HABITAT MANAGEMENT PLAN
FOR
GOPHER TORTOISE (GOPHERUS POLYPHEMUS)
ON THE SITE OF
A SINGLE FAMILY SUBDIVISION
AT THE SOUTHWEST CORNER OF THE
INTERSECTION OF DONALD ROAD AND STEVENSON ROAD

SECTION 31, TOWNSHIP 43S, RANGE 25E
NORTH FORT MYERS,
FLORIDA

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DESCRIPTION OF HABITAT

The subject property, containing approximately 31.6 acres, is located In Section 31, Township 43S, Range 25E on the south side of Donald Road and the west side of Stevenson Road. The property was classified according to the Florida Land Use, Cover and Forms Classification System (FLUCCS). See Map 1. A Listed Species Survey, as prescribed by Lee County, was conducted on the property in April of 1995. Sixty-eight gopher tortoise burrows, both active and inactive, were discovered on the site. No gopher tortoises were sighted during the survey.

The vegetation associations in which active or inactive gopher tortoise burrows were documented are Pine Flatwoods, Pine-Xeric Oak and Xeric Oak. The burrows are scattered throughout the central portions of the property with a particularly high concentration in the xeric oak area (FLUCCS 421) in the southwest part of the property. No burrows were found in several contiguous FLUCCS sites, totaling nearly six acres in the northwest portion of the property.

Applying a factor of 0.3 to the number of active and inactive burrows provides an estimate of approximately 20 individuals on the site. The high density estimates in some areas, especially in the 421 area, suggest that the actual number of tortoises may be somewhat lower. The number of active and inactive burrows found, by FLUCCS site, is as follows:

Occupied FLUCCS Site	No. of Burrows	Area of FLUCCS Site	Est. No. of Tortoises*	Density, Tortoises per Acre
411b Pine Flatwoods	6	6.9±	1.8±	0.3±
411c Pine Flatwoods	12	8.4±	3.6±	0.4±
412a Pine - Xeric Oak	11	1.8±	3.3±	1.8±
412b Pine - Xeric Oak	12	4.1±	3.6±	0.9±
412c Pine - Xeric Oak	8	3.4±	2.4±	0.7±
421 Xeric Oak	19	1.1±	5.7±	5.2±
Total	68	25.7±	20.4±	0.8±

* Number of burrows multiplied by 0.3

DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development consists of a conventional single-family subdivision of approximately 54 lots on 31.6 acres. The typical lot size is approximately 0.4 acre. The proposed development plan has lots arranged around five cul-de-sacs with wildlife preservation areas along rear lot lines and in the area of highest tortoise density (FLUCCS 421). The strategy for this layout, while observing market-related geometric parameters identified by the owner, was to avoid the destruction, if possible, of gopher tortoise burrows for road construction and to attempt to minimize the occurrence of tortoise burrows within potential home footprints. Three-fourths of the burrows identified by the listed species survey are located either in the wildlife preserve or on lots at or near side or rear lot lines.

The configuration of the wildlife preserve was influenced by the following parameters. The preserved area should:

- be one parcel, with areas interconnected by corridors of native vegetation;
- contain a representative diversity of habitat types;
- be contiguous to as many lots as practicable to take advantage of the on-lot preservation requirement;
- be configured to encompass as many gopher burrows and as much xeric-oak habitat as practicable;

- be roughly equivalent in size to the area which would be used to calculate the cost of a permit for an incidental take.

HABITAT PRESERVATION

The area proposed for habitat preservation is delineated by crosshatching on the Proposed Site Plan. This wildlife preserve would be a separate tract, *not* a part of any residential lots. This tract would be owned by a homeowner's association and would have a perpetual conservation easement imposed over it to prevent its future development or other detrimental activities. The conservation easement would be granted to Lee County, Florida Game and Freshwater Fish Commission and/or South Florida Water Management District. The area of the proposed wildlife preserve shown on the Proposed Site Plan is approximately 6 acres, about one-fifth of the entire property.

The developer proposes to require through deed restrictions that each lot owner preserve a minimum of 10% of the lot in native vegetation. With an average lot area of 0.4 acres, this would add to the area of the wildlife preserve at least 2 acres of native vegetation which would be available as habitat for gopher tortoises. Together with the dedicated wildlife preserve the natural habitat set aside and available for gopher tortoises on site would be approximately 8 acres, about one quarter of the property. Presumably, some lot owners would preserve larger areas of native vegetation than the minimum 10% required by the deed restrictions.

Further, by deed restrictions, each lot owner will be required to submit a site plan to the homeowners' association for review prior to construction of a home on the lot. Clearing, particularly the removal of trees, would be limited by and subject to the approval of the homeowners' association. Filling of lots also will be limited by deed restrictions. Each lot owner will be required to fully comply with the requirements and guidelines of the Florida Game and Freshwater Fish Commission with regard to gopher tortoises, to locate homes and lot alterations to minimize disturbance near gopher tortoise burrows, and to notify the Florida Game and Freshwater Fish Commission prior to clearing or grading in proximity to any gopher tortoise burrows.

The deed restrictions will be prepared in consultation with staff of Lee County and Florida Game and Freshwater Fish Commission, as appropriate.

Initial development of the subdivision would consist of road and utility construction and the water management features required by governing authorities. Particular care has been taken with the design of the subdivision and water management features allow a minimal amount of clearing for construction. The lots would not be cleared until such time as the homeowner was ready to construct the dwelling unit. It is anticipated that many of the lots may remain for some time in their natural state.

PROTECTION DURING CONSTRUCTION

Initial construction of this development will consist of roadways, and utility and surface water management infrastructure. The residential lots will generally not be cleared until the home site is sold and a residence is constructed. A minimum of 10% of each lot area will be required to be left in its natural state. The individual homeowners will be required to consult with the Florida Game and Freshwater Fish Commission for assistance regarding any burrow on a residential lot which is in the path of any site alterations. This requirement will be made a part of the deed restrictions.

The street layout for this subdivision was planned to avoid, if possible, the destruction of any tortoise burrows. However, if during construction it is discovered that a burrow will be destroyed, the inhabitant will be captured and relocated to the wildlife preserve. During construction protective barriers will be erected to keep the tortoises outside the construction area. Any tortoises found in construction areas of the property will be relocated to the wildlife preserve area. Because so little of the site vegetation will be removed in the initial

development phase, the tortoises forage areas will remain largely intact during the road, utility and water management construction phase.

HABITAT MAINTENANCE

The wildlife preserve should be inspected annually for infestation by the exotic pest plants Schinus, Melaleuca, Casurina, etc. Any of these plants discovered will be removed or killed. The property currently is not managed for wildlife and intensive management is not recommended. The vegetation on site is fire suppressed due to advancing urban development in the area has not been burned in recent years. Although prescribed burning is the preferred method for managing the tortoise forage area, this will not be feasible due to the proximity of homes, both existing and proposed. As an alternative to prescribed burning, a periodic bush-hoggin9 of palmetto and shrubby areas can be used to maintain an open canopy and herbaceous ground cover for gopher tortoise forage.

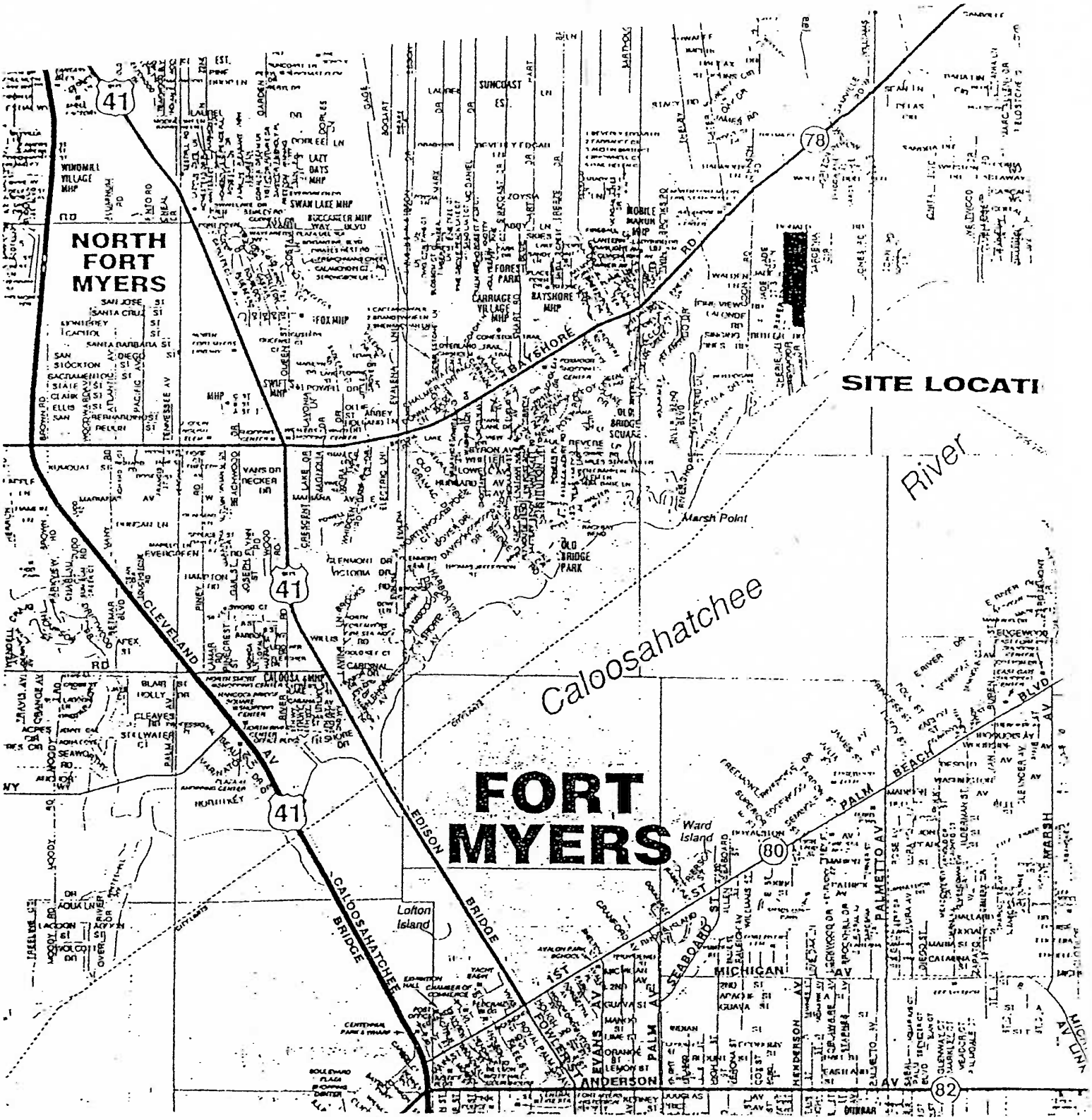
MONITORING PROGRAM

Reports as to the condition of the habitat and management techniques applied to the habitat will be provided to the Lee County Division of Environmental Sciences for review on an annual basis, as required by the Lee County Land Development Code. The reports will be submitted for five consecutive years from the date that the development order is issued. —> 5-30-96

The following elements are suggested: The monitoring program should endeavor to determine the number of tortoises occupying the habitat and their size and sex. Tortoises encountered on the property should be captured, measured, sexed (adults only), marked and released. This applies to tortoises encountered during construction activities as well. Marking and measuring should bee done as described in Attachment 4 of guidelines for "Gopher Tortoise Relocation, February 1988" Florida Game and Freshwater Fish Commission. The number, location, status (active, inactive) and width of opening of burrows should be recorded. The development of any pathways or habitual feeding areas should be noter'. If any changes in management techniques are warranted, such recommendations should be included in the report. A photographic record of the habitat should be kept, including photographs taken prior to commencement of construction, and immediately following completion of the infrastructure construction.

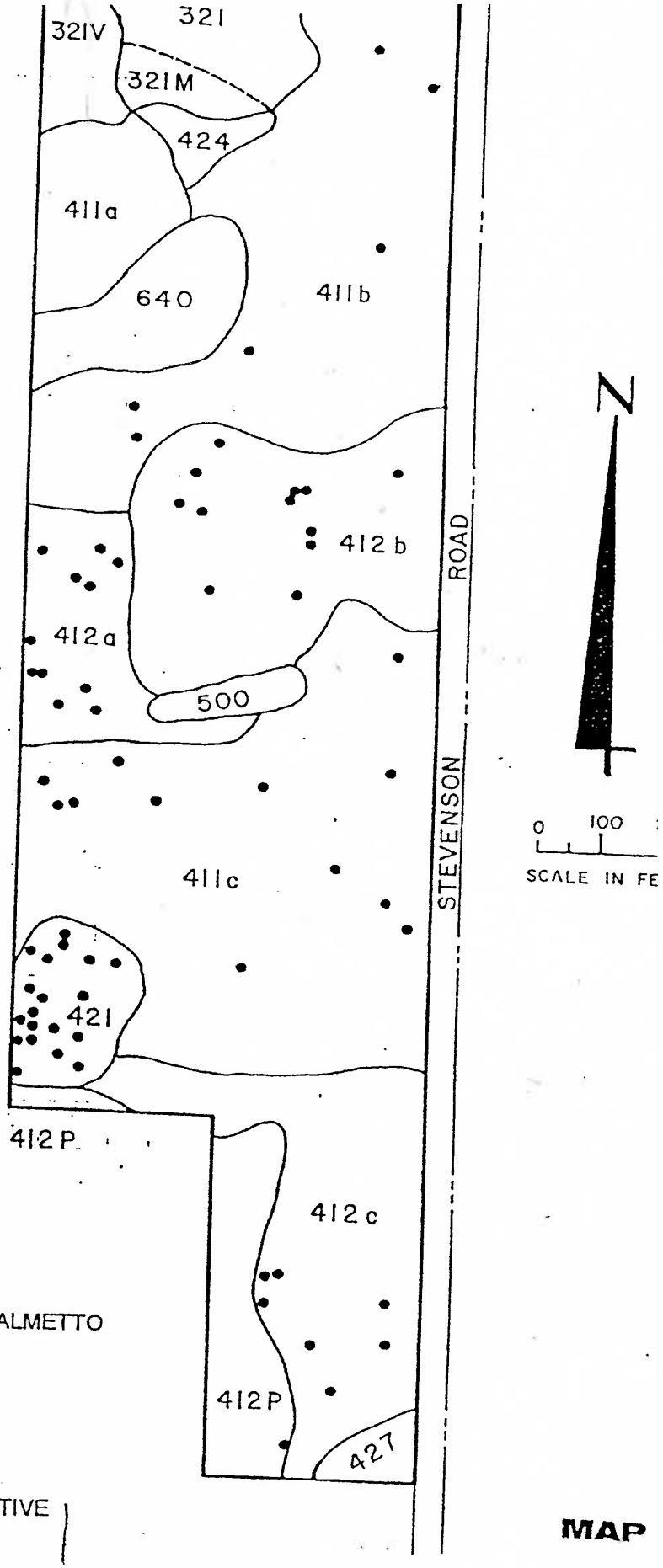
IMPLEMENTATION

The wildlife preserve tract and conservation easement will be created by the recording of the subdivision plat in accordance with the requirements of the Lee County Land Development Code. It will be the responsibility of the homeowners' association to implement the approved habitat management plan. The contractor for the subdivision infrastructure and each individual homeowner will be made aware of the requirements of the approved habitat management plan and will be required to maintain full compliance. During and after the construction of the subdivision infrastructure, the developer will be responsible for maintenance of the habitat area until such time as the homeowner's association is a fully functioning entity. The developer and subsequently the homeowner's association will be responsible for the preparation and submittal of the annual reports of the five year monitoring program to Lee County



LOCATION MAP

NTS



LEGEND

321	PALMETTO PRAIRIE
321M	PALMETTO PRAIRIE W/ MELALEUCA
321V	PALMETTO PRAIRIE W/ VITIS
411a	PINE FLATWOODS
411b	PINE FLATWOODS
411c	PINE FLATWOODS
412a	LONGLEAF PINE - XERIC OAK
412b	LONGLEAF PINE - XERIC OAK
412c	LONGLEAF PINE - XERIC OAK
412P	LONGLEAF PINE - XERIC OAK W/ DENSE PALMETTO
421	XERIC OAK
424	MELALEUCA
427	LIVE OAK
500	WATER
640	VEGETATED NON-FORESTED WETLANDS

• APPROXIMATE LOCATION OF ACTIVE/INACTIVE GOPHER TORTOISE BURROWS

MAP