECTIVE 14.1: NATURAL RESOURCES. County regulations, policies, and discretionary actions affecting Greater Pine Island will permit no further degradation of estuarine and wetland resources, and ~~no unnecessary loss of~~ will serve the long-term preservation of native upland vegetation and wildlife habitat.

POLICY 14.1.3: Lee County will, ~~by 1996,~~ explore the possibility of estimating the aerial extent and maturity of mangroves in Greater Pine Island for the purpose of providing baseline data necessary to ensure that the cumulative impact of mangrove alteration does not decrease the combination of aerial extent and maturity of mangroves relative to the baseline data.

~~**POLICY 14.1.8:** The county reclassified all uplands on Pine Island previously designated as Rural to a new Coastal Rural designation on the Future Land Use Map. The purposes of this redesignation was to provide a clearer separation between rural and urban uses on Pine Island, to discourage the unnecessary destruction of native upland habitats, and to avoid placing more dwelling units on Pine Island that can be served by the limited road capacity to the mainland. The Coastal Rural designation is designed to provide land owners with maximum flexibility while accomplishing these public purposes.~~

POLICY 14.1.8: Lee County will support practices that reduce pesticides, fertilizers, animal waste, and other pollutants entering Greater Pine Island's estuarine and wetland resources.

POLICY 14.1.9: Lee County will support the use of central sanitary sewer service to reduce potential contamination to groundwater or the surrounding estuarine systems from on-site septic systems.

OBJECTIVE 14.2: ROAD IMPROVEMENTS. The county will continually monitor traffic levels within Greater Pine Island to on Pine Island Road to insure that the sum of the current population plus development on previously approved land plus new development approvals will not exceed maintain hurricane evacuation clearance times in accordance with Objective 14.8.~~the capacity of existing and committed roadways between Pine Island and mainland Lee County.~~

POLICY 14.2.1: Lee County will monitor impacts to the existing transportation infrastructure of Greater Pine Island recognizing the limited access to the community and the seasonal nature of infrastructure demand.

POLICY 14.2.2: Lee County will maintain a maximum hurricane evacuation clearance time of 18 hours for Greater Pine Island in accordance with Objective 14.8. When the

evacuation clearance time reaches 16 hours, Lee County will develop mitigation regulations to address transportation deficiencies, sheltering needs, and other public safety measures. When the evacuation clearance time of 18 hours is exceeded, Lee County will impose the additional mitigation measures.

POLICY 14.2.3: Lee County, in conjunction with the Florida Department of Transportation, will identify hurricane evacuation roadway capacity improvements, including critical intersections and manual traffic control provisions, to maintain evacuation clearance time standards for Greater Pine Island.

~~**POLICY 14.2.1:** The minimum acceptable level of service standard for Pine Island Road between Burnt Store Road and Stringfellow Boulevard is hereby established as LOS D on an annual average peak hour basis and LOS “E” on a peak season, peak hour basis. This standard will be measured at the county's permanent count station on Little Pine Island and using the methodology described in the 1985 Highway Capacity Manual, Special Report 209.~~

~~**POLICY 14.2.2:** In order to recognize and give priority to the property rights previously granted by Lee County for about 6,675 additional dwelling units, the county will keep in force effective development regulations which address growth on Pine Island and which implement measures to gradually limit future development approvals. These regulations will reduce certain types of approvals of at established thresholds prior to the capacity of Pine Island Road 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 reaches 810 peak hour, annual average two way trips, the regulations will restrict 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 reaches 910 peak hour, annual average two way trips, the regulations will provide restrictions on the further issuance of residential development orders (pursuant to chapters 10 of the Land Development Code), or other measures to maintain the adopted level of service until improvements can be made in accordance with this plan. The effect of these restrictions on residential densities must not be more severe than restricting densities to one-third of the maximum density otherwise allowed on that property.~~

~~The 810 and 910 thresholds were based on 80% and 90% of level of service “D” capacity calculated using the 1965 Highway Capacity Manual, as documented in the 2001 Greater Pine Island Community Plan Update. 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.~~

~~**POLICY 14.2.3:** In addition to enforcing the restrictions in Policy 14.2.2, the county will take whatever additional actions are feasible to increase the capacity of Pine Island Road. The following measures will be evaluated:~~

- ~~• The construction of left turn lanes at intersections with local roads in Matlacha.~~
- ~~• 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.~~

~~**POLICY 14.2.4:** The county will make every effort to continue extending the bicycle path to run the entire length of Stringfellow Road. ~~Wherever possible,~~ This path should be designed as a major public amenity similar to the high quality design used for similar to the bicycle path north of Pineland that was completed in 2001.~~

~~**POLICY 14.2.5:** Lee County will investigate the merits of creating a concurrency exception area for a portion of Pine Island Center. The concurrency exception area will promote the expansion of public transportation to and from the Greater Pine Island area.~~

~~**POLICY 14.2.5:** Lee County will continue to evaluate pedestrian safety and circulation, and will seek to minimize pedestrian-vehicular conflicts within the Matlacha Historic District.~~

~~**POLICY 14.2.6:** Lee County will assess the benefits of expanding mass transit services to Greater Pine Island to minimize the number of vehicular trips through Matlacha, and will encourage projects to accommodate bus stops, multi-modal opportunities, ride share lots, water taxis, and/or pedestrian connectivity.~~

OBJECTIVE 14.3: RESIDENTIAL LAND USES. County regulations, policies, and discretionary actions will recognize certain unique characteristics of Greater Pine Island which justify different treatment of existing and future residential areas than in mainland Lee County, as described in the following policies.

~~**POLICY 14.3.1:** Due to the constraints on future development posed by the limited road connections to mainland Lee County, ~~bonus densities~~ only Greater Pine Island TDUs of any kind are ~~not~~ permitted in Greater Pine Island consistent with Table 1(a), Note 4. Only the portion of Greater Pine Island defined as Pine Island Center is eligible to receive Greater Pine Island TDUs. ~~This prohibition includes, housing density bonuses, off-site transfers from environmentally critical areas, and transfer from on-site wetlands at rates above the standard density rates for environmentally critical areas.~~~~

POLICY 14.3.3: Adjusted Maximum Density is not permitted to be located within Coastal Rural designated lands within the Coastal High Hazard Area.

POLICY 14.3.4: Dwelling units may be transferred from parcels that have a future land use designation of Coastal Rural to parcels with urban future land use categories on Greater Pine Island, subject to the following:

1. The receiving and transferring lands are under the same ownership at the time this policy was adopted, and remain under the same ownership at the time units are transferred;
2. The maximum allowable density that may be transferred from Coastal Rural parcels is limited to one dwelling unit per 2.7 acres (1 du/2.7 acres);
3. The property receiving the additional dwelling units is rezoned to a planned development.
4. Density can be allocated across the planned development-zoned property, including those lands within the planned development that are designated Coastal Rural, provided that the density developed within Coastal Rural designated property does not to exceed 1 dwelling unit per 2.7 acres (1 du/2.7 acres);
5. Development rights for each unit transferred from the transferring parcel are extinguished through a recorded instrument acceptable to the County Attorney's Office and provided to the Department of Community Development with the planned development rezoning application for the receiving parcel;
6. The allowable density on the receiving parcels will be the sum of the allowable densities for the receiving and transferring parcel, subject to the Coastal Rural density limitations set forth in subsection 4 above; and
7. Bona fide agricultural uses on the transferring parcel may continue in accordance with Policy 14.6.1.

~~**POLICY 14.3.3:** The county's Land Development Code will continue to state that no building or structure on Greater Pine Island will be erected or altered so that the peak of the roof exceeds thirty-eight (38) feet above the average grade of the lot in question, or forty-five (45) feet above mean sea level, whichever is the lower. No deviations from these height restrictions may be granted through the planned development process. These height restrictions will not be measured from minimum flood elevations nor will increases in building height be allowed in exchange for increased setbacks. Industrial buildings must also comply with these height restrictions.~~

~~**POLICY 14.3.4:** The county Zoning Regulations will continue to allow storage of commercial fishing equipment at a fisherman's private residence as a permitted use in residential districts on Pine Island. Reasonable restrictions not having the effect of prohibiting such storage may be developed.~~

~~**POLICY 14.3.5:** The county will amend its land development code to provide specific regulations for neighborhood connectivity and walls and gates on Greater Pine Island if an acceptable proposal is submitted by the Greater Pine Island community. These~~

~~regulations would require interconnections between adjoining neighborhoods wherever feasible and would no longer allow perimeter walls around larger developments.~~

OBJECTIVE 14.4: COMMERCIAL LAND USES. County regulations, policies, and discretionary actions will recognize certain unique characteristics of Greater Pine Island which justify different treatment of existing and future commercial areas than in mainland Lee County, as described in the following policies.

POLICY 14.4.1: ~~Future Urban Areas at in Pine Island Center is are~~ targeted for most future commercial and industrial uses as permitted by other portions of this plan. Non-residential developments within Pine Island Center are encouraged to provide employment opportunities; serve the day to day needs of residents and visitors; demonstrate a positive impact on traffic patterns within Greater Pine Island; and reduce the number of vehicular trips through Matlacha.

POLICY 14.4.2: Commercial development at ~~other locations outside on~~ Greater Pine Island Center, but within future urban land use categories (such as ~~Bokeelia, Pineland, Matlacha, and St. James City~~) should be limited must be sited and designed to minimize impacts to residential and adjacent agricultural uses. Permitted uses should be restricted to the following: to marinas; fish houses; and minor commercial uses to serve the day to day needs of local residents and island visitors. Such development must be sited and designed to minimize disruptive influences to the greatest degree possible.

POLICY 14.4.3: The county will ~~expand the commercial design standards in its land development code to~~ provide specific architectural and site design standards for Greater Pine Island in the Land Development Code if an acceptable proposal is submitted by the Greater Pine Island community. These standards ~~must; would~~ promote but not mandate rehabilitation over demolition; ~~require smaller rather than larger buildings~~ address the size and scale of building mass in relationship to the built and natural environment; establish community-specific architectural standards in support of Greater Pine Island's coastal rural character; avoid standardized franchise buildings; preserve mature trees wherever possible; and encourage the location of off-street parking to the side and rear of buildings to preserve viewsheds along public roadways; require large windows and forbid most blank walls; and encourage metal roofs and other features of traditional "Old Florida" styles. The new commercial design standards will reflect the different characteristics of Bokeelia, Pineland, Matlacha, and St. James City. Deviations from these standards may not be granted unless the request meets the County approval criteria for variances set forth in Chapter 34 of the Land Development Code.

POLICY 14.4.4: ~~The county will expand its current sign regulations to include specific standards for Greater Pine Island if an acceptable proposal is submitted by the Greater Pine Island community. These standards would reduce the size of ground-mounted signs, discourage or disallow internally lit box signs, allow wall signs on buildings near the right of way, and allow small directional signs on Stringfellow Road for businesses not visible from the road.~~

~~**POLICY 14.4.5:** The county will establish a prioritized schedule for an effort to rezone land to zoning districts that properly reflect its development potential under the Lee Plan.~~

POLICY 14.4.65: In the Coastal Rural future land use category, non-residential development is ~~limited~~ restricted to minor commercial development. ~~New commercial~~ All zoning requests for commercial projects must utilize the ~~Planned Development~~ rezoning process and be consistent with the following ~~limitations~~:

- Total building floor area is limited to 5,000 square feet, unless the development can demonstrate compatibility with adjacent uses, and a positive impact on traffic patterns within Greater Pine Island.
- Development must not exceed two acres of impervious area.
- Uses are limited to those that reflect the Coastal Rural character and unique culture of Greater Pine Island, such as animal clinics, bait and tackle shops, ecotourism, farm and feed supply stores, food stores, lawn and garden supply stores, restaurants (excluding fast food), roadside/produce stands, speciality retail, and plant nurseries.
- Buildings exceeding 5,000 square feet that are lawfully existing or approved as of October 1, 2009 will be deemed vested for the approved and existing square footage for the life of the structure despite a change in use.

~~**POLICY 14.4.7:** During the Comprehensive Plan Evaluation and Appraisal Report process the County will analyze commercial rezoning and commercial development in the Coastal Rural areas and assess their impacts to the Greater Pine Island Community and identify any needed policy modifications.~~

OBJECTIVE 14.6: AGRICULTURAL USES GREATER PINE ISLAND TRANSFER OF DEVELOPMENT RIGHTS PROGRAM. To promote and preserve the rural character of Pine Island Lee County will ~~strive to foster a viable and productive agricultural community on the island. Lee County will pursue the incorporation of Greater Pine Island's incorporate several land use "tools" such as purchase and transfer of development rights programs into the Lee County Land Development Code to preserve agricultural uses on Pine Island.~~

POLICY 14.6.1: Lee County will amend its Land Development Code to implement Transfer of Development Rights (TDR) and Purchase of Development Rights (PDR) programs for Greater Pine Island. The new programs will create incentives for property owners within Greater Pine Island to transfer development rights associated with their parcels to: receiving lands outside of the planning community; future urban areas within the planning community that are targeted for development in accordance with these provisions; or, Lee County. The programs will allow for continued agricultural uses on sending lands, in addition to limited non-residential uses that directly support the agricultural operations.

~~**POLICY 14.6.1:** Lee County will maintain a map (Map 21) of all existing farmland on Pine Island. These mapped existing farmlands and Pine Island lands containing indigenous vegetation are the primary targeted sending areas for the creation of transfer of development rights (TDR) on Pine Island.~~

~~**POLICY 14.6.2:** The county will administer the TDR program and will develop clear and concise forum to disseminate program information and records, including but not limited to a: TDR program website that will provide general program information, rules and guidelines; TDU administrative determination application; county-approved form of conservation easement; certified TDU database with ownership information; and, for-sale TDU clearinghouse information for those individuals that request to be included within the TDU clearinghouse program.~~

~~**POLICY 14.6.23:** Lee County, by 2009, will evaluate creating a Purchase of Development Rights Program with the objective of preserving Pine Island agricultural uses.~~

~~**POLICY 14.6.3:** By 2007 Lee County will amend the Lee County Land Development Code to establish a Pine Island Transfer of Development Rights (TDR) program to supplement the existing wetland TDR program. The program will be encouraged for properties depicted on Map 21 as well as other Pine Island lands as promoting reduced densities in the Coastal High Hazard Area.~~

~~**POLICY 14.6.4:** The property owners of lands designated Intensive Development, Central Urban, or Urban Community are eligible to receive Pine Island TDRs. The property owners of lands designated Suburban and Outlying Suburban are eligible to receive Pine Island TDRs consistent with the Lee Plan's definition of Density and if approved through the planned development rezoning process. The land development code will maintain several approval processes such as by right, administrative and planned development approval. Developments receiving TDR units will be evaluated for the following criteria: compact site design, innovative open space design, well designed pedestrian/bicycle connections to commercial and employment areas, locations on or a walkable distance to mass transit service, and mixed use buildings. Utilization of in-fill and brownfield sites are encouraged. Land Development Code incentives will be given to projects that incorporate concepts from traditional neighborhood design, transit oriented development, and new urbanism principles.~~

~~**POLICY 14.6.5:** Participation in the Pine Island TDR by right and administrative approval processes for receiving sites requires that the subject property be already conventionally zoned in a zoning district that would permit the proposed development consistent with allowable densities and with the zoning district's lot size, setback, open space and height requirements. The by right process will be limited to adding one additional dwelling unit to a receiving parcel that is one acre or less in size. If the receiving parcel is larger than one acre, TDR units may be used to add one dwelling unit per acre by right. The resulting density may not exceed the maximum total density range for the land use category of the subject site.~~

~~**POLICY 14.6.6:** Adding Pine Island TDR units in excess of one dwelling unit per acre in conventional zoning districts requires administrative approval. The Lee County Department of Community Development director may administratively approve the use of TDR units to increase the density of a proposed development provided that the proposed development is: in compliance with the Lee Plan; zoned for the type and number of dwelling units proposed to be constructed; designed so that the resulting development does not have substantially increased intensities of land uses along its perimeter, unless adjacent to existing or approved development of a similar intensity; in a location where the additional traffic will not be required to travel through areas with significantly lower densities before reaching the nearest collector or arterial road; in a location outside of the Category 1 Storm Surge Zone for a land falling storm as defined by the October 1991 Hurricane Storm Tide Atlas for Lee County prepared by the Southwest Florida Regional Planning Council; not in a location where existing and committed public facilities are so overwhelmed that a density increase would be contrary to the overall public interest, and; will not decrease required open space, buffering, landscaping and preservation areas or cause adverse impacts on surrounding land uses.~~

~~**POLICY 14.6.7:** The Land Development Code will be amended to specify that Pine Island TDRs may be utilized through the Planned Development approval and amendment rezoning processes for land owners seeking to add additional dwelling units utilizing TDR units. The Code will specify that the application for the rezoning and the request to utilize TDR units may be submitted at the same time for concurrent review.~~

~~**POLICY 14.6.8:** The generation rate for Pine Island TDRs will be limited by the Land Development Code to two Transfer of Development Rights per acre for the Coastal Rural land use category, to six Transfer of Development Rights per acre for the Future Urban land use categories, and one Transfer of Development Right per five acres of wetland. The Land Development Code will be amended to establish a creation of development rights process as well as a receiving process.~~

OBJECTIVE 14.8: HURRICANE PREPAREDNESS, EVACUATION AND MITIGATION. Lee County will provide for the protection of Greater Pine Island residents, visitors and property from the physical and economic effects of hurricanes and tropical storms. The following policies will supplement Goal 109 of the Conservation and Coastal Management Element of this plan, as it relates to the hurricane preparedness, evacuation, mitigation and sheltering for residents of Greater Pine Island.

POLICY 14.8.1: Lee County will work to maintain hurricane evacuation clearance times for Greater Pine Island, and continue to incorporate those times into the county-wide evacuation decision-making planning.

POLICY 14.8.2: Lee County will continue to include Greater Pine Island specific issues in its Comprehensive Emergency Management Plan (CEMP) and related evacuation planning documents.

POLICY 14.8.3: In the event of a pending hurricane (defined as Categories 1-5) Lee County shall maintain an evacuation clearance time of 18 hours for the resident population of Greater Pine Island. The evacuation clearance time is defined as the time necessary to safely evacuate people from the point when the evacuation order is given until the last evacuee can either leave Greater Pine Island, or arrive at safe shelter within Lee County. In order to maintain the 18-hour evacuation clearance time for residents, mandatory evacuation of non-residents, visitors, recreational vehicles, travel trailers (transient and non-transient) may occur in a phased approach to address evacuation in advance of tropical storm winds in accordance with the CEMP.

POLICY 14.8.4: Lee County will continue to include Greater Pine Island in its year-round public information program focused on disaster preparedness. The program will include information on hurricane risk, the need for timely evacuation, the availability and location of hurricane shelters and the actions necessary to minimize property damage to protect human life.

POLICY 14.8.5: New residential development and redevelopment within, or partially within, the Hurricane Vulnerability Zone must mitigate hurricane sheltering and evacuation impacts in accordance with Chapter 2, Article XI of the Land Development Code.

POLICY 14.8.6: Shelters will not be built on barrier or coastal islands within Greater Pine Island. Where financially feasible, geographically appropriate, and in the interest of public health, safety and welfare, Lee County will make every effort to construct new public buildings to hurricane shelter standards.

POLICY 14.8.7: Where feasible, Lee County will evaluate the purchase of lands within Greater Pine Island identified as Coastal High Hazard in order to reduce the expansion of new development within vulnerable areas.

POLICY 14.8.8: The county will evaluate alternative mechanisms to improve evacuation clearance times within the planning community, including but not limited to: access control; mandatory evacuation notices; one-way evacuation routes; and the preparation and implementation of community-specific mitigation measures.

POLICY 14.8.9: Deviations relating to setbacks, lot coverage, and density within the Coastal High Hazard Area may not be granted, unless the request meets the County approval criteria for variances set forth in Chapter 34 of the Land Development Code.

Transportation Element:

OBJECTIVE 37.1: GENERAL STANDARDS. ~~From time of plan adoption, new facilities will be added at a rate equal to growth demands.~~ Establish non-regulatory level of service (LOS) standards on county and state transportation facilities within Lee County. Cooperate with municipalities on the facilities maintained by Lee County within the municipalities and with FDOT on state transportation facilities.

POLICY 37.1.1: ~~The minimum acceptable peak hour, peak season, peak direction roadway levels of service (see also Policy 95.1.3) will be as follows:~~

Minimum Level of Service	Peak Hour/Peak Season/Peak Direction
State & County Maintained Roads (Excluding FHHS, SIS and TRIP Roads)	
Expressways (Limited Access Facilities)	D
Controlled Access Arterials	E
Arterials	E
Major Collectors	E
Minor Collectors	E
FHHS Roads⁽⁴⁾	
I-75	
Collier County to SR 78	D
SR 78 to Charlotte County	C
SR 80 (Palm Beach Boulevard)	
I-75 to Werner Dr.	D
Werner Dr. to Hendry County	C
SIS Roads	
SR 82 (Immokalee Road)	
Lee Boulevard to Commerce Lakes Dr.	D
Commerce Lakes Dr. to Hendry County	C
Airport Connector	
I-75 to Ben Hill Griffin Parkway	D
TRIP Funded Roads	
Colonial Boulevard	
I-75 to Lee Boulevard	D
Imperial Parkway	
E. Terry Street to Bonita Bill Dr.	D
Six Mile Cypress Parkway	
Daniels Parkway to Winkler Avenue Extension	D

⁽⁴⁾ ~~The County may seek variances to the level of service standards for the FHHS facilities as authorized under Section 120.542, F.S. If granted, the level of service standards for I-75 and SR 80 will be as approved by FDOT in the Order Granting Petition for Variance.~~

LOS “E” is the minimum acceptable LOS for principal and minor arterials, and major collectors on county-maintained transportation facilities. Level of service standards for the State Highway System during peak travel hours are “D” in urbanized areas and “C” outside urbanized areas.

The minimum acceptable level of service as ~~specified above~~ for Pine Island Road between Burnt Store Road and Stringfellow Boulevard is also subject to Objective 14.2 Policies 14.2.1 and 14.2.2.

For minimum acceptable levels of service determination, the peak season, peak hour, peak direction condition will be defined as the 100th highest volume hour of the year in the predominant traffic flow direction. The 100th highest hour approximates the typical

peak hour during the peak season. Peak season, peak hour, peak direction conditions will be calculated using K-100 factors and “D” factors from the nearest, most appropriate county permanent traffic count station. (Amended by Ordinance No. 98-09, 99-15, 00-08, 07-09, 10-36)

POLICY 37.3.1: Lee County will measure traffic volumes and capacity on all roads on a roadway segment-by-segment basis, except for constrained roads and where alternatives are established pursuant to Chapter 163.3180, F.S., ~~and Rule 9J-5.0055, F.A.C.~~ Transportation for Pine Island will be governed by the policies under Objective 14.2 of this comprehensive plan. (Amended by Ordinance No. 98-09, Amended and Relocated by Ordinance No. 99-15, Amended by Ordinance No. 00-08, 07-09, 14-09)

Capital Improvements Element:

POLICY 95.1.3: MINIMUM ACCEPTABLE LEVEL-OF-SERVICE STANDARDS: Level of- service (LOS) standards will be the basis for planning the provision of required public facilities within Lee County. Some of these standards will be the basis for determining the adequacy of public facilities for the purposes of permitting new development. The "Minimum Acceptable Level of Service" will be the basis for facility design, for setting impact fees, and (where applicable) for the operation of the Concurrency Management System (CMS).

Two classes of standards are established. "Regulatory" standards are those which apply to facilities identified in state law or inter-local agreements as being essential to support development. These consist of facilities for the provision of public schools, potable water, sanitary sewer, disposal of solid waste, and stormwater management. (It is the intent of this element that these standards will be the same as those established in the various relevant plan elements. If there are discrepancies between standards contained in the elements and standards as set forth herein, the standards as set forth herein will govern.) The second class, "non-regulatory" standards, are those which apply to other facilities for which the county desires to set standards for its own use. These consist of facilities for the provision of community and regional parks, and transportation. Compliance with non-regulatory standards will not be a requirement for continued development permitting, but will be used for facility planning purposes.

No changes to number 1 through 6

7. Roadway Facilities:

Los “E” is the standard LOS for principal and minor arterials, and major collectors on county-maintained transportation facilities. Level of service standards for the State Highway System during peak travel hours are D in urbanized areas and C outside urbanized areas.

Due to scenic, historic, environmental, aesthetic, and right-of-way characteristics and considerations, Lee County has determined that certain roadway segments will not be widened. Therefore, reduced peak hour levels of service will be accepted on those

constrained roads within unincorporated Lee County as a trade-off for the preservation of the scenic, historic, environmental, and aesthetic character of the community. These constrained roads are defined in Table 2(a).

~~The minimum acceptable level of service as specified above for Pine Island Road between Burnt Store Road and Stringfellow Boulevard is subject to Policies 14.2.1 and 14.2.2.~~

~~For minimum levels of service determination, the peak season, peak hour, peak direction condition will be defined as the 100th highest volume hour of the year in the predominant traffic flow direction. The 100th highest hour approximates the typical peak hour during the peak season. Peak season, peak hour, peak direction conditions will be calculated using K-100 factors and "D" factors from the nearest, most appropriate county permanent traffic count station.~~

Conservation and Coastal Management Element:

GOAL 109: EVACUATION AND SHELTER. To provide evacuation and shelter capabilities adequate to safeguard the public against the effects of hurricanes and tropical storms

OBJECTIVE 109.1: EVACUATION. By 2030 Lee County will work towards attaining a level of service for out of county hurricane evacuation for a Category 5 storm event that does not exceed 18 hours.

POLICY 109.1.1: The county will assess the impact of all new residential development upon the projected hurricane evacuation network and upon projected hurricane evacuation times, and will require mitigation either through structural (on-site, off-site shelter) provisions or through non-structural methods or techniques. Pursuant to Policy 14.8.4, all new residential development and redevelopment within the Hurricane Vulnerability Zone in Greater Pine Island must mitigate hurricane sheltering and evacuation impacts in accordance with Chapter 2, Article XI of the Land Development Code.

POLICY 109.1.2: ~~By 1995,~~ periodic updates of the hurricane evacuation portion of the Comprehensive Emergency Management Plan will be coordinated with computer transportation modeling to identify critical roadway links.

POLICY 109.1.3: Critical roadway links causing congestion on evacuation routes will receive high priority for capital improvement expenditures.

POLICY 109.1.4: New or replacement bridges on evacuation routes spanning major or marked navigable waterways will be designed, constructed, and operated to adequately accommodate the safe and timely evacuation needs of both motor vehicle and marine traffic. For the purposes of accommodating hurricane evacuation, a new bridge to Pine Island is strongly discouraged due to the costs, design constraints, and potential impacts to growth patterns within Greater Pine Island.

POLICY 109.1.5: Comprehensive plan amendments that increase density within coastal high hazard areas must meet one of the following criteria in accordance with Section 163.3178(9), F.S.:

1. The proposed amendment will not exceed a 16 hour out of county hurricane evacuation time for a category 5 storm event; or
2. Maintain a 12 hour evacuation time to shelter for a Category 5 storm event and ensure shelter space is available to accommodate the additional residents of the development allowed by the proposed comprehensive plan amendment; or
3. Provide appropriate mitigation to satisfy the provisions of either of the previous two paragraphs, which may include without limitation, the payment of money, contribution of land, or construction of hurricane shelters and transportation facilities. The developer must enter into a binding agreement to memorialize the mitigation plan prior to adoption of the plan amendment.
4. Any comprehensive plan amendment that increases density within Coastal High Hazard Areas in Greater Pine Island must meet one of the above criteria, in addition to the community-specific requirements set forth in Goal 14 of this plan.

Glossary:

COASTAL HIGH HAZARD AREA – The area below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model and delineated by Map 5 of the Lee Plan as Future Land Use Map Series required by Chapter 163.3177(6)(a)10.c.(VI), F.S.

COMMERCIAL DEVELOPMENT,

MINOR- Commercial development that provides for the sale of convenience goods and services and contains less than 30,000 square feet of gross floor area.

NEIGHBORHOOD– Commercial development that provides for the sale of convenience goods and personal services, such as food, drug, sundries, and hardware items and has a gross floor area range of 30,000 to 100,000 square feet.

COMMUNITY– Commercial development that provides for the sale of retail goods such as clothing, variety items, appliances, and furniture as well as goods that may be found in a neighborhood commercial development and has a gross floor area range of 100,000 to 400,000 square feet.

REGIONAL– Commercial development that provides some functions of community commercial, in addition to providing a full range and variety of shopping goods for comparative shopping (such as general merchandise, apparel, furniture, and home furnishings) and has a gross floor area range of 400,000 to 1 million square feet.

DENSITY – The number of residential dwelling or housing units per gross acre (du/acre). Densities Specified in this plan are gross residential densities. For the purpose of calculating gross residential density, the total acreage of a development includes those lands to be used for residential uses, and includes land within the development proposed to be used for streets and street rights of way, utility rights-of-way, public and private parks, recreation and open space, schools, community centers, and facilities such as police, fire and emergency services, sewage and water, drainage, and existing man-made waterbodies contained within the residential development. When the calculation of the gross density of a development results in a fractional density, 0.50 of a dwelling unit or greater shall be rounded up to the next whole number and fractions less than 0.50 shall be rounded down. No further rounding is permitted. Fractional density rounding may not be applied to parcels subject to the Gasparilla Island Conservation District Act of 1980 (as amended) or existing, undersized parcels that would require a determination through the Single Family Residence provision of the Lee Plan, Chapter XIII to permit one single-family residence on said parcel. Fractional density rounding may not be applied to parcels of land created (subdivided or combined) after [DATE OF ADOPTION] in a manner that would permit greater gross density than that was permitted (with fractional density rounding) prior to creation of the new parcel. Lands for commercial, office, industrial uses natural water bodies, and other non-residential uses must not be included, except within areas identified on the Mixed Use Overlay Map (Future Land Use Map Series Map 1 page 6 of 8) that have elected to use the process described in Objective 4.2 and except within areas identified as Mixed-Use Communities as identified on Map 17 where development rights are concentrated or transferred using the process described under Objective 33.3. Within the Captiva community in the areas identified by Policy 13.2.1, commercial development that includes commercial and residential uses within the same project or the same building do not have to exclude the commercial lands from the density calculation. For true mixed use developments located on the mainland areas of the County, the density lost to commercial, office and industrial acreage can be regained through the utilization of TDRs that are either created from Greater Pine Island Coastal Rural future land use category or previously created TDRs. True mixed use developments must be primarily multi-use structures as defined in this Glossary as a mixed use building. If development is proposed in accordance with Policy 2.12.3, residential densities are calculated using the total land area included in the mixed use portion of the development.

HURRICANE VULNERABILITY ZONE - The areas delineated by the area below the elevation of the category 3 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. ~~requiring evacuation in the event of a specified event (hurricane) as determined by the SLOSH computer model (see the October 1991, Hurricane Storm Tide Atlas for Lee County, prepared by the Southwest Florida Regional Planning Council). This zone is subdivided into maximum areas subject to flooding by each of the five storm categories.~~

PINE ISLAND CENTER – Central Urban-designated lands that are generally located at the arterial intersection of Pine Island Road and Stringfellow Road within the Greater Pine Island Planning Community.

TABLE 1(a)
SUMMARY OF RESIDENTIAL DENSITIES¹

FUTURE LAND USE CATEGORY	STANDARD OR BASE DENSITY RANGE		BONUS DENSITY
	MINIMUM ² (Dwelling Units per Gross Acre)	MAXIMUM (Dwelling Units per Gross Acre)	MAXIMUM TOTAL DENSITY ³ (Dwelling Units per Gross Acre)
Intensive Development ¹⁴	8	14	22
Central Urban ¹⁵	4	10	15
Urban Community ^{4,5,16}	1	6	10
Suburban ¹⁷	1	6	No Bonus
Outlying Suburban	1	3	No Bonus
Sub-Outlying Suburban	1	2	No Bonus
Rural ¹⁰	No Minimum	1	No Bonus
Outer Islands	No Minimum	1	No Bonus
Rural Community Preserve ⁶	No Minimum	1	No Bonus
Open Lands ⁷	No Minimum	1 du/5 acres	No Bonus
Density Reduction/Groundwater Resource	No Minimum	1 du/10 acres	No Bonus
Wetlands ⁸	No Minimum	1 du/20 acres	No Bonus
New Community	1	6	No Bonus
University Community ⁹	1	2.5	No Bonus
Destination Resort Mixed Use Water Dependent ¹¹	6	9.36	No Bonus
Burnt Store Marina Village ¹²	No Minimum	160 Dwelling Units; 145 Hotel Units	No Bonus
Coastal Rural ¹⁸	No Minimum	1 du/2.7 acres	No Bonus

CLARIFICATIONS AND EXCEPTIONS

¹See the glossary in Chapter XII for the full definition of “density”.

²Adherence to minimum densities is not mandatory but is recommended to promote compact development.

³These maximum densities may be permitted by transferring density from non-contiguous land through the provisions of the ~~Bonus Density Program identified in chapter 2 of the Land Development Code Housing Density Bonus Ordinance (No. 89-45, as amended or replaced)~~ and the ~~Transfer of Development Rights Ordinance (No. 86-18, as amended or replaced)~~.

⁴Within the Future Urban Areas of Pine Island Center, rezonings that will allow in excess of 3 dwelling units per gross acre must “acquire² the density above 3 dwelling units per gross acre utilizing ~~TDRs~~ TDUs that were created from ~~Greater Pine Island Coastal Rural or Greater Pine Island Urban Categories (see Policy 14.3.4)~~, or transfer dwelling units in accordance with Policy 14.3.5.

⁵In all cases on Gasparilla Island, the maximum density must not exceed 3 du/acre.

⁶Within the Buckingham area, new residential lots must have a minimum of 43,560 square feet.

⁷The maximum density of 1 unit per 5 acres can only be approved through the planned development process (see Policy 1.4.4), except in the approximately 135 acres of land lying east of US41 and north of Alico Road in the northwest corner of Section 5, Township 46, Range 25.

⁸Higher densities may be allowed under the following circumstances where wetlands are preserve on the subject site:

- (a) If the dwelling units are relocated off-site through the provision of Transfer of Development Rights Ordinance (86-18, as amended or replaced); or
- (b) Dwelling units may be relocated to developable contiguous uplands designated Intensive Development, Central Urban, Urban Community, Suburban, Sub-Outlying Suburban, from preserved freshwater wetlands at the same underlying density as permitted for those uplands. Impacted wetlands will be calculated at the standard Wetlands density of 1 dwelling units per 20 acres. Planned Developments or Development Orders approved prior to October 20, 2010 are permitted the density approved prior to the adoption of CPA2008-18.

⁹Overall average density for the University Village sub-district must not exceed 2.5 du/acre. Clustered densities within the area may reach 15 du/acre to accommodate university housing.

¹⁰In the Rural category located in Section 24, Township 43 South, Range 23 East and south of Gator Slough, the maximum density is 1 du/2.25 acres.

¹¹Overall number of residential dwelling units is limited to 271 units in the Destination Resort Mixed Use Water Dependent district.

¹²The residential dwelling units and hotel development portions of this redevelopment project must be located outside of the designated Coastal High Hazard Area in accordance with Lee Plan, Map 5.

¹³See Policies 33.3.2, 33.3.3, and 33.3.4 for potential density adjustments resulting from concentration or transfer of development rights.

¹⁴The maximum total density may be increased to 30 du/acre utilizing Greater Pine Island TDUs.

¹⁵The maximum total density may be increased to 20 du/acre utilizing Greater Pine Island TDUs.

¹⁶The maximum total density may be increased to 15 du/acre utilizing Greater Pine Island TDUs.

¹⁷The maximum total density may be up to 8 du/acre when utilizing Greater Pine Island TDUs.

¹⁸The standard maximum density is 1 du/2.7 acres unless the “Adjusted Maximum Density” of 1 du/acre is achieved in accordance with requirements of Policy 1.4.7 and Chapter 33 of the Land Development Code.

TABLE 2(a)
CONSTRAINED ROADS
STATE AND COUNTY ROADS

ROADWAY	SEGMENT	MAINTENANCE RESPONSIBILITY	CONSTRAINED CONDITIONS
Captiva Road	Blind Pass/South Seas Plantation	County	ROW, Scenic, Aesthetic, Environmental
Daniels Parkway	Metro Parkway/I-75	County	ROW
Estero Boulevard	Center Street/Big Carlos Pass	County	ROW, Scenic, Aesthetic
Hickory Boulevard	Big Carlos Pass/Bonita Beach Road	County	Scenic, Aesthetic, Environmental
McGregor Boulevard (SR 867)	Colonial Boulevard/College Parkway	State	ROW, Scenic, Aesthetic, Historic, Environmental
Pine Island Road (Matlacha)	Shoreview Drive/Little Pine Island	County	ROW, Scenic, Aesthetic, Historic, Environmental
San Carlos Boulevard (SR 865) (Mantanzas Bridge)	Center Street/Main Street	State	ROW, Scenic, Aesthetic, Environmental
US 41	South of Daniels Road/North Airport Road	State	ROW
Gulf Boulevard	Boca Grande	County	Scenic, Aesthetic, Historic, Environmental
<u>Stringfellow Road</u>	<u>8th Avenue/Main Street</u>	<u>County</u>	<u>Environmental</u>

TABLE 2(b)

RECOMMENDED OPERATIONAL IMPROVEMENTS ON CONSTRAINED ROADS

ROADWAY	SEGMENT (or INTERSECTION)	AUXILIARY LANES	GEOMETRICS	SIGNAL TIMING PROGRESSION	MISC.
Captiva Road	Blind Pass/South Seas Plantation	(1)	(1)	(1)	
Daniels Parkway	Metro Parkway/I-75	Provide frontage road connections	Potential removal of direct left turns @ Brookshire/International (2); Close median openings at minor side street approaches (2); Potentially eliminate EB left turn and NB/SB left turns at Danport Blvd. signal (2).	Continue monitoring/ updating of signal system.	Access management
Estero Boulevard	Center Street/Big Carlos Pass	(1)	(1)	(1)	
Hickory Boulevard	Big Carlos Pass/Bonita Beach Road	Left turn lane at new park entrance on Lovers Key.	(1)	(1)	
McGregor Boulevard (SR 867)	Colonial Boulevard/Winkler Road	Provide a NB right-turn lane Davis Dr. to Colonial Blvd. (2)	(1)	(1)	
Pine Island Road (Matlacha)	Shoreview Drive/Little Pine Island	Construct left turn lanes at intersections with local roads, where feasible	(1)	(1)	
San Carlos Boulevard (SR 865)	Center Street/Main Street	(1)	(1)	Consider alternating signal for southbound approach lands and signal/lane controls to create a preferential transit lane.	Encourage transit ridership

US 41	S. of Daniels Parkway/North Airport Road	(1)	(1)	Continue monitoring/ updating of signal system	Maintain access control. Pursue installation of bike paths through MPO process.
Gulf Boulevard	Boca Grande	(1)	(1)	(1)	
<u>Stringfellow Road</u>	<u>8th Avenue/Main Street</u>	<u>Improved route efficiency, shelters</u>	<u>Greenway, add/widen sidewalks, improved pedestrian crossings in activity centers</u>	<u>Bicycle lanes or shared lanes</u>	<u>Turn lanes. On-street parking</u>

Footnotes:

- (1) ~~No specific operational improvement identified at this time, but operational improvements may still be possible and warranted in relation to development approval requests.~~ Additional operational improvements may still be possible and warranted in relation to development approval requests.
- (2) *Indicates that the recommended improvement should increase ~~the~~ estimated service volume multimodal system capacity of the facility.*

CPA2015-00013

PINE ISLAND COMMUNITY PLAN UPDATE

DATA AND ANALYSIS



Memorandum

To: Michael Jacob, Mikki Rozdolski & Brandon Dunn
From: Alexis Crespo
cc: Jeffrey Hinds
Date: December 2, 2015
Subject: Greater Pine Island Community Plan Update Summary

In March 2015, the County engaged a consultant team to assist in the preparation of the Greater Pine Island community plan update, which included the following members:

- Jeffrey Hinds of Smolker, Bartlett, Schlosser, Loeb & Hinds, P.A. (legal counsel)
- Alexis Crespo of Waldrop Engineering, P.A. (land use planning)
- Greg Stuart of Stuart and Associates Planning and Design Services (land use planning)
- Karl Passetti of Kittelson & Associates, Inc. (transportation planning)
- Daniel Trescott of Trescott Planning Services, LLC (hurricane evacuation & mitigation)

In preparation of the Update, the county and consultant team sought to maintain the bulk of the adopted Lee Plan goal, objectives and policies, and Land Development Code regulations in order to preserve the original vision developed by the Greater Pine Island community. The Update proposes amendments to only those portions of the current plan that were identified as inconsistent with recent changes to Florida Statutes, including modifications to concurrency regulations and property rights protections under the Bert Harris Act, and to minimize future legal liability under the existing policies and land use regulations.

A. AMENDMENT SUMMARY

The Greater Pine Island community plan update (“Update”) addresses the following four (4) general areas:

- **Transportation Concurrency**

Hurricane evacuation times and roadway constraints, especially at the Matlacha Bridge, continue to be of concern to the Greater Pine Island community. The consultant team identified issues with the antiquated methodology associated with the “810/910 Rule” in the current Lee Plan and LDC regulations, namely its reliance on the 1965 Highway Capacity Manual (HCM) methodology. It is important to note that the HCM has been updated in 1985, 2000 and 2010, and has undergone numerous improvements as the understanding of traffic operations, the design of two-lane highways, and the design of motor vehicles have improved over the past 50 years.

The Update proposes to replace the “810/910 Rule with a new and enforceable standard tied directly to the interrelated concern of hurricane evacuation timing. The intent of this change is to apply an enforceable standard that relies on the current methodology for analyzing roadway capacity on Pine Island Road. The Update also includes a mechanism for monitoring capacity and evacuation times to ensure appropriate implementation of the regulations.

- **Hurricane Evacuation**

The Update provides robust policy and land use regulations to address the expressed concerns regarding hurricane evacuation out of the planning community. The Update incorporates a new objective to address hurricane preparedness, evacuation and mitigation (Lee Plan Objective 14.8), and provides for the implementation and enforcement of a hurricane evacuation clearance time not to exceed 18 hours.

The Update also provides for public information programming, limitation on future development in the Coastal High Hazard Area, and appropriate mitigation requirements. Of note, proposed language in Policy 109.1.4 discourages construction of a new bridge to Pine Island to accommodate hurricane evacuation, due to potential impacts to the planning community’s coastal rural character, as well as the costs and design constraints.

- **Transfer of Development Rights Program**

A significant modification proposed in the Update is the creation of a Transfer of Development Rights (TDR) program specific to the Greater Pine Island (GPI) planning community. The GPI TDR program is intended to incentivize the transfer of development rights, or density, out of the planning community to more urbanized areas of the county, thereby supporting the permanent preservation of lands within Pine Island. Specifically, the proposed GPI TDR program is designed to achieve the following objectives:

- Expand the potential receiving areas for the use of GPI TDRs to include Suburban designated lands, in addition to Urban Community, Central Urban and Intensive Development future land use categories;
- Allows the generation of two (2) dwelling units for every one (1) GPI TDU transferred outside of the planning community;
- Allows GPI TDU’s to be used for bonus densities that are higher than current Lee Plan Table 1(a) bonus densities;
- Advances GPI TDU use by allowing by right and administrative approval processes for eligible projects;
- Advances GPI TDU’s use by allowing TDU’s to be exchanged for increased commercial intensities and open space reductions in eligible projects.

The resulting framework will serve a two-fold objective of incentivizing the transfer of density out of Greater Pine Island to maintain the coastal rural character and hurricane evacuation clearance times, while directing new growth to urbanized areas of the county.

- **Community Character**

The Update proposes policies and land use regulations aimed at upholding and enhancing the coastal rural character inherent to Pine Island. The Update maintains the Coastal Rural future land use

category, applicable to the majority of lands within the planning community, and sets forth increased standards to guide new development in these areas. Specifically, the proposed regulations require larger setbacks from roadways and property boundaries, enhanced right-of-way buffers, reduced maximum lot coverage, and the Planned Development review and approval process for rezonings containing 10 or more dwelling units.

The adopted concepts of Standard Maximum Density and Adjusted Maximum Density for Coastal Rural lands are maintained in the Update. However, the densities associated with these development options are proposed at 1 dwelling unit per 2.7 acres and 1 dwelling unit/1 acre, respectively. The currently adopted densities are tied to the aforementioned “810/910 Rule” and therefore require modification through this Update. The densities proposed will ensure the Coastal Rural future land use category remains one of the lowest density areas in the county.

It is important to note that no changes are proposed to the majority of Greater Pine Island’s adopted regulations regarding the design of commercial buildings, the continuation of a high-quality bicycle path along Stringfellow Road, neighborhood connectivity, including stricter limitations on fences and walls, identification of additional historic buildings and districts, building height limitations and enhanced design guidelines for business signs.

Drafts of the Greater Pine Island Community Plan Update (Update) were submitted to the Lee County Attorney’s Office and Department of Community Development at various times throughout the drafting process. Planning staff provided copies of each draft and requested comments from various county departments, including:

- Zoning Division
- Development Services Division
- Lee County Department of Public Safety
- Lee County Department of Transportation
- County Attorney’s Office
- Hearing Examiner’s Office

Written and verbal comments were received from the County Attorney’s Office, Zoning Division, Department of Public Safety, Department of Transportation, and the Hearing Examiner’s Office. As a result of these meetings and comments from the various county departments, the proposed updates to the Lee Plan goals, objectives, and policies and Land Development Code regulations have been revised numerous times to address staff input.

B. DATA & ANALYSIS

The consultant team prepared detailed analyses of transportation conditions and roadway capacity along Pine Island Road, community-wide hurricane evacuation times, and build-out scenarios for the development of this Update.

To determine the capacity of Pine Island Road from Stringfellow Road to Burnt Store Road, an analysis using the 2010 Highway Capacity Software (HCS) was conducted. The analysis used common default values, including a peak hour factor of 0.88, to determine a capacity value of 1,495 passenger cars/hour.

This data was then utilized to analyze current and projected hurricane evacuation clearance times, which is defined by Lee County Emergency as “the time necessary for people evacuate from the point when the

evacuation order is issued until the last evacuee can either leave the evacuation zone, or arrive at safe shelter within the county.” The current unit count was obtained from Lee County Property Appraiser parcel data for all single-family, multi-family, mobile home, hotel/motel units, and RV spaces in Greater Pine Island, as well as dwelling units on the outer islands that evacuate via Pine Island Road.

Based on revised road capacity and unit count data, the Pine Island hurricane evacuation clearance time is estimated to be 6.2 hours at present. Furthermore, it is estimated that an additional 11,226 more vehicles could be accommodated during an evacuation before the proposed 18-hour evacuation clearance time standard for the island is exceeded.

C. COMMUNITY INPUT & CONSENSUS BUILDING

Building consensus is critical to the successful development and implementation of community plans, as every community has many individuals with differing ideas, needs, and concerns. By building consensus between these different points of view, the community planning process helps ensure that community members buy into the resulting vision, policy direction, and land development strategies.

The Update was developed through a coordinated community outreach effort that incorporated input from stakeholders involved in the original Greater Pine Island community plan preparation and subsequent updates; landowners (both large and small); local business owners; and residents. The intent was to obtain input from a diverse group of participants to ensure the Update reflects the comprehensive and broad vision and interests of the community as a whole.

Specifically, the Planning Division and County Attorney’s Office developed a stakeholder committee consisting of the following participants:

- Noel Andress
- Phil Buchanan
- Mike Downing
- Michael Dreikorn
- Bob Elder
- Dan Honc
- Kathy Malone

The stakeholder committee reviewed the first preliminary draft Update in a meeting at Lee County on June 9, 2015. Comments were received from the committee members at the meeting and in subsequent email correspondence. These comments were incorporated into a revised preliminary draft presented on July 13, 2015. Additional comments were received and incorporated into the “final preliminary draft” finalized and distributed to the committee for final review via email on September 18, 2015.

On October 14, 2015, the county and consultant team conducted a community presentation at Fishers of Men Lutheran Church on Pine Island. The meeting was well attended with over 250 members of the public in attendance. During the meeting comments and questions were taken from attendees, which focused on questions regarding traffic and hurricane evacuation. Comments were also received regarding the ability to develop both large lots in conventional subdivisions where open space is contained in the privately owned lots, and clustered subdivisions where open space is located outside of private lots. There was general consensus that the Update maintained the adopted community vision for protecting Greater Pine Island’s coastal rural character, and created strong incentives for the transfer of density out of the planning community via the proposed TDR program.

Trescott Planning Solutions, LLC

Urban and Regional Planning



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Jeffrey Hinds, Attorney
 Smolker, Bartlett, Loeb, Hinds & Sheppard
 100 North Tampa Street, Suite 2050
 Tampa, FL 33602

RE: Pine Island Hurricane Evacuation Clearance Time Calculation

Dear Mr. Hinds:

Based on revised road capacity and unit count data, the Pine Island hurricane evacuation clearance time is estimated to be 6.2 hours. Furthermore, it is estimated that an additional 11,226 more vehicles could be accommodated during an evacuation before the 18 hour evacuation clearance time standard for the island is exceeded. Total maximum units on the island would be dependent on unit type, which varies the occupancy rate and thus the total vehicles used during an evacuation.

The following provides an analysis of my calculations and assumptions for determining an estimated hurricane evacuation clearance time to evacuate all of Pine Island as would be required by county emergency management policy for a Level A hurricane evacuation zone.

Pine Island Hurricane Evacuation Clearance Time Calculation Table									
Unit Type	Total Units	Occupancy Rate %	Occupied Units	Vehicle Use Rate	Total Vehicles	Road Capacity	Clearance Time	18 Hrs. Vehicle Capacity	Excess Vehicle Capacity
SF	3,569	95	3,391		3,730				
MF	738	71	524		576				
MH	1,583	75	1,187		1,306				
RV	374	41	153		168				
H/M	122	70	85		94				
TOTAL	6,386		5,340	1.1	5,874	950/hr	6.2 hours	17,100	11,226

As defined by Lee County Emergency Management in their “Evacuation Clearance Times for Lee County Explained,” “Evacuation Clearance Time is the time necessary for people evacuate from the point when the evacuation order is issued until the last evacuee can either leave the evacuation zone, or arrive at safe shelter within the county.” The current unit count was provided by Greg Stuart using Lee County Property Appraiser parcel data for SF, MF, MH and H/M. Mr.

Stuart obtained information regarding the total spaces at the one RV Park. The outer islands were included in the unit count. The occupancy rate is for October and was derived from surveys taken for previous Southwest Florida Regional Hurricane Evacuation Study Updates completed by the Southwest Florida Regional Planning Council. Vehicle use rate by occupied units in a hurricane evacuation is from the Behavioral Study within the 2010 Statewide Regional Evacuation Study. The critical link road capacity (through Matlacha) for Pine Island was provided by Karl Passetti. It is assumed once an evacuation is ordered for Pine Island manual traffic control will be provided at the 4-way stop at Pine Island Center for this critical intersection on the island.

If you have any questions let me know.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel L. Trescott". The signature is fluid and cursive, with the first name "Daniel" being the most prominent part.

Daniel L. Trescott, MSP
President



DRAFT TECHNICAL MEMORANDUM

Pine Island Roadway Capacity Evaluation

Date: November 20, 2015 Project #: 18951
To: Jeffrey L. Hinds - Smolker Bartlett Loeb Hinds & Sheppard, PA
From: Karl Passetti, P.E.
cc: Jay J. Bartlett - Smolker Bartlett Loeb Hinds & Sheppard, PA

The purpose of this memorandum is to provide findings related to the following three issues:

1. An evaluation of the roadway capacity of Pine Island Road from Stringfellow Road to Burnt Store Road;
2. A discussion of values used to evaluate transportation concurrency on Pine Island Road from Stringfellow Road to Burnt Store Road in the Lee County Concurrency Report (2013); and
3. Impact of the '810/910 rule' on capacity and concurrency values.

ROADWAY CAPACITY EVALUATION OF PINE ISLAND ROAD

The Highway Capacity Manual (HCM) has undergone numerous improvements as the understanding of traffic operations, the design of two-lane highways, and the design of motor vehicles have improved over the years. The term **capacity**, though often loosely used by transportation professionals and the general public, is defined in the 2010 HCM as *the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions* (TRB, 2010). Capacity exists at the boundary between LOS E and F.

The 2010 HCM clearly states that the capacity of a two-lane highway *under base conditions* in one direction is 1,700 passenger cars per hour (pc/h). To determine the capacity under the *prevailing conditions* of a specific facility, adjustment factors are applied to the value of 1,700 pc/h. The adjustment factors to be considered include the peak hour factor, the heavy vehicle percentage, the directional split of vehicles, the percent of no-passing zone, lane widths, and traffic volumes and others.

To determine the capacity of Pine Island Road from Stringfellow Road to Burnt Store Road, an analysis using the 2010 Highway Capacity Software (HCS) was conducted. The analysis used common default values, including a peak hour factor of 0.88, to determine **a capacity value of 1,495 pc/h**. Figure 1

shows a comparison of the calculated capacity value to other sources commonly referenced. It is noted that the 1965 HCM did not include procedures to calculate peak-direction capacity.

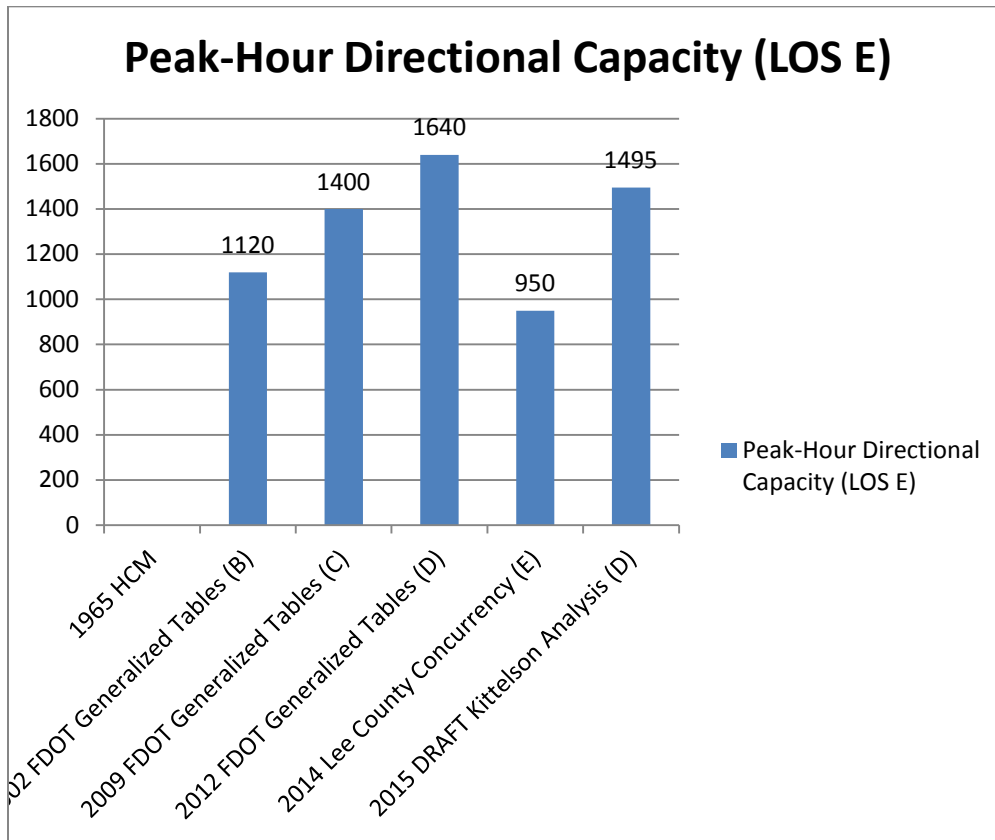


Figure 1: Comparison of Peak-Hour Directional Capacity Values for Pine Island Road

TRANSPORTATION CONCURRENCY EVALUATION OF PINE ISLAND ROAD

Pine Island Road from Stringfellow Road to Burnt Store Road is listed as having a level of service (LOS) threshold of 'E' and a capacity threshold of 950 pc/h in the peak direction on page 64 of the 2014 Lee County concurrency Report. The capacity threshold is based on a conceptual planning analysis completed in 2013 utilizing FDOT's HIGHPLAN software (see attached for HIGHPLAN analysis). Key elements of the HIGHPLAN analysis include:

- The base capacity of 1,700 pc/h was utilized;
- The peak hour factor (PHF) was set at 1.0;
- The local adjustment factor was set at 0.70; and
- The characteristics of the length of Pine Island Road from Stringfellow Road to Burnt Store Road were combined.

The use of 0.70 for the local adjustment factor has a significant impact on the capacity calculation. The local adjustment factor is described in the FDOT Quality/LOS Handbook as: *The local adjustment factor may be thought of as a driver population factor that accounts for driver characteristics and*

their effects on traffic. The factor takes into consideration driver aggression, hurriedness, and familiarity with the facility. It is used in FREEPLAN and HIGHPLAN to reflect lower capacities by different area types. It is noted that little guidance is offered on how to calculate or select a local adjustment factor and often the decision is left to the judgment of the individual completing the analysis.

It is recommended that for the segment of Pine Island Road from Stringfellow Road to the western edge of Matlacha and for the segment from the eastern edge of Matlacha to Burnt Store Road the capacity value be increased from 950 pc/h peak direction to 1,495 pc/h peak direction. The capacity of those segments of Pine Island Road should not be reduced due to concerns about operations and geometric conditions through Matlacha. For the segment through Matlacha, additional analysis of travel time data and traffic operations should be completed to determine whether the capacity value of 1,495 pc/h peak direction should be reduced to account for prevailing conditions.

IMPACT OF THE '810/910 RULE' ON CAPACITY AND CONCURRENCY VALUES

Policy 14.2.2 presents the thresholds of 810 peak hour, annual average two-way trips and 910 peak hour, annual average two-way trips. The thresholds were based on 80% and 90% of the level-of-service (LOS) 'D' two-way capacity calculated using the 1965 HCM, as documented in the 2001 Greater Pine Island Community Plan. It is noted that the use of the term 'capacity' in describing the thresholds is inconsistent with HCM definitions and meanings previously presented.

The thresholds listed in Policy 14.2.2 represent policy decisions based on analysis techniques from the 1965 HCM (it is noted that the HCM has been updated in 1985, 2000, and 2010). The threshold values represent a self-imposed limitation on the use of Pine Island Road – not a determination of how many vehicles can be accommodated on Pine Island Road. The capacity values presented in the 2014 Lee County Concurrency Report (950 pc/h one-way peak direction) and recommended in this memo (1,495 pc/h one-way peak direction) are much higher than the 910 peak hour, annual average two-way trip threshold used in Policy 14.2.2. Policy 14.2.2 does not impact the calculation of the capacity of Pine Island Road.

REFERENCES

1. 1965 Highway Capacity Manual, Transportation Research Board, Washington, DC
2. 1985 Highway Capacity Manual, transportation Research Board, Washington, DC
3. 2000 Highway Capacity Manual, transportation Research Board, Washington, DC
4. 2010 Highway Capacity Manual, transportation Research Board, Washington, DC



DRAFT TECHNICAL MEMORANDUM

Pine Island Road Capacity Evaluation

Speed and Volume Data Fusion

Date: November 20, 2015

Project #: 18951

To: Jay Barlett & Jeffrey Hinds, Smolker Barlett, PA

From: Karl Passetti, PE; Richard Dowling, Ph.D.; Jorge Andres Barrios, PE

cc:

This draft memorandum presents the results of Kittelison & Associates, Inc.'s matching of 15-minute vehicular volume ("flow") data with probe speed data on Pine Island Road (SR 78) in Pine Island, FL.

INTRODUCTION

There is a connection between traffic density and vehicle speed: The more vehicles are on a road, the slower their speed will be. This fundamental relationship between vehicular volume and speed is characterized by fast speeds up to a critical volume, at which flow goes from stable to unstable and vehicle speeds drop quickly. The critical volume is often taken to be a roadway's capacity.

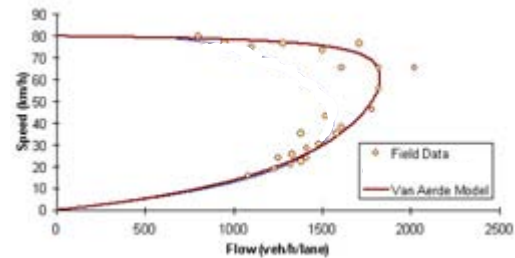


Figure 1: Sample Speed-Flow Diagram. Source: Van Aerde and Newell (1990)

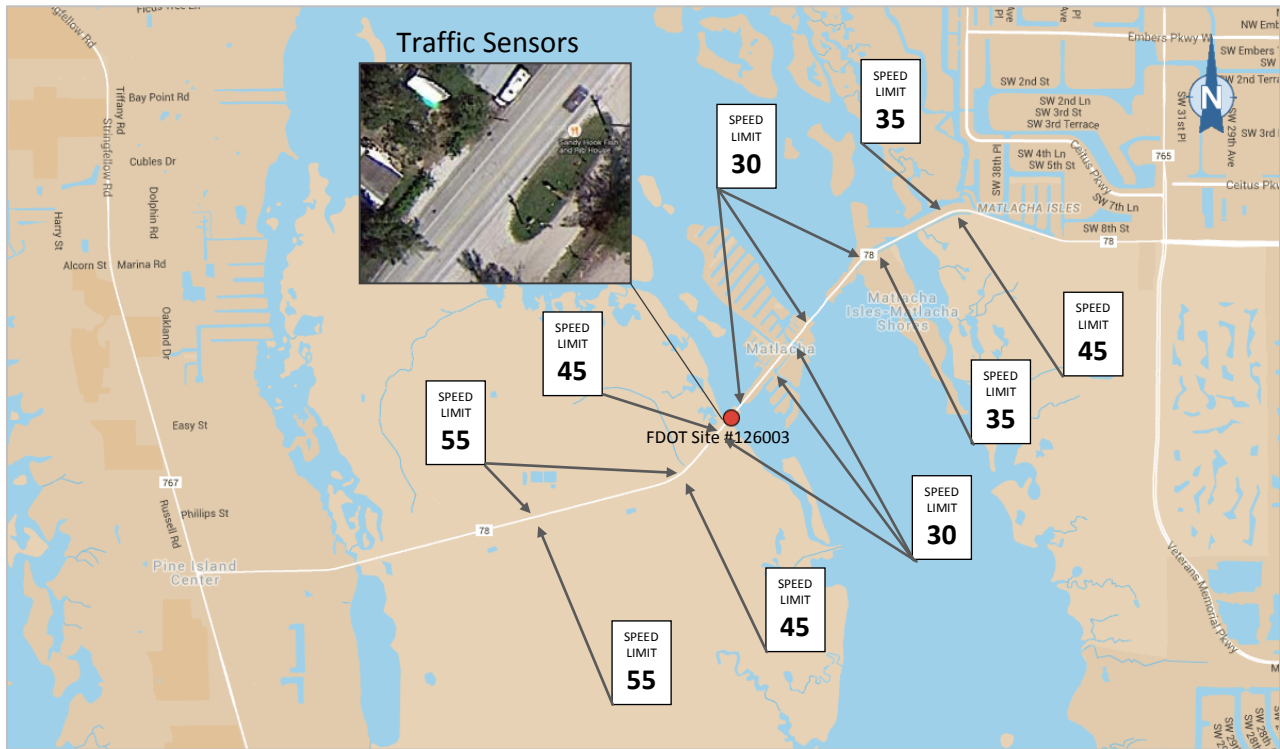
As seen in Figure 1, a speed-flow plot consists of two branches: a mostly horizontal free-flow branch and a congested branch. The free-flow branch represents the facility during times of unconstrained flow (i.e., no congestion). The congested branch reflects constrained conditions when demand is higher than capacity. The following sections describe the development of a speed-flow curve for Pine Island Road just west of Matlacha, based on 2014 data.

DATA DESCRIPTION

Flow data were obtained from the Lee County count database website¹ for the FDOT permanent count site #126003 just west of Matlacha, FL (see Figure 2). The data are available at a 15-minute resolution and for the eastbound and westbound directions. Since the speed data described below are only available for 2014, only 2014 volumes were obtained.

¹ <http://www.leegov.com/dot/traffic/trafficcountreports>

Figure 2: FDOT Counter Location Setting



Sources: Florida Traffic Information (2013), Google Maps, Google Street View

Speed data were purchased from Midwestern Software Solutions (MS2Soft) for Pine Island Road. The speed data are reported at a 5-minute temporal resolution across 92 directional subsegments on Pine Island Road. One of the segments in the speed data set contains the FDOT permanent count station just west of Matlacha. The data covers all days between January 1, 2014 and December 31, 2014. The source of the data is Nokia's HERE Traffic Analytics, which gathers data from the world's largest compilation of both commercial and consumer probe data.

DATA FUSION

Volume data were compiled by direction for each 15-minute interval in 2015. Hourly vehicle flow rates (in vehicles per hour per lane) were calculated for each time interval.

Speed data were filtered for Traffic Message Channel (TMC) 134884806. TMC codes are an open, global standard way of referencing road segments. The aforementioned TMC contains directional speed information at the location of the FDOT permanent count station.

Data quality in the HERE database varies depending on sample size, types of data sources, and roadway conditions. For this analysis, only data categorized as "confident" or "highly confident" were used.

The speed data were then paired with the contemporary hourly flow rate from the volume data set. Only data points with matching speed and volume data were considered to be valid for speed-flow analyses. Table 1 compares the volume dataset with matching speeds versus the entire volume dataset—that is, regardless of whether a contemporary speed is available. The subset with valid speed data represents the data sufficiently well for directional analysis, but not for bidirectional analysis. This is because there are few data points having *both* eastbound and westbound speeds.

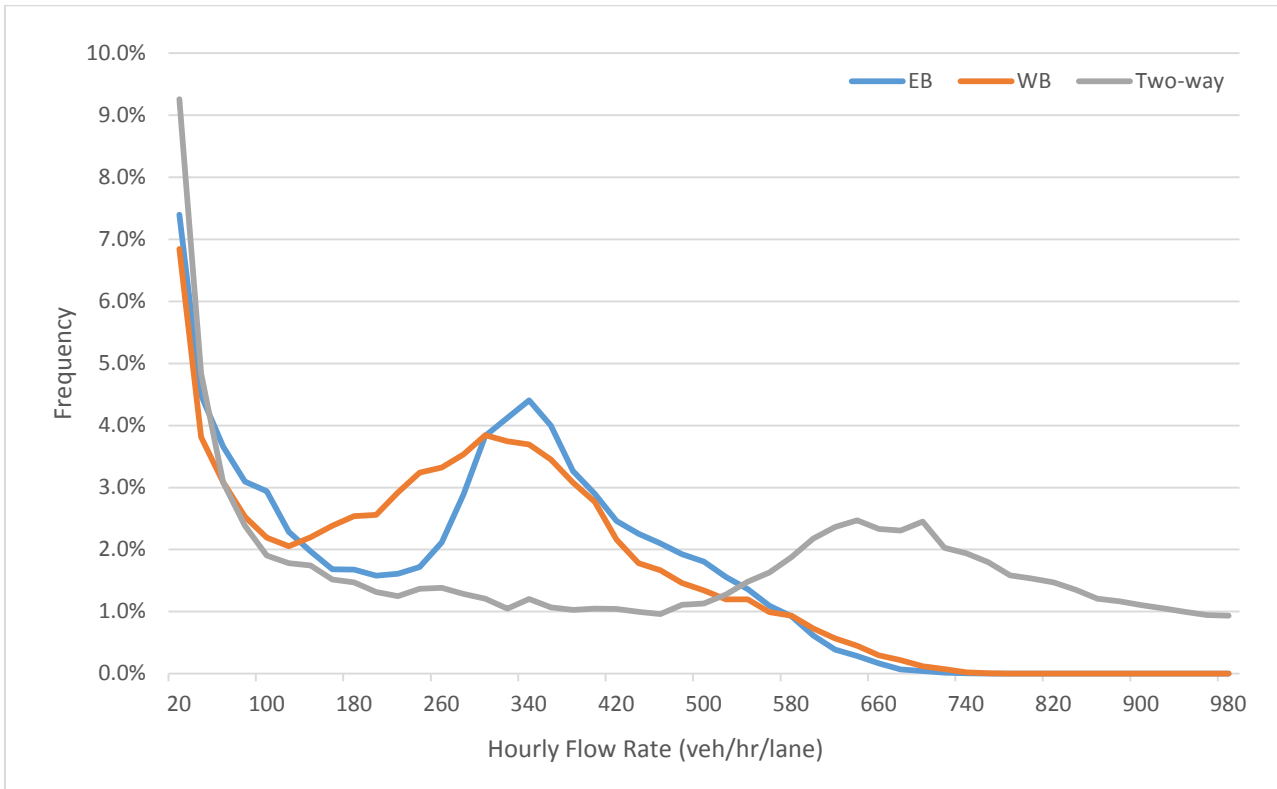
Table 1: Summary of 2014 Hourly Flow Rates

Metric	Hourly Flow Rates (veh/hr/lane) Using data points with valid speed data			Hourly Flow Rates (veh/hr/lane) Using all data points		
	EB	WB	Two-Way	EB	WB	Two-Way
	Count of data points	672	666	11	35,040	35,040
50th Percentile	326	276	576	212	224	448
85th Percentile	476	416	852	444	428	864
Maximum	724	656	884	756	800	1,524

Data points are 15-minute intervals. Data Source: Lee County Count Database (2014)

Figure 3 further describes the entire volume dataset—which includes all data points regardless of whether a valid speed is available to match it. The figure is a histogram that tallies the frequency of vehicle hourly flow rates (aggregated to 20 veh/hr/lane buckets) across all of 2014. All days of the week and times of the day are summarized in the Figure. Both eastbound and westbound directions show a two-peak pattern, with low flows (below 20 veh/hr/lane) and flows between 300 and 360 veh/hr/lane being the most common in the dataset. Using bidirectional volumes, the most common condition other than low-flow times is around 600-700 veh/hr.

Figure 3: Histogram of 2014 Hourly Flow Rates

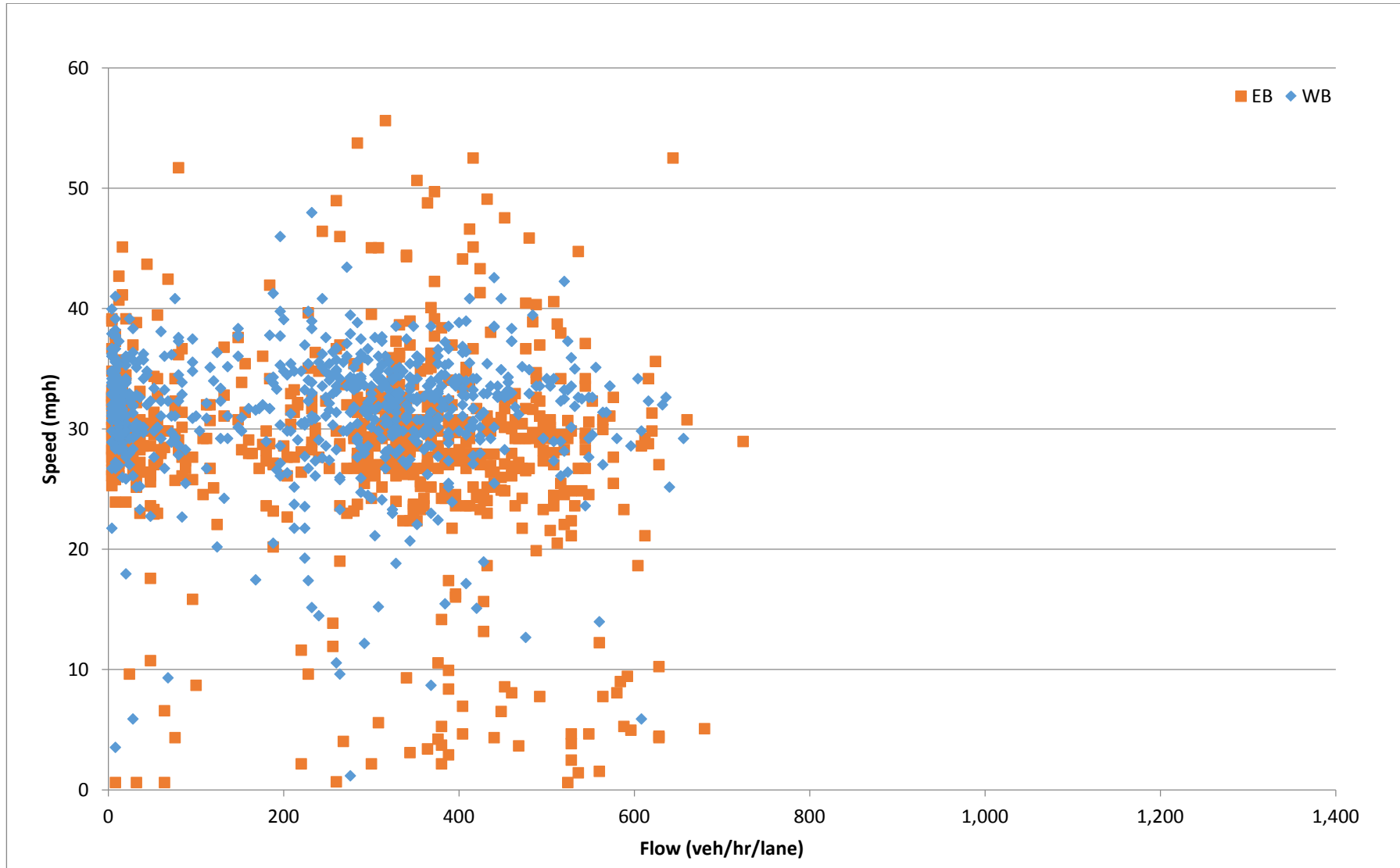


Data Source: Lee County Count Database (2014)

A comparison of histograms from the full volume dataset and the volume dataset with matching speeds confirms the aforementioned statement: directional speed-flow analyses can be considered representative of year-round traffic conditions. There are not enough data points with valid eastbound *and* westbound speeds to do a bidirectional analysis.

Figure 4 presents the relationship between speed and flow data just west of Matlacha.

Figure 4: Speed-Flow Relationship on Pine Island Road west of Matlacha



Data Source: Speeds from HERE Traffic Analytics' 2014 data considered confident or highly confident. Flow measurements from the Lee County traffic counts database for Location ID 3, just west of Matlacha, FL.

ANALYSIS

Figure 4 shows a partial fundamental diagram with a defined free-flow branch with speeds in the range of 25 mph to 35 mph, consistent with posted speed limits west of Matlacha. There is little to no reduction in the free-flow branch for the range of flow rates measured. In other words, the data show that—for the most part—speeds on Pine Island Road just west of Matlacha were near the speed limit in 2014.

The fundamental diagram in Figure 4 does not show the transition from the free-flow branch to the congested branch (i.e., the capacity threshold). There are at least two possible explanations:

1. Flow rates were not high enough at any point over 2014 to cause a breakdown in traffic flow. As mentioned in the HCM 2010 chapter on two-lane highways and documented in earlier memoranda, few two-lane highways operate at flow rates approaching capacity. They are usually widened before congestion becomes an issue.
2. There is a downstream bottleneck that limits the maximum flow rate on this segment. When this happens, a fundamental diagram appears to be “lopped off”, as vehicles transition from free-flow speed directly to a queued state due to the downstream bottleneck.

The first possible explanation was explored further with the information contained in Table 1 and Figure 3. As can be seen in these exhibits, the directional flow rate never exceeded 800 veh/hr/lane in 2014. The gentle right tail of the histogram (Figure 3) suggests that this upper limit in flow rates simply corresponds to an upper limit in demand. In other words, the shape of the histogram does not support the second hypothesis that flow is constrained by a downstream bottleneck.

However, the speed analysis presented earlier² suggests that speeds through Matlacha are below free-flow particularly in the midday and afternoon peak periods. These slow speeds on Matlacha are likely due to bridge raises, driveway accesses, parking maneuvers, and/or pedestrian activity. These sources of friction reduce the capacity of Pine Island Road through Matlacha, but seemingly not to an extent that would constrain the observed eastbound flows at the FDOT permanent count station west of Matlacha.

² *Speed Data Analysis*, Kittelson & Associates (submitted on June 18, 2015)

CONCLUSION AND FUTURE WORK

The 2014 speed and volume data just west of Matlacha do not show a clean transition from free-flow speeds to congested speeds. Therefore, a reliable capacity estimate cannot be inferred from these data. Two possible explanations were presented: lack of high flow rates and/or a downstream bottleneck. An in-depth review of the volume data suggests that the first explanation better describes 2014 traffic conditions west of Matlacha.

Since capacity cannot be estimated from the data due to few or no data points with high enough flow rates, the Kittelson & Associates team will make an assessment based on the guidance in the HCM and FDOT documents. This assessment will be supported with historical volume data from the FDOT permanent count station on Pine Island Road and with data from similar roadways in the state.



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DRAFT TECHNICAL MEMORANDUM

Pine Island Road Capacity Evaluation

Speed Data Analysis

Date: November 20, 2015 Project #: 18951
To: Jay Barlett & Jeffrey Hinds, Smolker Barlett, PA
From: Karl Passetti, PE; Richard Dowling, Ph.D.; Jorge Andres Barrios, PE
cc:

This draft memorandum presents the results of Kittelson & Associates, Inc.'s analysis of probe speed data on Pine Island Road.

DATA DESCRIPTION

Speed data were purchased from Midwestern Software Solutions (MS2Soft) for Pine Island Road (SR 78) in Pine Island, FL. The study route stretches from Stringfellow Road to Burnt Store Road in Cape Coral, FL (6.43 miles). The speed data are reported at a 5-minute temporal resolution across 92 directional subsegments on Pine Island Road. The data covers all days between January 1, 2014 and December 31, 2014. The source of the data is Nokia's HERE Traffic Analytics, which gathers data from the world's largest compilation of both commercial and consumer probe data.

FREE-FLOW SPEEDS

A key input to the HCM 2010 capacity estimation is the free-flow speed of the roadway facility. As discussed in earlier communication, the posted speed limit on the study segment of Pine Island Road varies from 55 mph between Pine Island and Matlacha, to 35 mph through Matlacha, and to 45 mph from Matlacha to Cape Coral.

The speed data were analyzed to obtain estimates of the free-flow speed across the corridor. To do this, recorded speed measurements from 2 AM to 5 AM—representing times of light traffic demand and rare bridge openings—were averaged. Figure 1 presents the free-flow speed estimates. In summary, the free-flow speed varies from 50-55 mph west of Matlacha, 30-35 mph through Matlacha, and 30-45 mph east of Matlacha.

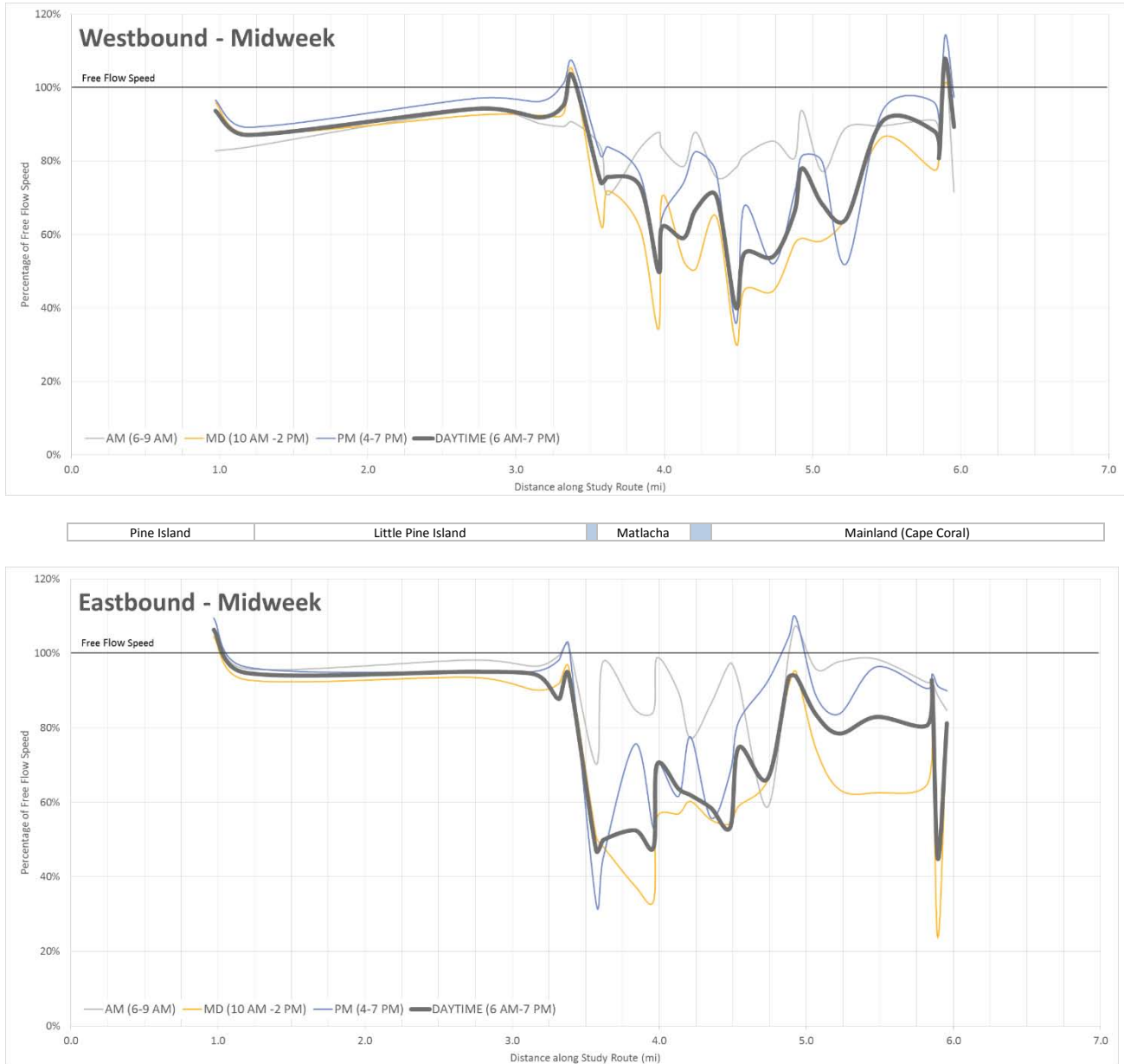
Figure 1: Free-Flow Speeds on Pine Island Road



TYPICAL MIDWEEK SPEEDS

In traffic engineering, conditions during Tuesday, Wednesday, and Thursday (“midweek days”) are considered typical of commute traffic. To present these conditions, the speed data were filtered for midweek days only and aggregated at the hourly level. The speed data were normalized with respect to free-flow speeds and averaged across four commonly-used time periods to obtain Figure 2.

Figure 2: Percent Free Flow Speed along Study Corridor - Midweek Days



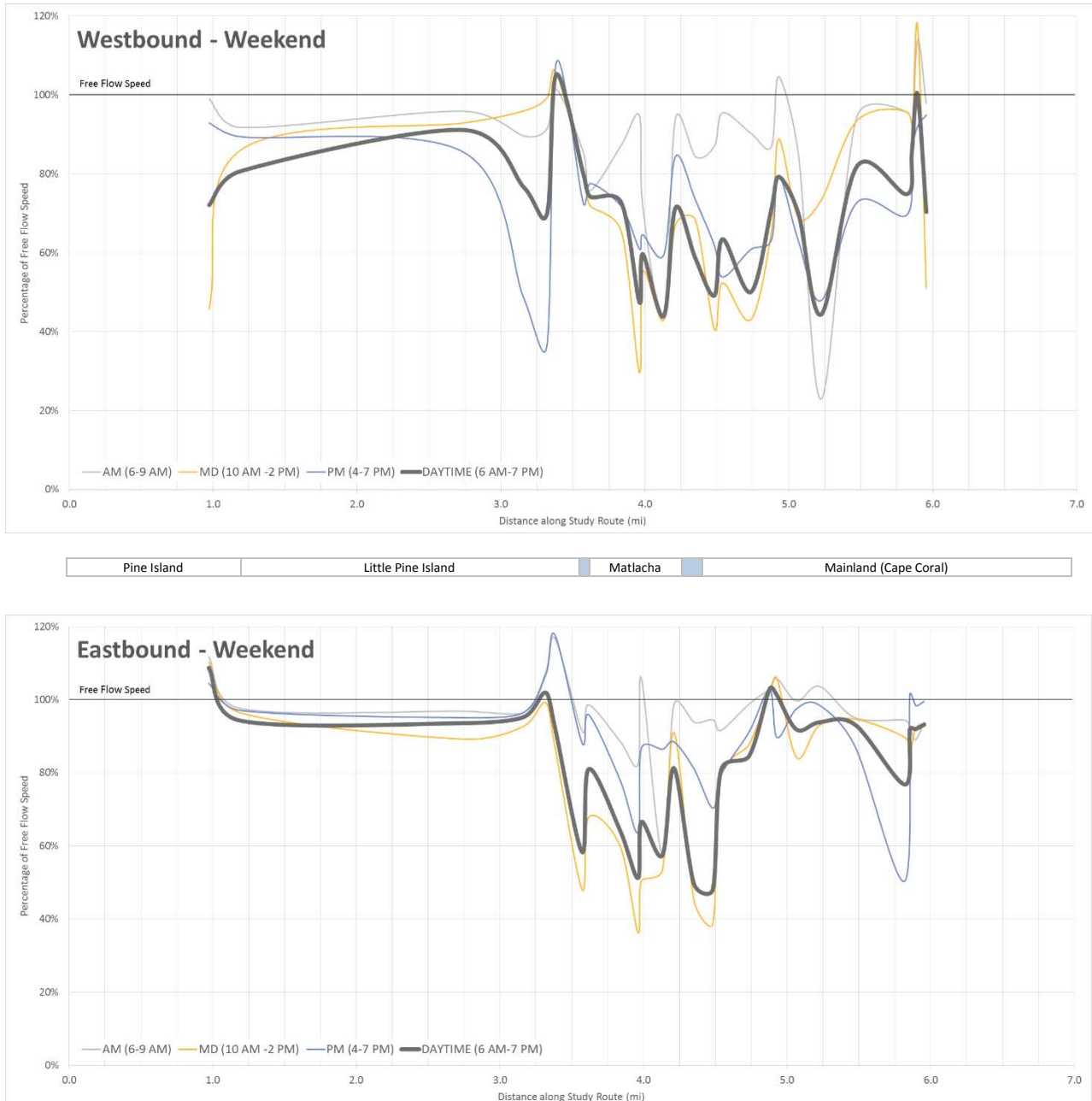
Data Source: HERE 2014 data on midweek days | Study Limits: From Stringfellow Road in Pine Island, FL to Burnt Store Road in Cape Coral, FL (6.43 mi). Subsegments near signalized intersections at the start and end of the segment are not shown.



TYPICAL WEEKEND SPEEDS

Average speeds on Friday, Saturday, and Sunday were also computed to assess the effect of recreational travel on Pine Island Road. Figure 3 illustrate average weekend speeds through the corridor.

Figure 3: Percent Free Flow Speed along Study Corridor - Weekend Days



Data Source: HERE 2014 data on weekend days | Study Limits: From Stringfellow Road in Pine Island, FL to Burnt Store Road in Cape Coral, FL (6.43 mi). Subsegments near signalized intersections at the start and end of the segment are not shown in the figure.

DATES AND TIMES BELOW 70 PERCENT OF FREE-FLOW SPEED

An analysis of the 2014 historical data identified the top ten dates and times during which operating speeds were below 70 percent of free-flow speed (see Figure 1). The 70 percent threshold was chosen as generally representative of 30 mph travel on a 45 mph facility. The results are presented ranked by the number of miles experiencing speeds below 70 percent of free-flow speeds.

Figure 4: Top 10 Times with Number of Miles under 70% FFS

Dates	Times	Number of Miles under 70% FFS
Friday, February 7 th	10:15 AM	4.97
Friday, August 8 th	3:00 PM	3.85
Thursday, January 23 rd	11:00 AM – 12:00 PM	3.72
Thursday, February 20 th	10:35 AM	3.63
Friday, February 7 th	1:50 PM	3.52
Saturday, January 26 th	1:30 PM	3.52
Wednesday, July 2 nd	7:55 AM	3.46
Friday, February 7 th	8:55 AM	3.40
Thursday, February 6 th	10:15 PM	3.45
Thursday, January 23 rd	12:00 PM	3.34

Data Source: HERE 2014 data from all days. | Note: Number of miles is bidirectional (i.e., maximum of $6.43 \times 2 = 12.86$ mi).

CONCLUSION AND FUTURE WORK

The analysis of 2014 speed data confirms that free-flow speeds on Pine Island Road—as shown in Figure 1—are generally at or slightly below the posted speed limits on the corridor. With respect to typical conditions, speeds are typically near free-flow levels west of Matlacha and below free-flow through Matlacha and on the segment between Matlacha and Cape Coral. Lower speeds were found to be more common during the midday and afternoon peak periods on both midweek days and weekends.

The Kittelson & Associates, Inc. team is currently compiling both historical and field-collected traffic volume data on Pine Island Road. The combination of the speed data summarized here and volume data will allow for the development of a speed-flow relationship that can inform capacity estimation. The top ten dates with speeds below 70 percent of free-flow speed will be evaluated first, as they are the most likely to exhibit capacity or near-capacity conditions.