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DATA AND ANALYSIS FOR KEY WEST CHAPTER 288 MILITARY BASE REUSE PLAN NAS  
KEY WEST FL  
9/8/1999  
BERMELLO, AJAMIL AND PARTNERS

# KEY WEST CHAPTER 288 MILITARY BASE REUSE PLAN



Data & Analysis  
September 8, 1999

KEY WEST CHAPTER 288  
MILITARY BASE REUSE PLAN



Date & Analysis  
September 8, 1999

BERMUD • ALAMIE & PARTNERS, INC.

FLORIDA CONFLICT RESOLUTION CONSORTIUM

SULLINS SQUARE

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## I. EXECUTIVE SUMMARY

~~Last year~~ In 1997, the City of Key West engaged in an intensive community-driven process to create a long range vision for civilian reuse of excessed military land. The resulting plan, the **City of Key West Base Reuse Plan**, was prepared according to federal guidelines, adopted by the City Commission on September 16, 1997, and approved by the federal government on August 11, 1998.

The 1997 **Base Reuse Plan** presented a community vision. It did not, however, attempt to translate that vision into the land use laws of the city and state. The **Chapter 288 Military Base Reuse Plan** — this plan — will do that translation. It will provide the amendments to the city's **Comprehensive Plan** and **Land Development Regulations** necessary to guide future development in accordance with the concepts in the **Final Base Reuse Plan**.

Because the **City of Key West Base Reuse Plan** reflects an exhaustive consensus-building process, the **Chapter 288 Plan** does not revisit decisions made and approved by the community, unless explicitly directed by the City Commission. Instead, it focuses on planning level implementation guidelines.

Once the **Chapter 288 Military Base Reuse Plan** is adopted and approved, the policy framework to guide development will be complete. What remains will be the implementation phase of the reuse process: the actual federal conveyance (or acquisition) and development of the sites. At that time, site plans, detailed site analysis, and measurement of the proposed projects against the policies and regulations, will occur.

This plan will be reviewed by the State of Florida according to regulations specifically created to facilitate the conversion of military lands into civilian use. The state regulation —Chapter 288, Florida Statutes— gives this plan its name. It also sets forth specific criteria for provision of data and analysis with a focus on the existing **Comprehensive Plan** as the mechanism for guiding growth. Because the City of Key West is a designated Area of Critical State Concern, the **Chapter 288 Military Base Reuse Plan** will also be reviewed by the state according to the city's Principles for Guiding Development.

The **Chapter 288 Plan** is divided into ~~six~~ four sections. This summary is the first section. The second section, the Introduction, provides more detail on the federal and state processes governing the base reuse plans. The third section provides the data and analysis required by state law for the plan. An impact analysis is provided in Section IV. The final section consists of appendices, including a description of the community workshops held as part of the Chapter 288 process.

The ~~adopted~~ portions of the plan to be adopted are ~~proposed~~ provided in companion documents in Section V; these are the portions of this plan which will be incorporated in the **City of Key West Comprehensive Plan** and **Land Development Regulations**.

## II. INTRODUCTION

The **Key West Military Base Reuse Plan** is the city's second step in providing long-range planning for naval properties designated for civilian reuse. The first step in this process was the preparation, adoption and approval of the federally required **Base Reuse Plan**. That plan summarized the community's vision for the ~~eight~~ seven reuse sites, and also assessed economic redevelopment opportunities and homeless assistance needs.

The purpose of the **Key West Military Base Reuse Plan** is to translate the community vision described in the federal-level plan -- as refined by the City Commission -- into the city's growth management documents. The mechanism for accomplishing this important local planning effort is provided by Chapter 288, Florida Statutes, which is the reason this plan is sometimes referred to as the **Chapter 288 Plan**.

The Chapter 288 provisions allow a streamlined approach to amending the city's guiding growth management document, the **City of Key West Comprehensive Plan**, and the regulations which implement the objectives and policies in the Comprehensive Plan, the **City of Key West Land Development Regulations**. In addition, the Chapter 288 contains specific data and analysis requirements, and calls for the reclassification of military land into categories representing proposed uses.

The following chapters and companion documents are meant to meet the requirements of Chapter 288, thereby providing the City of Key West with the means to address the base reuse parcels by amending the **Comprehensive Plan** and the **Land Development Regulations**. Together, the **Comprehensive Plan** and **Land Development Regulations** will provide the tools necessary to ensure the community's vision for the reuse sites is maintained into the future.

Although ~~eight~~ seven sites were considered in the **Key West Military Base Reuse Plan**, only three of those sites required integration into city planning documents through the Chapter 288 process: the Truman Waterfront Parcel, the Poinciana Housing Parcel, and the Peary Court Cemetery. The other sites already possessed adequate land use designations in the city's **Comprehensive Plan**. A map of the three sites is shown in **Figure II.1, Chapter 288 Military Base Reuse Plan Sites**.

This Introduction provides information on the base reuse processes from both a federal and state level —and, it additionally outlines the manner in which the **Key West Military Base Reuse Plan** will be integrated with other ongoing city efforts.

### A. Base Reuse Planning Process

#### 1. The Federal Process

As a consequence of changing U.S. national security requirements over the past several decades, the Department of Defense (DoD) has closed or reduced the operation of many military installations across the country. Base closure can provide an opportunity for communities to convert military installations into needed civilian uses. However, the closure of military installations can also pose potential economic hardships, both long and short term, for the communities in which they are located.

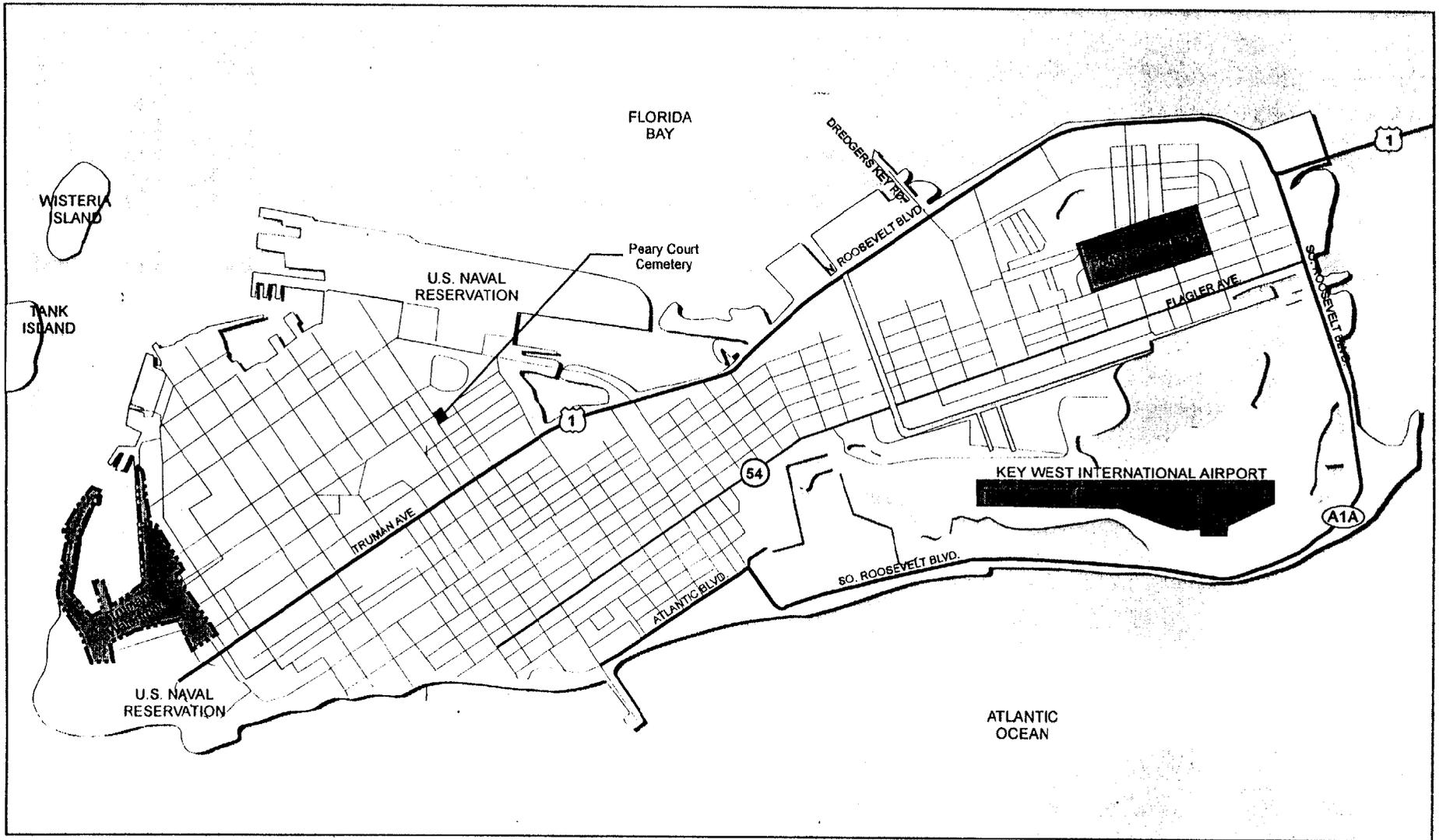


Figure II.1  
Chapter 288 Military Base Reuse Plan Sites

KEY WEST MILITARY BASE REUSE PLAN



Not to Scale



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The Base Closure Community Redevelopment and Homeless Assistance Act of 1994 (known as the Redevelopment Act) was designed to accommodate the overall needs of communities impacted by the closure of a military base, while still addressing the needs of homeless individuals and families. The Act places primary responsibility for base reuse planning in the hands of a Local Redevelopment Authority (LRA). The LRA is charged with the task of developing a plan balancing the community's need for economic redevelopment, and homeless assistance. The ability to achieve this balance requires a broad-based strategic planning process rooted in a rigorous public participation plan. Under the direction of the LRA, homeless providers, businesses, nonprofit organizations and other parties are all afforded the opportunity to formally express their interest in reuse of the surplus properties. In conjunction with a series of public participation meetings and ongoing planning efforts of the LRA, these interests are recognized, balanced, and carefully considered in the development of the plan.

### **The Key West Base Reuse Plan**

In 1995, the Naval Air Station (NAS), Key West, Florida, was designated for realignment by the Federal Base Realignment and Closure Commission (BRAC) pursuant to the Defense Closure and Realignment Act of 1990. On May 2, 1996, certain land and facilities at the Naval Air Station were declared surplus by the Department of the Navy. These properties will become available for use by non-federal public agencies for public benefit purposes, eligible non-profit groups, and homeless provider groups, pursuant to the Base Closure Community Redevelopment Assistance Act of 1994. The Naval Properties Local Redevelopment Authority (LRA) was established by the City of Key West for the purposes of planning, acquiring, and redeveloping surplus properties at the Key West NAS. At the direction of the LRA, an exhaustive public participation program was used to establish community priorities, identify potential site uses, develop and refine concept designs, and evaluate reuse plans. The resulting Base Reuse Plan and Homeless Assistance Submission was adopted by the City Commission on September 16, 1997, and approved by the Department of Housing and Urban Development on August 11, 1998.

The overall purpose of the **Key West Base Reuse Plan** is to provide long-term, sustained, economic growth in Key West through the adaptive reuse of surplus military land and facilities while reflecting the community's vision for base reuse. While more specific objectives came to light over the course of the entire planning process, the **Key West Base Reuse Plan** was generally developed to achieve the following overarching goals:

- provide meaningful integration of the sites into the community fabric;
- help diversify the economy;
- encourage balanced growth in the area's economy, including commercial and service sector job growth;
- provide employment opportunities for the region's unemployed and underemployed persons;
- strengthen the local tax base;
- help existing businesses and industries expand;
- help small businesses develop;
- provide affordable housing for Key West residents;
- provide public recreation and access opportunities, especially on the waterfront;
- provide opportunities for port, harbor and marina improvements;

- facilitate improvements and provide physical and economic links to Bahama Village;
- ensure environmental sensitivity; and,
- provide opportunities for social services and special needs facilities.

The **Base Reuse Plan** specifically outlined guiding principals and associated concept plans for each of the reuse sites. While the plan indicated proposed land use classifications and land development guidelines, it left specific land use implementation measures open for later planning processes ~~to determine at the state and local level.~~

## 2. State Process

The Florida Growth Management Act (Chapter 163, F.S.) requires land uses and associated policies for guiding development in each community's long range Comprehensive Plan. The **Comprehensive Plan's** land use classifications and plan policies must in turn be implemented through land development regulations. Florida law also provides for the designation of areas with environmental resources of regional or statewide importance as an Area of Critical State Concern (Chapter 380, F.S.). In areas of Critical State Concern, additional state review is conducted to ensure that new development meets the standards set forth in the Principals for Guiding Development.

Only five areas in the State of Florida have been designated as Areas of Critical State Concern; the City of Key West, is one of them. Therefore, long range planning in the city must meet both the requirements of the Growth Management Act (Chapter 163, F.S.) and the Principals for Guiding Development, as adopted per the Area of Critical State Concern (Chapter 380, F.S.) provisions.

In recognition of the need for prompt and effective planning for military sites designated for closure by the federal government, the Florida legislature created the Defense Conversion and Transition Act per Chapter 288, Florida Statutes. Chapter 288 allows communities to meet the requirements of the Growth Management Act, as well as other state growth management laws, through a streamlined process. However, Chapter 288 did not envision a base realignment within an Area of Critical State Concern. Therefore, although the Chapter 288 process provides some relief from the typical regulatory process necessary to institute land use plans, it does not fully address the unique needs of the City of Key West as an Area of Critical State Concern experiencing a base closure.

In order to resolve any procedural inconsistencies between the requirements of Chapter 288 and the Area of Critical State Concern review process, and to facilitate base realignment in the spirit of the legislative directive, a Chapter 380.032 Agreement was reached between the City of Key West and the Florida Department of Community Affairs. That agreement sets forth specific transmittal and review dates, thereby incorporating the requirements of both Chapter 288 and Chapter 380.

## 3. Local Implementation

Once the Chapter 288 plan is adopted and approved by the state, development of the base reuse sites becomes possible. Actual development plans will be reviewed by city staff for compliance with the goals, objectives and policies set forth in this plan and amended into the city's **Comprehensive Plan**. All development will also be required to meet the city's **Land Development Regulations**.

**B. Objectives of the Chapter 288 Plan**

If a land use plan is too restrictive, it can discourage development, by either failing to be flexible enough to meet changing site planning needs, or creating a burdensome site plan approval process. Because the over-arching goals of the **Base Reuse Plan** can never be met if the sites remain undeveloped, the challenge is to create a regulatory framework protecting the community's vision without becoming bogged down in the regulatory process.

The primary objective of the **Chapter 288 Plan** is protecting the integrity of the community vision established during the formulation of the **City of Key West Base Reuse Plan**. In addition, the **Chapter 288 Plan** must allow enough flexibility in the programming and site development process to promote good development in the future. Therefore, whenever possible, the plan relies on existing regulatory mechanisms and processes for implementation. That means the primary tools for ensuring future development of the site are the designation of future land use classifications, the adoption of policies ~~set~~ setting forth the organizing elements of the plans, and the creation of special considerations to use within existing processes.

**C. Integration with other Plans**

Two other important planning processes were initiated during the time when the **Chapter 288 Plan** was being prepared: an update of the Bahama Village Redevelopment Plan and submission of the Evaluation and Appraisal Report (EAR), concerning the **City of Key West Comprehensive Plan**. The Bahama Village Redevelopment Plan was adopted by the City Commission prior to the completion of this plan. Therefore, the results of Bahama Village Redevelopment Plan are reflected in the **Chapter 288 Plan** when those results have an effect within the physical boundaries of the base reuse sites.

The EAR was drafted prior to, and then modified during, the Chapter 288 planning process. However, the EAR is still in draft form and has not been adopted by the city. Therefore, although the draft EAR was considered in this planning process, the adopted **Comprehensive Plan** was used as the basis for all data, analysis and amendments for in this plan.

**D. Organization of the Plan**

The **Chapter 288 Plan** is organized into ~~six~~ four sections, with the data and analysis falling in Section III, and the impact assessment in Section IV, and the portions recommended for adoption in Section V. ~~Section VI~~ The appendices provides documentation regarding the public process associated with this plan, and other information referenced in the text of the plan. The portions of the plan to be adopted are provided in companion documents.

### III. DATA AND ANALYSIS

#### A. Introduction to the Data and Analysis, including Facility Provision

The Truman Waterfront Parcel, Poinciana Housing Parcel and Peary Court Cemetery once served the U.S. Navy respectively as a port facility, housing project, and cemetery. Although these sites will take on new roles in the community, their prior uses have shaped their future: the Truman Waterfront Parcel will include port facilities, as well as new housing, environmental education and social services, and waterfront recreational areas; the Poinciana Housing Parcel will provide affordable housing and social services for residents; and, the Peary Court Cemetery will remain an interment area.

The following chapter provides an in-depth analysis of existing and proposed uses, and their potential impacts on community facilities. As such, this chapter will serve as a link to the city's existing **Comprehensive Plan** and as the factual basis for assessing necessary amendments to the plan's policy framework. The organization of information within the chapter follows the format for the existing **City of Key West Comprehensive Plan** and the content reflects the relevant portions of the non-procedural requirements of Rule 9J-5, F.A.C.

#### B. Land Use

This section addresses existing and future land use issues relevant to the base reuse sites. It begins with an assessment of the parcel's relationship to the existing land use inventory in the **Comprehensive Plan**, and then provides an analysis of proposed future uses and facility provision.

##### **Existing and Adjacent Land Uses [9J-5.006(1)(a)(c)]**

Generalized existing land uses, historic resources, and natural resources are shown on the Existing Land Use Map Series (City of Key West Comprehensive Plan, September 1991) contained in **Appendix A**. More detailed mapping of specific land use issues and resources of particular relevance are provided where appropriate throughout this section.

All three sites are shown on the Existing Land Use Map as military uses. This is consistent with the site's pre-alignment, military status; however, actual use can be summarized as follows:

- Truman Waterfront Parcel: Deepwater port, miscellaneous industrial uses, open space.
- Poinciana Housing Parcel: Multi-family housing.
- Peary Court Cemetery: Historic cemetery and open space.

The **City of Key West Comprehensive Plan** locates all three sites in Key West Planning Area Six: Military Lands (see **Appendix A, Existing Land Use Map Series, City of Key West, 1989**). Once these sites are realigned, they will become part of either the Old Town Planning Area One (Truman Waterfront and Peary Court Cemetery) or Central Residential Planning Area Two (Poinciana Housing).

~~Please note that the Truman Annex portion of the site is not the same Truman Annex area previously accessed by the Navy and developed by private interests.~~

Perhaps the most significant feature of the site is the (-) 32' deep harbor which opens into a (-) 34' channel. Mole Pier forms the outer wall of the harbor, most of which is bulkheaded. The northernmost section of the Outer Mole also fronts deep water where it abuts with the federal channel; however, the southern section of the Outer Mole is faced with a series of deteriorated groins and shallow rock rubble, which transition into narrow seagrass beds. Although this area is within 50' of deep water channel, it is currently too shallow to be used for berthing. Portions of the harbor bulkhead have undergone major renovation in the last ten years: Mole Pier and the bulkhead running north from the boat ramp. Remaining areas appear to be in various states of dilapidation; one area near the floating docks is completely unhardened. Strong winds and currents are reported to create docking safety concerns for smaller vessels in the basin, particularly along the eastern harbor edge.



**Legend**

- |   |   |
|---|---|
|  SITE BOUNDARY           |  TOURIST COMMERCIAL          |
|  PUBLIC SERVICES         |  RESIDENTIAL/COMMERCIAL CORE |
|  PLANNED REDEVELOPMENT   |  MEDIUM DENSITY RESIDENTIAL  |
|  RESIDENTIAL/OFFICE      |  MILITARY                    |
|  NEIGHBORHOOD COMMERCIAL |   |

**Figure III.B.1**  
**Surrounding Land Uses**  
**TRUMAN WATERFRONT PARCEL**  
**KEY WEST MILITARY BASE REUSE PLAN**



Not to Scale



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**Poinciana Housing Parcel**

The Poinciana Housing Parcel was developed in the mid-1960's with 212 multi-family Navy housing units. The 28-acre site is in the heart of a predominantly residential area of Key West, across from a small strip commercial development. Access to the site is limited to two entrances: one on Duck Avenue, the other on 19<sup>th</sup> Street. This, along with a drainage canal along the north edge of the site, limit interaction of the site with the surrounding community. **Figure III.B.2, Surrounding Land Uses, Poinciana Housing Parcel**, identifies land uses on the existing site and surrounding area.

**Peary Court Cemetery**

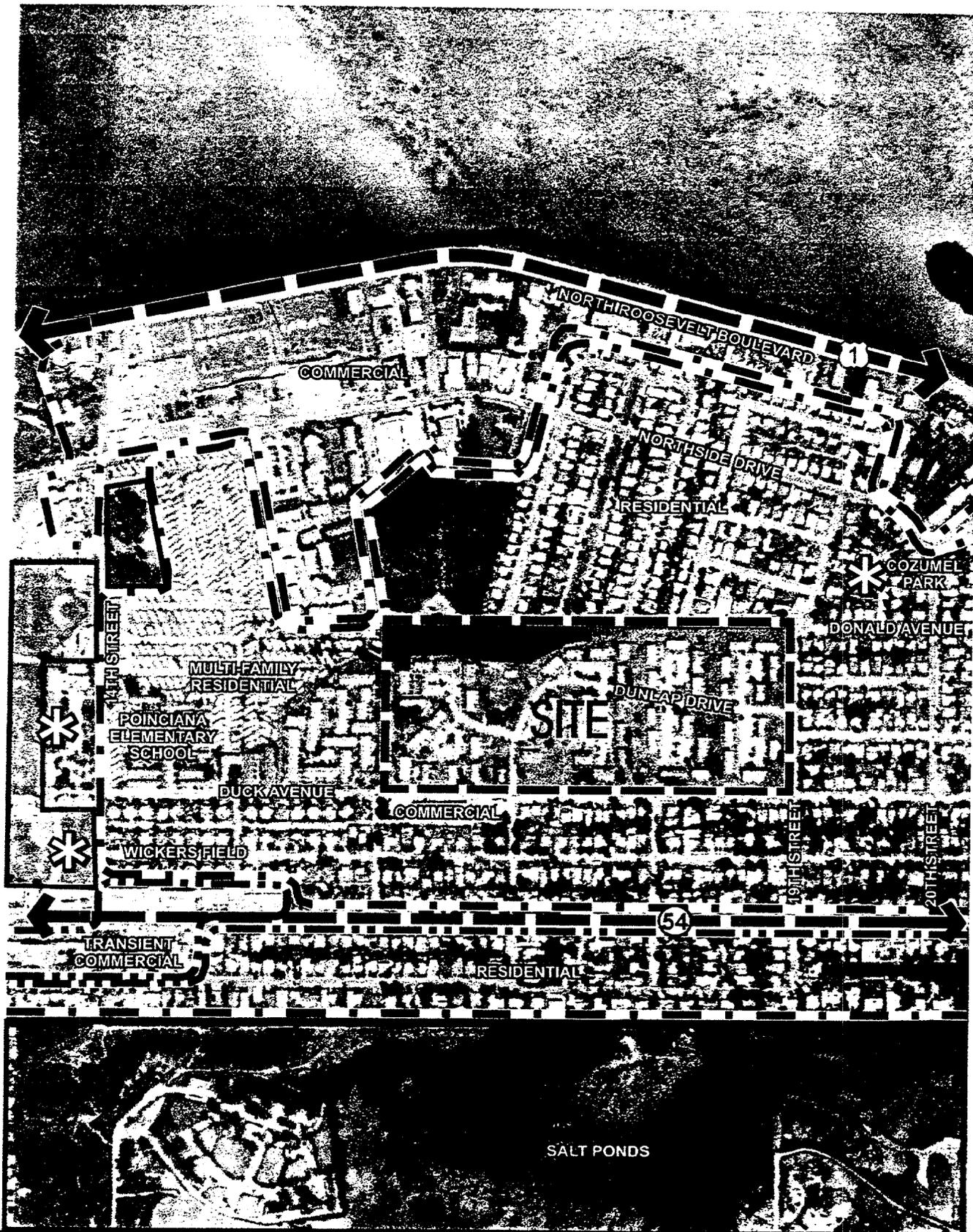
The Peary Court Cemetery is a one-acre cemetery located in the city's historic district, approximately two blocks east of the Key West Cemetery. The first interment on the site is recorded in 1835. In 1927, 436 bodies were removed from the cemetery; however, recent site investigations have determined the relocation efforts incomplete, and an undetermined number of bodies remain in the site. As such, the site has been protected as a cemetery and open space. The site is surrounded by residential uses to the north, northeast, west and south. Of particular note is the Navy's Peary Court Housing Development. A privately-owned mini-warehouse/storage building borders the site to the east. **Figure III.B.3, Surrounding Land Uses, Peary Court Cemetery**, identifies the site and its surrounding uses.

**Land Use Acreage, Density and Intensity [9J-5.006(1)(c)]**

**Table III.B.1, Existing Land Uses**, shows the approximate acreage and general range of density/intensity of use for the three sites:

TABLE III.B.1			
EXISTING LAND USES			
Site	Existing Land Use Classification	Existing Use	Acreage
Truman Waterfront	Military	Public Services; Industrial	44.9 <u>50.4</u>
Poinciana Housing	Military	Multi-family Residential (8 units/acre)	37.14 <u>36.2</u>
Peary Court Cemetery	Military/Historic Medium Density Residential	Historic/ Public Services	1
		TOTAL	80.17 <u>87.6</u>

Source: Bermello, Ajamil and Partners, 1998

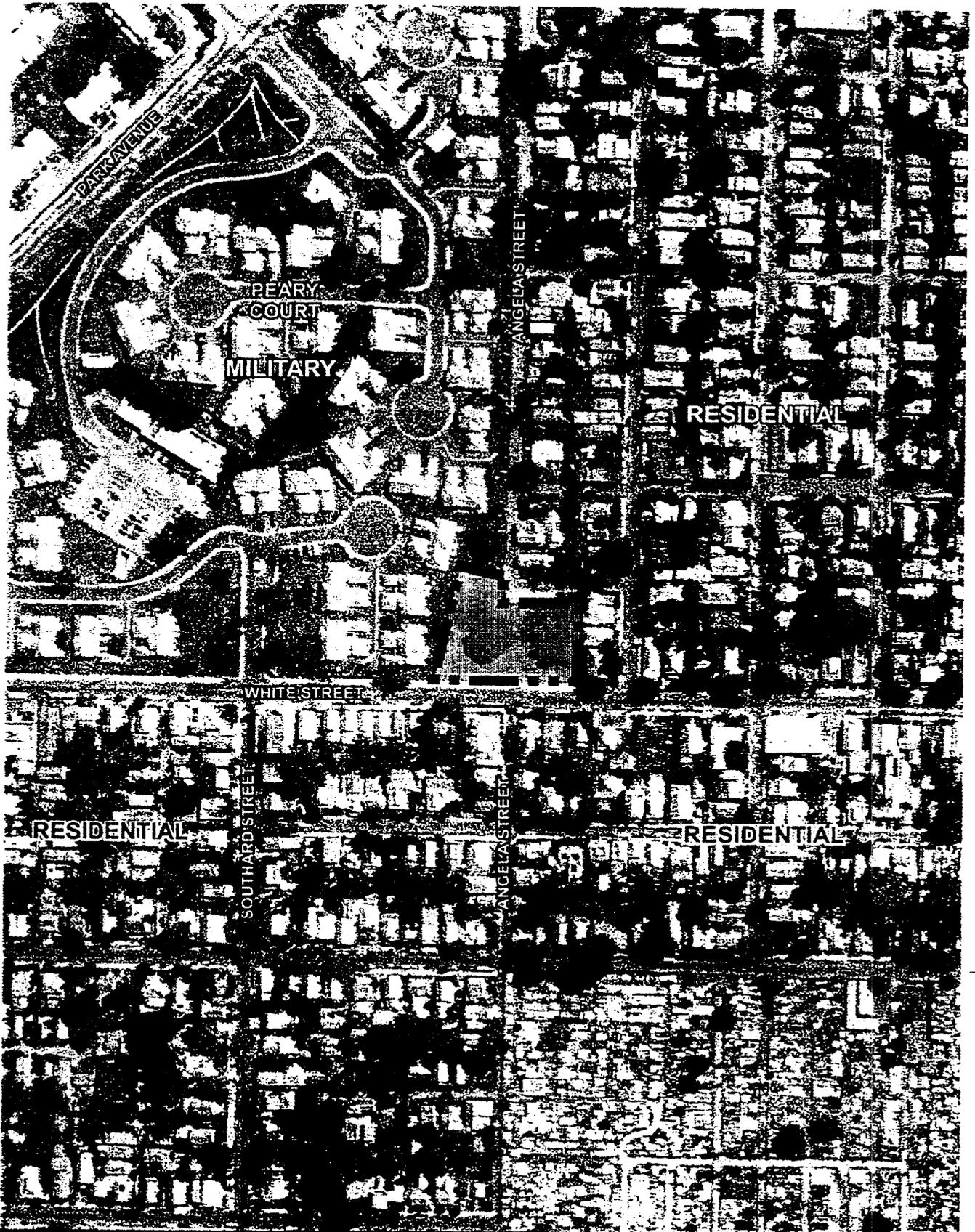


**Legend**

- — SITE BOUNDARY
- — OPEN SPACE
- \* LOCAL FEATURE
- - - MAJOR ROAD

**Figure III.B.2**  
**Surrounding Land Uses**  
**POINCIANA HOUSING PARCEL**  
**KEY WEST MILITARY BASE REUSE PLAN**





**Legend**

□ SITE BOUNDARY

**Figure III.B.3**  
**Surrounding Land Uses**  
**PEARY COURT CEMETERY**  
**KEY WEST MILITARY BASE REUSE PLAN**

1866, the area was later filled, but it was thought a nineteenth century military midden debris could be deep below the surface. Three backhoe trenches dug at the coverface site produced artifacts in the two southernmost trenches (Butler 1997). Fort Zachary Taylor, Site 8MO206, has been expanded to include the coverface now listed with the National Register. The site has also been listed with the Florida State Master Site File (Butler 1998).

*Poinciana Housing:* Records indicate no major historical events occurred on this tract. Photographs taken in 1942 - 1943 indicate development near the site. During that time period the Army began construction on Meacham Field (later converted to civilian use as the Key West International Airport), and development seen in the early photographs may have been associated with the airfield. The existing buildings on the site are 1960's vintage multi-family dwelling units. The buildings are constructed from concrete block sitting on a concrete slab. The roofs are gabled with composite shingles and the windows are modern aluminum 4/4. The tract is not considered eligible for either the National Register or the Florida State Master Site File.

*Peary Court Cemetery:* The Peary Court Cemetery (formerly known as the Key West Post Cemetery), was associated with military barracks located at the site of the present day Peary Court Housing project. Records indicate the first interment was made in July of 1835. The cemetery was apparently in use as late as 1920.

The U.S. Army Barracks at Key West were established in 1831 and abandoned in December, 1835 due to a yellow fever epidemic. The Army troops re-occupied the barracks from 1862 to 1880. During that time men continued to be stricken and died from yellow fever and typhoid fever. These victims were buried in the cemetery. Wives and children of soldiers stationed at the post were also buried in the cemetery. No formal plat showing the locations of grave rows or individual graves has been found for the cemetery. Maps dating from 1880's to the 1920's show the cemetery as an irregularly shaped parcel bordering White Street. In 1927, records indicate that 436 bodies were removed from the Key West Post Cemetery and transferred to the military cemetery at Fort Barrancas, Pensacola, Florida. In 1949, what is now Peary Court was transferred from Army to Navy control.

The Peary Court Cemetery/Site 8MO1481 was identified in 1990, when USACE archaeologists conducted a survey of Peary Court in anticipation of a new housing project at the site. The site of the nineteenth century cemetery contained intact human remains. Investigators determined that the cemetery had been incompletely relocated. In 1990, a Memorandum of Agreement (MOA) was signed between the SHPO and the U.S. Navy which stipulates the cemetery be preserved in place and maintained by the U.S. Navy. It is considered eligible for the National Register and also has been listed with the Florida State Master Site File (Butler 1998).

### Natural Resources [9J-5.006(1)(b)]

Natural resources generally relevant to the sites are shown in the Existing Land Use Map series in **Appendix A**. The following text and maps illustrate site specific natural resource issues for each parcel. There are no existing or planned potable water wells or wellhead protection areas within the sites, no rivers or lakes, and no commercially valuable minerals. Further, all three sites are located on areas described by the Monroe County Soil Survey as Udorthents, Urban Land Complex.

**Truman Waterfront:** The Truman Waterfront Parcel includes a harbor, with direct connection to the Atlantic Ocean. There are no wetlands, lakes, rivers, bays, potable water wells, floodplains or true estuaries on the site; however, there is a sandy beach area. Specific ecological features of the site are described below and shown on **Figure III.B.4, Truman Waterfront Parcel Natural Conditions**.

#### ***Ecological Features and Wildlife Habitat***

The Truman Waterfront Site contains marine communities including seagrasses, coral-colonized structures, and barren silty bottom. Natural features and the location of listed species nests at the Truman Waterfront Site are shown in **Figure III.B.4**.

**Seagrass Beds:** Seagrasses at the Truman Waterfront Site occur in shallow sandy areas immediately adjacent to the seaward edge of Mole Pier. Dense beds of turtle grass (*Thalassia testudinum*) and manatee grass (*Syringodium filiforme*) are located adjacent to the base of Mole Pier. Scattered patches of shoal grass (*Halodule wrightii*) mixed with turtle grass, *Acetabularia* spp. and other green algae are found further to the north adjacent to Mole Pier. Seagrass beds at the Truman Waterfront Site provide habitat for a large number of juvenile reef fishes and invertebrates.

**Coral-colonized structures:** The seawalls and adjacent concrete and steel debris of the harbor interior support a wide variety of soft and hard corals, tunicates, sponges and other reef-building organisms. These organisms provide habitat for a large number of fish and marine invertebrates. The seawall and other submerged structures on the seaward side of Mole Pier have also been extensively colonized by soft and hard corals and support abundant reef creatures, including many juvenile reef fishes.

**Barren Silty Bottom:** The majority of the harbor bottom at the Truman Waterfront Site consists of a thick layer of silt. Except for occasional burrowing marine animals, this area provides little or no habitat for plants or animals.

**Sandy Beaches:** A small sandy area, known as Truman Beach, exists between the hardened shoreline of Mole Pier and Port Zachary Taylor State Park. The beach is unvegetated.



**Legend**

-  SITE BOUNDARY
-  AREAS OF CORAL COLONIZATION
-  PATCHY MIXED SHOAL & TURTLE GRASS
-  TURTLE GRASS

-  LEAST TERN NESTING SITES
-  OSPREY NESTING SITE
-  SEA TURTLE NESTING SITE

**Figure III.B.4**  
**Natural Conditions**  
**TRUMAN WATERFRONT PARCEL**  
**KEY WEST MILITARY BASE REUSE PLAN**

March 1996 Source: Fairchild National

011 ANDREWS DELAWARE STREET SUITE 1004 33040



### **Listed Species**

Waterways adjacent to the Truman Waterfront Site provide occasional navigation habitat for the West Indian manatee. Truman Beach has been documented as a nesting area for the federally threatened Loggerhead Sea Turtle (*Caretta caretta*; U.S. Navy et al., 1996). Other listed species occurring on or near the Truman Waterfront Site include least terns (*Sterna antillarum*) and osprey (*Pandion haliaetus*) (U.S. Navy et al., 1996).

### **Poinciana Housing**

#### *Ecological Features and Wildlife Habitat*

The Poinciana Housing Site contains a brackish water lake largely vegetated by red and black mangroves and exotic species. The remainder of the site is residential development, with sodded lawns and scattered ornamental trees. Natural features at the Poinciana Housing Site are shown in **Figure III.B.5, Poinciana Housing Parcel Natural Conditions**.

Red mangrove (*Rhizophora mangle*) and black mangrove (*Avicennia germinans*) trees dominate much of the lake area in the Poinciana Housing Site. However invasive exotic species such as Brazilian pepper (*Schinus terebinthifolius*) and Australian pine (*Casuarina* spp.) are also becoming established. Both the lake and the mangrove areas contain debris and show other evidence of human disturbance.

The lake provides habitat for marine fish and invertebrates, as well as foraging habitat for wading birds.

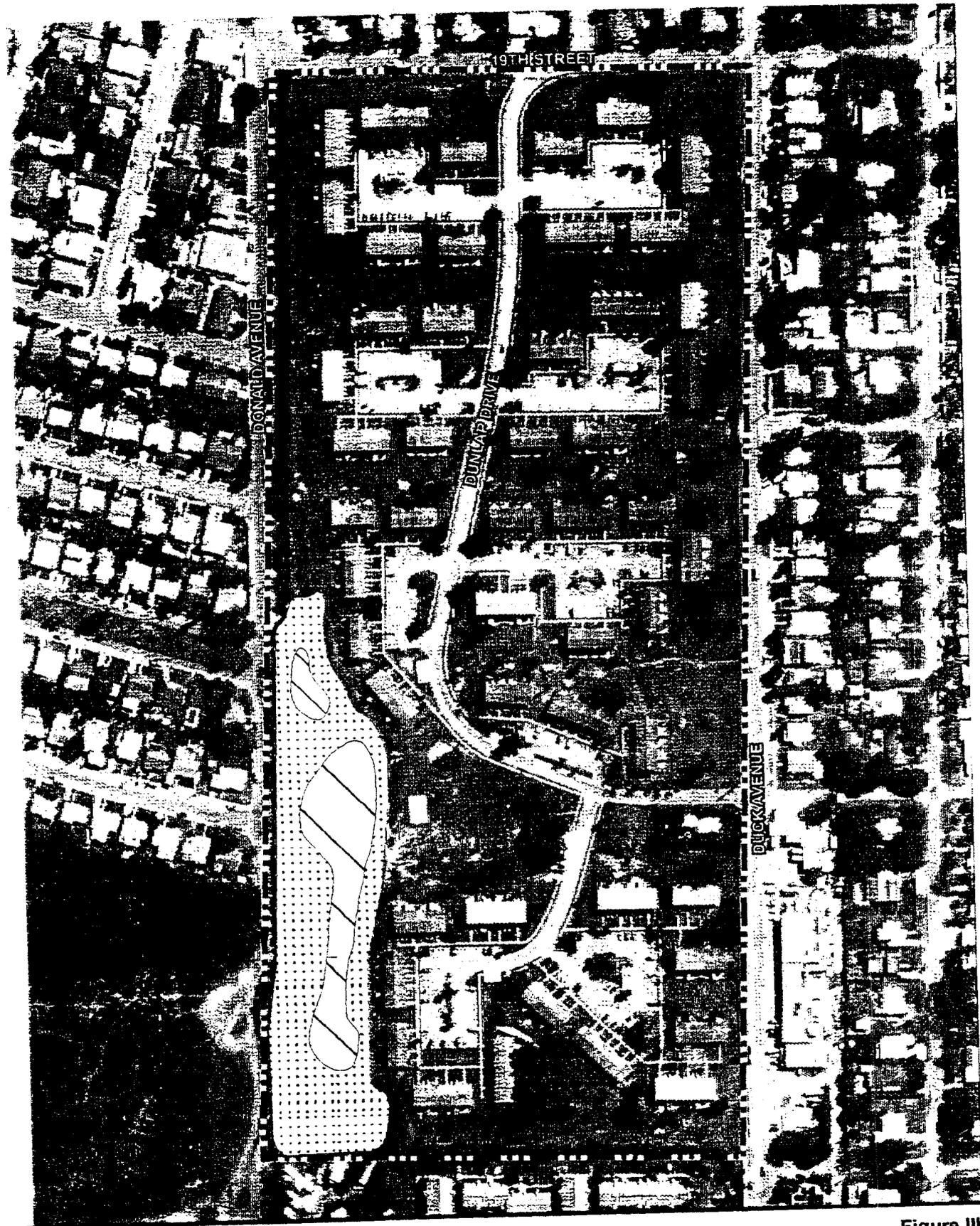
#### *Listed Species*

No listed species were observed on the Poinciana Housing Site. However, the lake and mangrove forest could provide roosting and foraging habitat for protected wading bird species.

No natural plant communities or other ecologically sensitive features occur on the Peary Court Cemetery site.

### **Coastal High Hazard Areas**

The Mole Pier area of the Truman Waterfront Parcel has been designated as a Coastal High Hazard Area. The remainder of the Truman Waterfront parcel lies outside the ~~eCoastal hHazard Area and hurricane evacuation zones~~. No portion of the Poinciana Housing parcel is designated as a Coastal High Hazard Area; however, a small portion of the southeast corner of the site lies within the Class I Hurricane Evacuation Zone. No portion of the Peary Court Cemetery is designated as a Coastal High Hazard Area ~~or~~ nor lies within the Class I Hurricane Evacuation Zone.



**Legend**

-  SITE BOUNDARY
-  BRACKISH WATER LAKE
-  MANGROVE FOREST

**Figure III.B.5**  
**Natural Conditions**  
**POINCIANA HOUSING PARCEL**  
**KEY WEST MILITARY BASE REUSE PLAN**

  
 Not to Scale

  
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**Area of Critical State Concern [9J-5.006(1)(f)(2)]**

All three sites are within the City of Key West Area of Critical State Concern.

**Dredge Spoil Sites [9J-5.006(1)(f)(3)]**

There are no existing dredge spoil disposal sites in the City of Key West.

**Population Projections [9J-5.006(1)(g)]**

Population projections, per the city's **Comprehensive Plan**, are provided in the following table, **Table III.B.2, Population Projections**.

Year	Permanent Residents <sup>1</sup>	Seasonal Visitors	Permanent and Seasonal (Peak)
1990	24,652(1)	12,887	37,539
1995	25,372(1)	13,130	38,502
2000	26,119(1)	13,382	39,501
2005	26,895(1)	13,644	40,539
2010	27,701(1)	13,916	41,617

Source: City of Key West Comprehensive Plan, 1991

<sup>1</sup> Permanent residential population projections include 6,000 military personnel

The Poinciana Housing Parcel is the only site that provides existing housing. Estimated maximum population associated with the existing 212 unit development is 812 individuals, based on an inventory of existing bedrooms per unit, assuming two people for the first bedroom and one person for each additional bedroom.

**Future Land Use Analysis [9J-5.006(2)]**

Future use of the three sites was determined through an extensive public participation process and adopted through the city's **Final Base Reuse Plan**. The following describes the proposed concept plans for each parcel.

***Truman Waterfront***

The concept plan for the Truman Waterfront surplus property is presented in **Figure III.B.6, Truman Waterfront Parcel Concept Plan**. This plan is a synthesis of ideas and design concepts generated through the public involvement process, an analysis of site opportunities and constraints, and a review of previous community planning efforts for the area. On January 12, 1999, the City Commission modified the

concept plan by eliminating the potential second cruise ship berth identified in the federal plan and by emphasizing recreational uses in the plan as a whole.

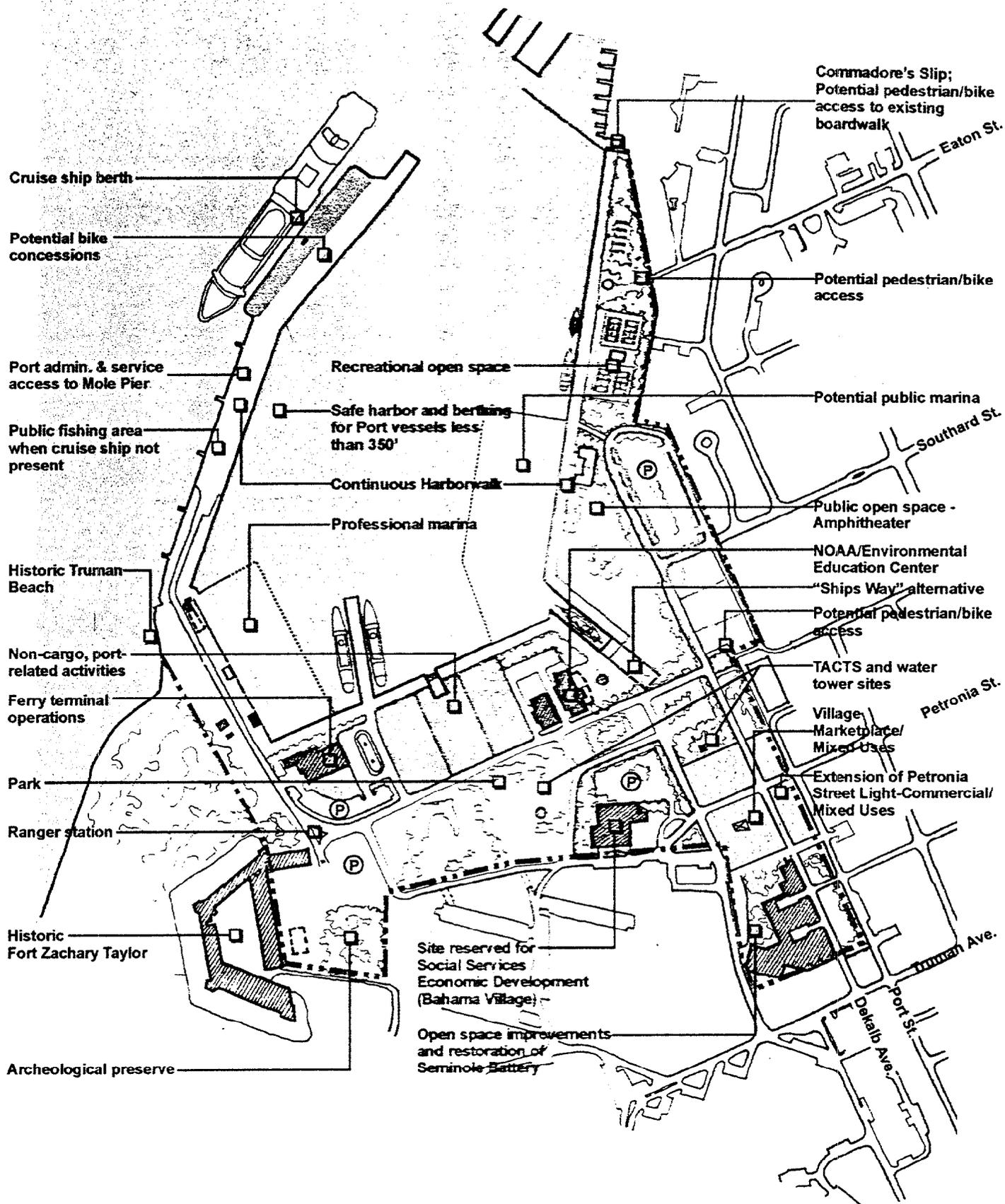
The guiding principles of the plan are continuity and flexibility. Emphasis is placed on extending the Bahama Village into the property and strengthening the existing community through improved circulation systems. This must be accomplished without sacrificing any potential economic opportunities. Therefore, the proposed land uses, while generally dividing the site into a village component and a harborside, mixed-use element, have been crafted so as not to impede future economic development, which remains an essential mandate of this process. The plan's key organizing elements and uses are highlighted below.

*Recreation and open space areas linked through multimodal green ways and view corridors*

A large open space and recreation park is shown for the northwestern portion of the site, between the existing Truman Waterfront residential community and the eastern quay wall. This area offers dramatic views of the waterfront; tennis, bocce, and other dedicated sports areas; community gardens; and, open areas for field sports or passive recreation. An amphitheater could be developed at the center of this open area for public gatherings, outdoor theater and concerts, or a series of other uses. To encourage activation of the park and prevent the park from having a "dead end", several ingress/egress points should be developed along the northern end to provide pedestrian and bicycle access. Possible connections could include a continuation of Eaton Street and a harbor walk connection over Commodore Slip. An area for parking is provided north of the terminus of Southard Street.

A public marina facility is envisioned for the southern portion of the basin adjacent to this large park. A mega-yacht berthing area could be designated for the northern portion of the eastern quay wall; a small boat facility, protected from wind and wave action by a breakwater, would be located to the south. These uses would help further activate the park and provide mooring facilities for Key West. The existing boat launch could be modified as a slip for large visiting boats or research vessels.

~~A second large open space and recreation area is envisioned for the area around the historic Seminole Battery located south of Dekalb Street connects Bahama Village to Fort Zachary Taylor. Uses for this and surrounding This open space areas to includes the TACTS Tower, the north could be tailored to meet water tower and the neighborhood recreational needs of the Bahama Village archaeological preserve at Fort Zachary Taylor. Smaller pocket parks at Once the TACTS tower Navy changes utility service, the water tower, will be abandoned and the archeological preserve at Ft. Zachary Taylor are contemplated possibly demolished. Once the Navy changes its utility service, the water tower will be abandoned, and possibly demolished. If required to serve as an alternate site A third recreation area is envisioned for the proposed amphitheater, the proposed open space area around the historic Seminole Battery may need to be reconfigured. Uses for this and the large open space are south of Dekalb Street could be tailored to meet the neighborhood recreational needs of the Bahama Village. These areas could also serve as alternate sites for the proposed amphitheater; the proposed open space area around the Seminole Battery may need to be reconfigured.~~



**Legend**

--- SITE BOUNDARY

(P) PARKING

NOTE: Potential Second Cruise Berth was Removed by the City Commission on January 12, 1999

FS2:\Lands\Landplan\Denny\Key West(9827)\Figure 11IB6.REV

**Figure III.B.6  
TRUMAN WATERFRONT PARCEL CONCEPT PLAN  
KEY WEST MILITARY BASE REUSE PLAN**



Each of these open space and recreation facilities would be linked together by a network of landscaped green ways. One green way is programmed to run along Dekalb Avenue, connecting the waterfront and park area to TACTS tower park, the Bahama Village marketplace, and Seminole Battery.

*Uninterrupted public access to the waterfront through a wide promenade, along the full length of the harbor*

Designed for use by pedestrians, cyclists, in-line skaters, and other recreation enthusiasts, the Truman Waterfront promenade would connect cruise operations on Mole Pier, Ft. Zachary Taylor, passenger ferry operations, the federal interagency visitor center, and recreation and open space areas. Ideally, the Truman Waterfront promenade would be linked at the Commodores Slip (northwest corner of the site) through to the existing harbor walk extending from the Hilton Hotel to the Key West Bight. Landscaping and hardscape treatments, pavilions, and lighting elements would all be incorporated into design of the promenade to create a diverse, safe, multi-use recreation facility.

*Affordable housing, neighborhood retail, and social service uses as an extension of the neighborhood fabric of Bahama Village*

The past, present and future of Bahama Village and the Truman Waterfront property are closely linked. A central theme of the plan is to remove the perceived boundary between the two areas and create a continuous transition between uses and neighborhoods. ~~Although low density and intensity mixed uses are allowed, the City Commission expressed a strong preference that portions of the area be developed as parks and active and passive recreation.~~ The various mixed use options are discussed below.

The Truman Waterfront property presents an opportunity to assist the City of Key West in meeting a portion of the demand for affordable housing. An area of ~~low- and medium-density~~ housing is designated ~~along at~~ the eastern edge of the Truman Waterfront property, ~~leading from Truman Avenue to~~ between Angela and Southard Street Streets. Housing would be similar in type and style to that found in historic Key West. ~~Housing and mixed uses are along a new landscaped boulevard at the center of the property and the southern boundary of the site.~~ Housing in these this areas could be developed to meet Key West's affordability thresholds.

Light commercial retail areas are programed as an extension of the commercial uses on Petronia Street. These uses would culminate at a village marketplace, an idea first contemplated in the *Bahama Village Neighborhood Charrette*. Offering Caribbean-inspired shopping, dining, and entertainment, the village marketplace is envisioned as an activity center with appeal to both the Bahama Village community and area visitors, especially cruise passengers from Mole Pier.

A multi-use center providing a variety of social services and economic development enterprises for Bahama Village and other Key West residents is programmed for the Enlisted Dining Facility. Services provided at this facility could include job training, community meeting, educational programs, day care, weekend church worship services, and others.

### *Educational and historical activity nodes*

The creation of diverse, lively points of interest (activity nodes) was an important community and design team objective. These nodes serve as activators within the Truman Waterfront property, drawing area residents and visitors to the site. Reviewed individually, the impact of each of these nodes is likely to be small; the net effect of these uses, however, may be fairly significant. One such area is the Bahama Village marketplace. Others include enhanced Fort Zachary Taylor and Seminole Battery historic properties and the creation of a visitor center and administration offices for the National Oceanic and Atmospheric Administration (NOAA) and other agencies.

Under this plan, Fort Zachary Taylor is restored and expanded into a major site amenity and destination. The historic entrance to Fort Zachary Taylor is restored through the demolition of two adjacent Navy excessed buildings. The northernmost building is modified to house related uses, including a museum, artifact storage, and administration office. The entrance to the park, as well as the Ranger Station, will be relocated, a new parking area is provided northeast of the fort. The properties east of Fort Zachary Taylor are dedicated as an archeological preserve.

The Seminole Battery, located in the southern portion of the site adjacent to Bahama Village, is also to be restored and preserved under this plan. As advocated in the *Bahama Village Neighborhood Charrette*, the Seminole Battery and adjacent site could be used as a central starting point for tours of Bahama Village. The underground bunker portion of Seminole Battery could also be developed into a war memorial and museum, depicting Key West's military history and the roles its citizens have played.

Two Navy excessed buildings, adjacent to the boat launch at the nexus of the eastern and southern quay walls would be reused and expanded to house a federal interagency visitor center and administrative offices for NOAA, the U.S. Fish and Wildlife Service, the National Park Service and other agencies. The facilities would serve as a single location for persons interested in obtaining information or learning about the natural and cultural resources of the Florida Keys. These facilities would front a plaza to the east and a newly landscaped boulevard to the south. Research vessels and boats offering tours to environmental areas could be moored within a new public marina contemplated for the portion of the basin north of the center.

### *Expanded use of portions of the Truman Waterfront property for port activities*

As a deepwater port, Truman Waterfront affords the city a unique opportunity for maritime related activities as well as continue its role as a port of emergency for ships at sea. Responding to concerns by residents and community leaders, the plan does not include containerized or general cargo operations. Further, on January 12, 1999 the City Commission resolved to limit cruise ships to the single existing berth on the outer mole.

A shaded public transportation pick-up/drop-off area, as well as a small area for a visitor information kiosk and bike concessions could be developed on north Mole.

Berthing areas for port vessels, including tugs and pilot boats, as well as for visiting ships under 350 to 400 feet -- the largest vessels that can be safely navigated into the Truman Waterfront basin -- are provided along the inner north and central portion of Mole Pier and the northern portion of the western quay wall.

Passenger ferry operations are programmed for the southern portion of the Truman Waterfront basin. Through use of the existing pier extending from the southern quay wall, two passenger ferries can be accommodated simultaneously. Ferry ticketing, luggage, and support requirements are provided through modification and reuse of the existing navy building located along the southwest corner of the basin. A small parking area and a bus and taxi drop-off is terminal envisioned for the ferry terminal facility along the southern and eastern sides of the building.

Port administration functions would be located in an expanded facility at the southern end of the Mole. Location of these uses in this area would allow for port administration functions to be proximate to the majority of port activities. To meet U.S. Customs and U.S. Coast Guard safety regulations, a secure access point to Mole Pier could also be developed at this point or another appropriate area. Public access to the north Mole Pier would occur unimpeded when a cruise vessel is not berthed at the outer mole.

The port would also administer an area located along the southern quay wall, possibly leasing it for light- and medium-industrial marine uses, such as boat and skiff manufacture, customizing of boats, repair, dry dock, boat storage, riggings, chandlery, and other activities. Bare-boat charter operations may also be feasible on this site.

### ***Poinciana Housing***

The plan for the Poinciana Housing property is presented in **Figure III.B.7, Poinciana Housing Parcel Concept Plan**. This plan represents the synthesis of ideas and design concepts generated through the public involvement process and the analysis of site opportunities and constraints.

The central goal of this plan is the reuse of structures located on the property, introducing limited infill development where appropriate. The public and design team also wanted to create an affordable, livable neighborhood, well integrated into the surrounding community.

The site is divided into eight housing nodes, each focusing around a courtyard and parking area. Each housing node is envisioned to have design elements making it distinct, such as color or other existing features. In several of the nodes, new infill housing is introduced. A new human services facility with a separate point of ingress/egress is provided in the southwest portion of the site. Surrounding this facility are several buildings dedicated as transitional housing for the special needs populations. The total number of proposed dwelling units for the site -- including the area (eight units) presently dedicate to the Park Service -- is 228 units; of these 16 are new infill.

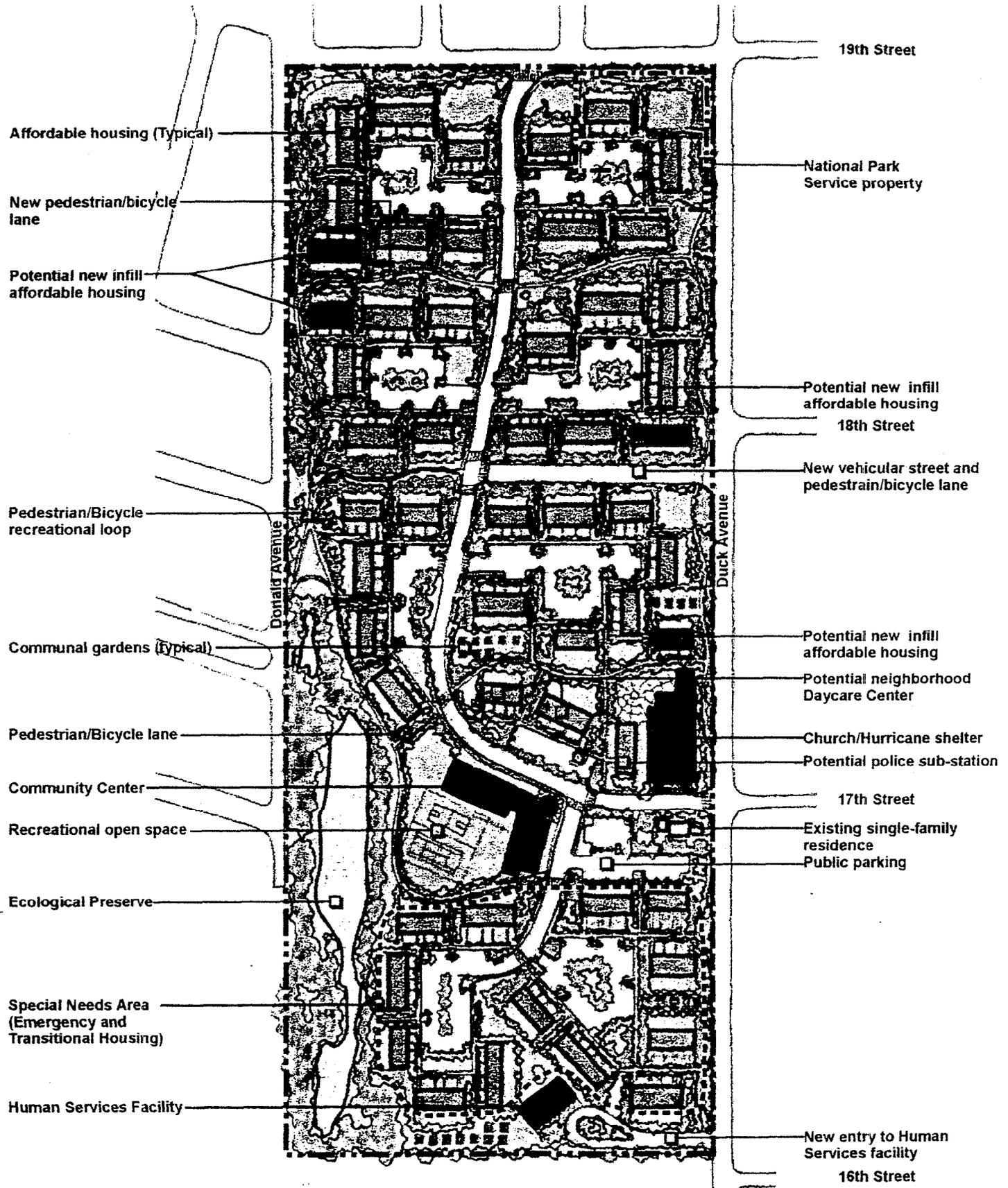
Several new facilities are proposed as part of the plan for the Poinciana Housing site. A community recreation center, located near the center of the site and adjacent to the ecological preserve, would offer meeting areas, day-care, and

recreation facilities for the neighborhood. This facility could also be designed as a potential hurricane shelter. Neighborhood services, such as a child day-care and a police substation could be provided in existing buildings southeast of the new community center. A church/hurricane shelter is contemplated for the vacant parcel southeast of the community center.

A third entrance should be introduced in the center of the site, connecting Duck Avenue to Dunlap Avenue. The purpose of this third entrance would be to improve neighborhood traffic circulation. This would help better integrate the site into the surrounding neighborhood, thereby eliminating the "gated" feel of the original military design of the development.

Lush landscaping is an essential component of this plan. It works to create definable spaces in building fronts and backyards, as well as a major amenity for the complex. An ecological preserve is dedicated in the northwest corner of the site, preserving red and black mangroves growing in the area.

A pedestrian and bicycle network is envisioned for the Poinciana Housing development. A wide, paved loop-course begins and ends at the new community center and ecological preserve and runs along the perimeter of the development. This course would serve as a major neighborhood amenity, offering a vita-course, jogging trail, and bicycling and in-line skating area. Bicycle and pedestrian sidewalks bisect the Poinciana Housing development at several points, expanding the range of access and opening the development to the surrounding community.



**Legend**

--- SITE BOUNDARY

Figure III.B.7  
**POINCIANA HOUSING PARCEL**  
**KEY WEST MILITARY BASE REUSE PLAN**



**Peary Court Cemetery**

The property is expected to remain as an historic open space and a cemetery. Additional interments may be proposed. **Future Land Use Classifications**

Such uses translate into the following proposed future land use classifications, as seen below, **Table III.B.3, Proposed Land Use Classifications**.

TABLE III.B.3	
PROPOSED LAND USE CLASSIFICATIONS	
Parcel	Proposed Classification(s)
Truman Waterfront	HRCC-4, HNC-2, HPS, HPS-1, HCL, and HMDR
Poinciana Housing	MDR-1 and CM
Peary Court Cemetery	HPS-2
Source: Key West Final Base Reuse Plan, October 1997	

The rationale behind each proposed classification, as well as the correlation of land use classifications to land development regulations, follows.

**Truman Waterfront Parcel**

The Truman Waterfront resides adjacent to several important districts including: the Old Town Historic District; Bahama Village; Truman Annex Development; and, Fort Zachary Taylor. Development of the Truman Waterfront will have an impact on these adjacent areas and, therefore, will require a regulatory framework to ensure redevelopment reflects the form, function, image and ambiance of the vicinity.

Review of the **City of Key West Comprehensive Plan** (and the implementing **Land Development Regulations**) revealed the type of uses, image and ambiance requested by the community in the public workshops; maintaining and enhancing vital adjacent areas could be accomplished using existing land use designations. But, additional land use sub-categories need to be created, including HCL, HPS-1, and HRCC-4. The land use classifications proposed for the Truman Waterfront are shown in **Figure III.B.8, Proposed Land Use Classifications, Truman Waterfront Parcel** and are discussed in detail below.

*Historic Limited Commercial District (HCL)*

This designation has been applied to the "market place" adjacent to Bahama Village, south of the extension of Petronia Street. The HCL designation restricts activities within the limited commercial district to shops catering to the following markets: neighborhood residential markets within the immediate vicinity, as opposed to city-wide or regional markets; specialized markets with customized market demands; or, tourist oriented markets in the immediate vicinity. The HCL district accommodates limited commercial land uses, with maximum gross floor area not to exceed 5,000 square feet.

*Historic Neighborhood Commercial District (HNC-2)*

The light retail area adjacent to the "village market" ~~and the mixed use area south of the extension of Angela Street~~ are proposed to be designated Historic Neighborhood Commercial (HNC-2).

The HNC designation is intended to accommodate both residential and neighborhood commercial uses. ~~In addition, on January 12, 1999 the City Commission expressed a strong preference that the area be developed as parks and as active and passive recreation.~~ The designation also allows single family and multi-family residential activities. The HNC contains sub-categories tailor to specific geographic areas. The profile of the HNC-2 sub-category is most appropriate for Truman Waterfront; unlike other HNC districts, it does not allow transient living accommodations. The HNC-2 designation also reflects the "fine-grained" urban design initiative requested by the public in the workshops.

*Historic Public and Semi-Public Services District (HPS)*

The HPS designation is proposed for the area immediately adjacent to and selected for incorporation into Fort Zachary Taylor. Application of this designation is consistent with the existing HPS designation of Fort Zachary Taylor.

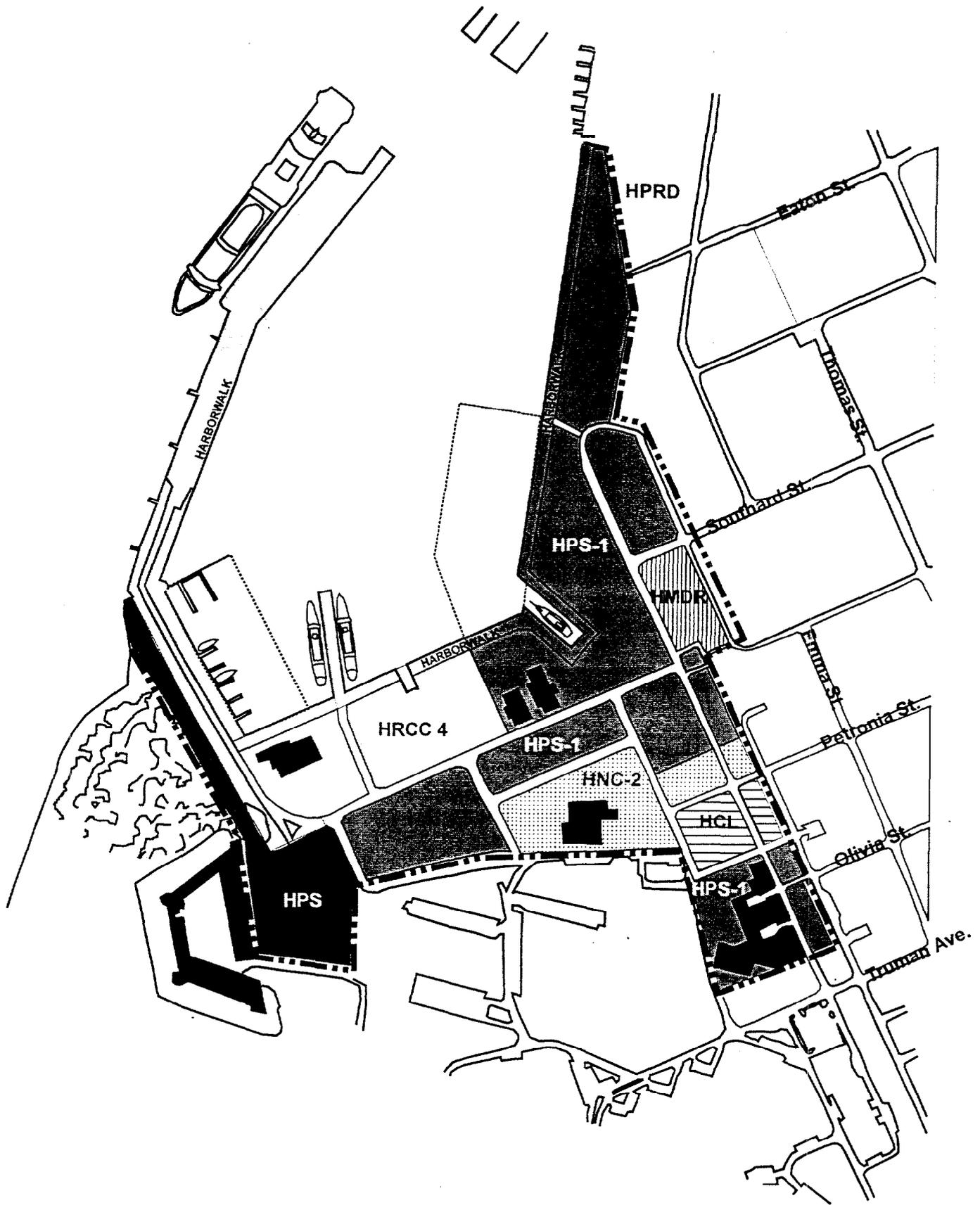
*Historic Public and Semi-Public Services District - Truman Waterfront (HPS-1)*

The HPS-1 designation is proposed for the park/open space along the east quay, the NOAA/environmental education center, the area south of Dekalb Street connecting Bahama Village to Fort Zachary Taylor, and the Seminole Battery. This designation includes uses such as a harbor walk, parks and recreation facilities, community centers, emergency medical services and parking lots.

*Historic Residential Commercial Core District - Truman Waterfront (HRCC-4)*

This designation represents a new sub-category not found in the **Comprehensive Plan or Land Development Regulations**; it is meant to specifically address port and port-related activities. Areas encompassed by this designation include: the marine light industrial area on the south quay; the ferry terminal; and, Mole Pier.

Generally, HRCC districts are designed to provide a management framework for preserving the nature, character, and quality of the city's historic commercial and residential development. The new HRCC-4 subcategory will allow light industrial and warehouse operations, one service and repair establishments, light manufacturing, terminal operations, port operations, cruise ship berthing, marinas, parks and recreation, and equipment rentals.



**Legend**

- SITE BOUNDARY
- HRCC4 PORT & PORT-RELATED ACTIVITIES
- HNC-2 NEIGHBORHOOD COMMERCIAL
- HPS-1 HISTORIC PUBLIC SERVICES - TRUMAN WATERFRONT
- HGI LIMITED COMMERCIAL
- HMDR MEDIUM DENSITY RESIDENTIAL
- HPS HISTORIC PUBLIC SERVICES

**Figure III.B.8**  
**Proposed Land Use Classification**  
**TRUMAN WATERFRONT PARCEL**  
**KEY WEST MILITARY BASE REUSE PLAN**

  
 Not to Scale

  
 BERNELLO · ALAMIL  
 & PARTNERS · INC.

### *Historic Medium Density Residential District (HMDR)*

The HMDR land use designation is proposed for the residential area adjacent to Bahama Village and the Truman Annex planned unit development. This designation is consistent and compatible with the adjacent designations of HMDR in the Bahama Village area and Historic Planned Redevelopment and Development (HPRD) in the Truman Annex development.

The designation is intended to provide a management framework to allow the proper development of the Truman Waterfront, while preserving the residential characteristic and historic quality of the medium density residential areas within Old Town. The HMDR district allows historic Old Town medium density residential development for permanent residents, including single family, duplex, and multiple family residential structures.

### *Poinciana Housing Parcel*

The proposed development program is premised on the rehabilitation of the existing units with possibility of limited infill of 16 additional units for a total of 228 units for a density of 6.3 units per acre. The surrounding SF land use designation allows up to 8 units/acre while the MDR land use allows 16 units/acre.

Rehabilitation of the existing multi-family units dictates the proposed land use category to allow for multi-family uses. However, the proposed plan also calls for provision of special needs, including emergency and transitional housing; these needs are not accommodated under the MDR classification. Therefore, a new MDR sub-classification, MDR-1, with an allowed limited density of 8 units/acre is proposed for the parcel. Permitted uses would include: single and two family dwelling units; multi-family residential dwellings; special needs, including emergency and transitional housing, human services facilities, day care centers, police substations, churches, and community recreation facilities.

The mangrove area within the parcel is partially designated CM, Conservation Mangrove. The boundaries of this existing designation will be slightly modified to reflect the actual location of the environmentally sensitive area.

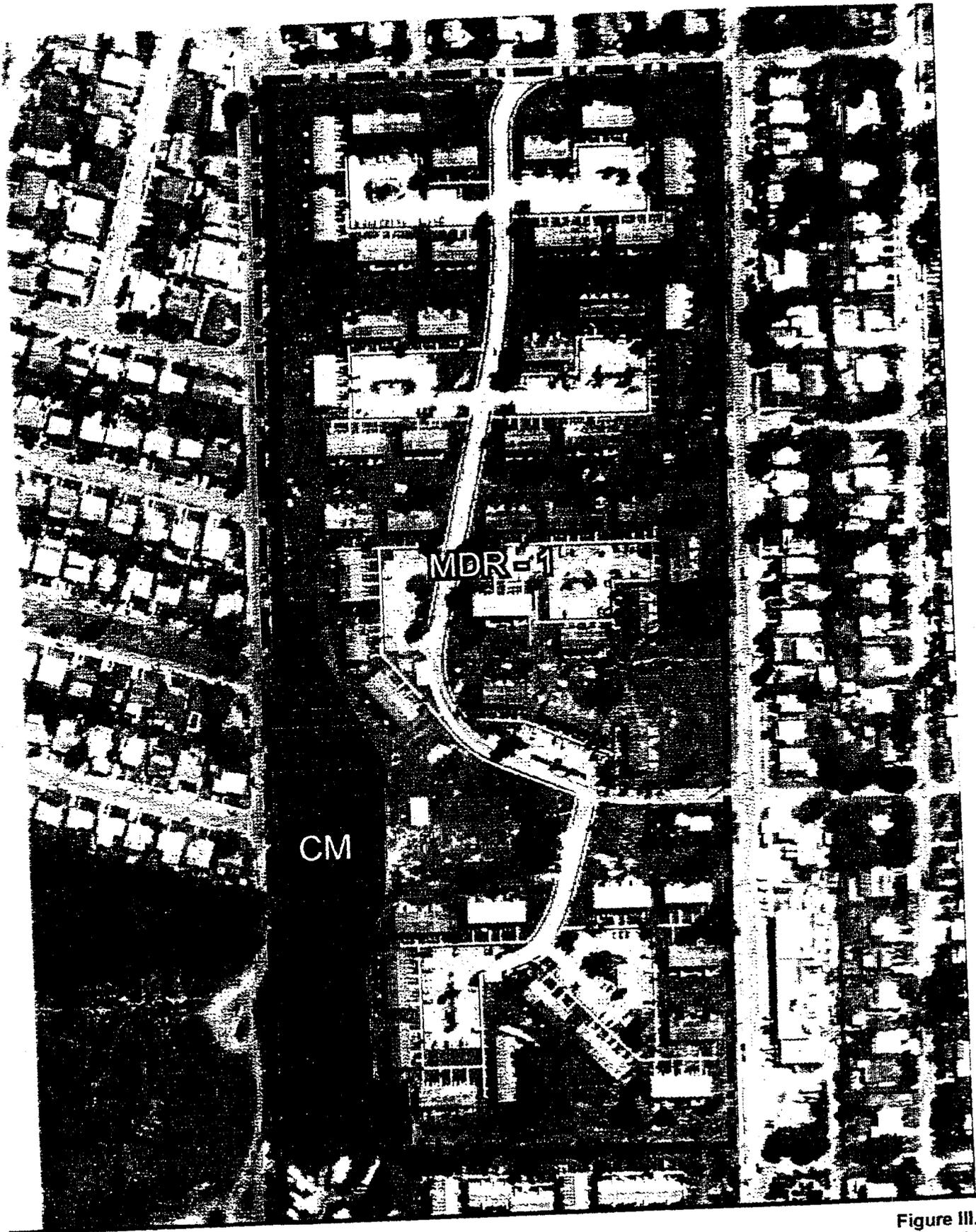
The proposed land use designations are shown in **Figure III.B.9, Proposed Land Use, Poinciana Housing Parcel**.

### *Peary Court Cemetery*

The western portion of this site is currently designated "Military" (M) while the eastern half is designated Historic Medium Density Residential (HMDR). The historic nature of the site and proposed use as a cemetery indicates that the entire site should be modified to the new district Historic Public and Semi-Public Services (HPS-2). This district is restricted to cemeteries and open space. The proposed land use change is shown on **Figure III.B.10, Proposed Land Use, Peary Court Cemetery**.

### Implications of Proposed Land Use Classifications

In order to assess the implications of the proposed land use classifications for each site, the following three tables were prepared. See **Table III.B.4, Truman Waterfront, Maximum Development Potential, Table III.B.5, Peary Court, Maximum Development Potential, Table III.B.6, Poinciana Housing, Maximum Development Potential.** These tables identify the proposed land use classification, relevant gross acreage or square footage, the maximum density and intensity, and a maximum development scenario. ~~The tables also provide a more realistic development scenario, as suggested by the Base Reuse Plan.~~ However, for the purposes of this analysis, the maximum, or worse case, scenario is used to assess potential impacts.



**Legend**

- MDR - 1 - MEDIUM DENSITY RESIDENTIAL
- CM - CONSERVATION MANGROVE

Figure III.B.9  
 Proposed Land Use  
 POINCIANA HOUSING PARCEL  
 KEY WEST MILITARY BASE REUSE PLAN





**Legend**

☐ SITE BOUNDARY

**Figure III.B.10**  
**Proposed Land Use Classification**  
**PEARY COURT CEMETERY**  
**KEY WEST MILITARY BASE REUSE PLAN**

TABLE III.B.4 TRUMAN WATERFRONT MAXIMUM DEVELOPMENT POTENTIAL						
Comprehensive Plan Classification	Gross Area*		Max. Density	FAR	Max-Lot Building Coverage	Maximum Development Scenario **
	Square Feet	Acres				
HNC-2	468,814 210,394	10.76 4.83	16 DU/Ac	1.0	40%	403,200 29,079 sf Residential (24 DU @ 1,200 SF/DU) 404,704 29,079 sf Office 404,704 58,158 sf Retail 25,000 sf Social Service/Economic Dev.
HCL	65,469	1.50	16 DU/Ac	0.8	40%	<del>26,188</del> 20,950 sf Retail (1 <sup>st</sup> Floor 40% Coverage) 15,712 sf Office <del>46,800</del> 15,712 sf Residential (13 DU @ 1,200 sf)
HMDR	88,744	2.04	16 DU/Ac	1.0	40%	38,400 sf Residential (32 DU @ 1,200 SF/DU)
HPS-1	1,100,326 830,869	24.88 19.07	N/A	1.0	30%	24.88 ac. Park 25,000 sf NOAA / Env. Ed. Ctr. 150 slip marina
HPS	246,985	5.67	N/A	4.0	40%	5.67 ac Addition to Fort Zachary Taylor
HRCC-4	500,786	11.49	Conditional Use Only	1.0	50%	Mole Pier Area (Coastal High Hazard Area) 10,000 sf Retail 5,000 sf Office 2 acre Harbor Walk <del>160,262</del> 66,382 sf Industrial <del>160,262</del> 66,382 sf Office <del>160,262</del> 66,382 sf Retail 20,000 sf Ferry Terminal Operations 1 Cruise Ship Berth 30 slip professional marina Berthing
TOTAL	1,954,502 2,195,860	44.86 50.41	N/A	N/A	N/A	<del>158,400</del> 67,483 sf Residential (69 DU) <del>49,27</del> 24.88 ac Park 5.67 ac addition to Fort Zachary Taylor <del>264,966</del> 111,173 sf Office <del>201,154</del> 145,499 sf Retail 25,000 sq. ft. NOAA / Env. Ed. Center <del>160,282</del> 66,382 sf Industrial 25,000 sq. ft. Soc. Service./Economic Development 20,000 sf Ferry Terminal Operations 180 Marina Slips 1 Cruise Ship Berth Berthing

\* Subject to site specific survey.

\*\* For impact analysis purposes, the Maximum Development Scenario represents the level of development that will be difficult to attain. This scenario makes no adjustment for non-buildable areas such as road right-of-ways, easements, etc...

TABLE III.B.5						
PEARY COURT MAXIMUM DEVELOPMENT POTENTIAL						
Comprehensive Plan Classification	Gross Area		Max. Density	FAR	Max. Lot Coverage	Maximum Development Scenario
	Square Feet	Acres				
HPS-2	43,560	1.0	N/A	1.0	40%	43,560 sf

TABLE III.B.6							
POINCIANA HOUSING MAXIMUM DEVELOPMENT POTENTIAL							
Comprehensive Plan Classification	Gross Area		Gross Max. Density	FAR	Max. Lot Coverage	Maximum Development Scenario	Proposed
	Square Feet	Acres <sup>1</sup>					
CM	126,324	3.25	na	na	na	Mangrove Wetland	<del>Mangrove Wetland</del>
MDR-1	1,450,548	30.92	8 DU/Ac	1.0	40%	273,600 sf Residential (228 DU @ 1,200 SF/DU)	<del>273,600 sf Residential (228 DU @ 1,200 SF/DU)</del>
TOTAL	1,576,872	34.17	N/A	N/A	N/A	273,600 sf Residential (228 DU @ 1,200 SF/DU)	<del>273,600 sf Residential (228 DU @ 1,200 SF/DU)</del>

<sup>1</sup> Hildebrant survey dated 2/9/98

**Availability of Facilities and Services to Serve Future Land Uses [9J-5.006(2)(a)]**

The availability of public facilities to accommodate the proposed future land uses is described for each parcel, based on the maximum development scenarios allowed by the proposed land use classifications (see **Tables III.B.4, III.B.5, and III.B.6**, above). This maximum represents a conservative estimate for several reasons: first, all the sites have existing uses, currently generating some level of facility impact; second, maximum development of the sites within the five and ten year planning periods is extremely unlikely due to the variability of the market and the paucity of residential units available through the Building Permit Allocation System; and, finally, actual development will likely be more moderate than the calculations indicated above. All data and analysis is based on existing generation and capacity figures available from various utility providers. Up-to-date projections (including an assessment of reserved capacity) are not available, although the city's Evaluation and Appraisal Report is expected to include an adequate update in a future draft. Key issues are outlined below.

**Wastewater:** The city's wastewater system is undergoing a series of improvements meant to reduce environmental impacts and the infiltration of ground water into the system. Due to the infiltration problem, the average daily generation permitted for treatment at the plant requires augmentation. This existing condition compelled the city to apply for a state permit to increase generation: the application has been determined complete. Assuming the permitted increase is allowed, there appears to be a capacity shortfall in the wastewater treatment or transmission facilities. Therefore, adequate facilities appear to be available.

**Potable Water:** The Florida Keys Aqueduct Authority has adequate water treatment and transmission facilities to address existing needs; in addition, they have excess capacity for future development. The excess capacity is adequate to address the proposed maximum development scenario for the base reuse sites.

**Solid Waste:** The city has excess solid waste treatment capacity and is expected to be able to accommodate the impacts associated with the base reuse sites.

**Drainage:** The city's existing drainage system is antiquated and is currently undergoing significant retrofitting and replacement. New drainage facilities may be required for redevelopment on the sites. Each facility will be designed for specific development plans and will assess whether the existing conveyance system is adequate for storm water discharge. Typically storm water is addressed as a site specific engineering solution, and there is no indication development plans will be unable to meet or exceed stormwater requirements.

**Character of Vacant Land [9J-5.006(2)(b)]*****Vacant Land Area***

Of the three sites, only one contains significant vacant or unused land: Truman Waterfront. The remainder of the sites are developed for their proposed uses: Poinciana Housing as a housing complex; and Peary Court Cemetery as a cemetery. An opportunity for ~~some~~ 16 units of infill housing at the Poinciana parcel exists and may be developed in the future. The **City of Key West Comprehensive Plan** does not include the Truman Waterfront Parcel (or any of the three sites) in an analysis of vacant land, primarily because as military lands, these parcels were

not eligible for development consideration. Therefore, Truman Waterfront, and to a much lesser extent, Poinciana Housing, represent an addition of actual developable land to the City of Key West.

The acreage of existing vacant land within the Truman Waterfront is difficult to calculate. Much of the area is sparsely developed with former military structures or deep water harbor facilities, leaving significant open space around the harbor perimeter and elsewhere within the site. However, the majority of the Truman Waterfront Parcel (with the exception of committed reuse buildings and historically protected areas) is available for redevelopment. This estimated redevelopment acreage is eight approximately ten to fifteen acres.

Vacant land within the Poinciana Housing Parcel is actually open space. Approximately 0.5 acres of the existing open space area is expected to be developed with 16 units of infill housing.

### ***Soils and Topography***

The proposed land uses will not negatively impact the soils or topography of the underlying land. Specifically, all three sites are located on urban soils, where prior activities have significantly altered the natural soils and topography.

### ***Natural Resources***

The proposed land uses are not expected to have any net negative impact on natural resources. This finding is based on the overall paucity of natural resources on the three sites, the proposed development plan and associated land uses, and the extensive local, state and federal regulations which govern the impact of development on natural systems. Each site is addressed individually below.

*Truman Waterfront Parcel:* The Truman Waterfront Parcel was created entirely out of material deposited on tidal wetlands for the purposes of supporting military activities, most recently a submarine basin. As a result, most of the site is environmentally barren: paved surfaces, structures, and hardened shorelines dominate the landscape. Natural resources are concentrated along the shoreline and consist of ecological communities which have adapted to the hardened surfaces and secondary impacts of a deep water port and military base. Therefore, measuring the potential impact of the proposed land uses on natural resources, and understanding how the proposed uses will change the existing impact scenario is helpful. The following outlines identified resources and outlines how proposed uses will impact the resources.

**Sandy Beach and Turtle Nesting Area:** This area will be incorporated into the park's existing HPS land use classification. Fort Zachary Taylor State Park has already initiated conveyance activities to ensure this area and associated resources are maintained as part of the park facility. In addition, the resources are protected by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, as well as the Florida Department of Environmental Protection, Division of Beaches and Shores.

**Bird Nesting Areas:** Existing bird nesting areas for Least Terns are located within the HPS-1 land use classification, on the roofs of existing WWII structures. The

concept plan for this area shows demolition of the structures for a park facility. Disruption of the birds during nesting season is regulated by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, the Florida Fresh Water Fish and Game Commission and the U.S. Fish and Wildlife Service. These nesting areas would be protected regardless of the proposed classification of the site.

An osprey nest has been identified within the area proposed for classification as HNC HPS1-1 (park). This nest is located on an existing water tower. Proposed development in this area, including the potential removal of the water tower, will need to be coordinated with the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, the Florida Fresh Water Fish and Game Commission and the U.S. Fish and Wildlife Service.

**Coral Colonized Structures:** The existing coral colonies on the harbor bulkhead are all included within the proposed HRCC-4 (port) area. These colonies have adapted to the hardened shoreline and port uses, and would quickly re-establish in areas where disruptions due to bulkhead repair or replacement are planned. Impacts to coral communities are heavily regulated by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations** Florida Department of Environmental Protection and the United States Army Corps of Engineers.

**Seagrass Beds:** Seagrass beds of varying densities are located along the edge of the parcel, with the most heavily vegetated areas adjacent to the proposed HPS designation scheduled for incorporation into Fort Zachary Taylor. Remaining seagrass patches are offshore of the area designated as HRCC-4, to the south of the existing cruise ship berth on the north outer mole. The City Commission's decision to limit cruise ship berth expansion should adequately protect existing resources. Furthermore, impacts to seagrasses are heavily regulated by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers.

**Water Quality:** Two potential marinas are shown adjacent to the proposed HRCC-4 and HPS HPS1-1 areas. These areas are already bulkheaded, and have been used for port and small boat berthing in the past. A floating marina is now located in one of the proposed marina areas. Construction and operation of marina facilities can have primary and secondary impacts on water quality and nearby submerged resources. Although the concept plan shows these marinas as an option which may be permitted adjacent to the proposed classification, they will be extensively studied through the regulatory process set forth by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers.

**Poinciana Housing Parcel:** The Poinciana Housing Parcel was developed in 1969 on top of filled wetlands. The only remaining natural resource on the site is a narrow, mangrove vegetated lake located along the north edge of the site. The entire mangrove area is designed for conservation. Therefore, no impacts to natural resources are expected from the proposed use.

**Peary Court Cemetery:** There are no natural resources on the Peary Court Cemetery site.

The deficit of affordable housing in Key West is well documented. The 1994 Comprehensive Plan identifies a significant affordable housing deficiency. The more recent assessment of affordable housing needs conducted by the Shimberg Center for Affordable Housing at the University of Florida indicates, in 1995 the City of Key West had a deficit of 4,192 affordable housing units. Further, the **City of Key West Base Reuse Plan Homeless Assistance Submission** (adopted on September 16, 1997), found the needs of many homeless could be addressed through the provision of affordable rental units because many instances of homelessness in Key West are caused by the lack of affordable housing.

There is strong factual and anecdotal evidence to suggest overcrowding of existing housing units in the city may occur as a result of the affordable housing deficit. An *Economic and Market Analysis of Selected Opportunities and Uses* conducted by KPMG Peat Marwick, LLP, in October 1997, as part of **Base Reuse Plan** found average household sizes in Key West have increased between 1990 and 1995, from 2.31 to 2.34. Non-family households, comprised of single persons and other, increased more than three percent from 1980 to 1990, resulting in the percent of non-family households increasing from 37.2 percent to 45.3 percent during the same ten year period. The study further noted a significant discrepancy between the number of rental units estimate by the City of Key West Building Department and the Housing Authority of Key West (2,773 units) and the renter-occupied housing units identified in the census data (5,200 units). This discrepancy was attributed to two possible factors: first, many of the rental units in the city include one or more unrelated individuals; or second, an inordinate amount of renter occupied units are not registered with the city.

The city's affordable housing criteria includes provisions requiring proof of legal residence in the City of Key West for at least one consecutive year. This, combined with a known shortage of affordable housing, documentation of working homeless, and other evidence suggesting the housing deficit is a result of overcrowding rental units, all implies population increases normally associated with the addition of new residential acreage may not be applicable to Key West.

~~The unit limits set through the Building Permit Allocation also affect population growth. All potential residential densities allowed by the proposed land use classifications will be limited by the availability of units through the Building Permit Allocation System. All new units will be restricted to affordable housing; therefore, new units, when available, are most likely to serve the existing population.~~

The following table, **Table III.B.7, Build-out Population In Truman Waterfront And Poinciana Housing**, outlines anticipated residents at maximum build-out in each parcel, as defined by **Tables III B.4, 5 and 6.**

<b>BUILD-OUT POPULATION IN TRUMAN WATERFRONT AND POINCIANA HOUSING</b>				
<b>Site</b>	<b>Existing Dwelling Units</b>	<b>Existing Population</b>	<b>Future Dwelling Units</b>	<b>Future Population</b>
Truman Waterfront	0	0	432 <u>69</u>	309 <sup>2</sup> <u>162</u> <sup>2</sup>
Poinciana	212	812	228	849 <sup>2</sup>
Total	212	812	360 <u>297</u>	4458 <u>1,011</u>

Source: Bermello, Ajamil and Partners, 1998

<sup>1</sup> Calculation based on actual bedroom counts per unit, assuming two people for the first bedroom and one person for each additional bedroom

<sup>2</sup> 2.34 persons per household, Economic and Market Analysis of Selected Opportunities and Uses, KPMG Marwick LLP, October 1997.

The above table, **Table III.B.7**, indicates populations allowed within the proposed classifications. However, actual development will be limited by the availability of residential units through the Building Allocation System, infrastructure improvements, and the overall market.

### ***Estimated Needed Acreage and Methodology***

The typical practice of estimating population growth, then estimating needed acreage to accommodate that growth is not appropriate for Key West due to the city's unique growth management restrictions. Further, although the proposed land use changes could result in the addition of new residential units and commercial areas (i.e. job generation), they will be strictly controlled by the existing growth management mechanisms in the city's **Comprehensive Plan and Land Development Code**.

### **Need for Redevelopment [9J-5.006(2)(d)]**

The Future Land Use Element Data Inventory and Analysis of the **Key West Comprehensive Plan** outlines major issues confronting redevelopment in the city, including the need to: avoid displacing low and moderate income families and generate affordable housing; retain and/or enhance public access to the waterfront; prevent dilapidation of open space and the intensification of drainage problems; and, diversify structure types. The same document identifies Bahama Village as a specific redevelopment area.

The proposed land uses will positively reinforce the major issues outlined in the **Comprehensive Plan**, and will specifically enhance the Bahama Village area through the proposed redevelopment of the Truman Waterfront Parcel. The provision of affordable housing is a major objective of the redevelopment of the Truman Waterfront and Poinciana Housing parcels.

### ***Renewal of Blighted Areas***

None of the three parcels are considered blighted areas.

---

**Elimination of Inconsistent Uses**

Prior use of the parcels as military holdings was not inconsistent with surrounding land uses. However, the proposed land uses will help create connections to existing communities and further their identities and goals.

**Analysis of Floodprone Areas [9J-5.006(2)(e)]**

None of the sites are known to experience flooding problems during normal storm events.

**Analysis of Need for Dredge Disposal Sites [9J-5.006(2)(f)]**

The future generation of spoil material at the Port of Key West may occur as part of regular maintenance of existing federal navigational channels. This work appears to be the responsibility of the federal government. The city's first priority, should the need for dredging be verified and permitted, is to ensure beach compatible material is used to nourish city recreational areas. Any remaining material will likely be disposed in upland areas in accordance with local, state and federal regulations. There does not appear to be a need to designate a disposal site at this point in time.

**Hazard Mitigation Development or Redevelopment [9J-5.006(2)(g)]**

All new development and redevelopment will meet flood plain criteria as required. No existing structures have been targeted for hazard mitigation at this point in time. However, as development plans progress, hazard mitigation may be deemed appropriate, at which time needed measures and funding sources (including state funds for public buildings) will be determined.

## C. Transportation

This section addresses transportation issues relevant to the base reuse sites. It also documents the existing inventory and operating characteristics of the island's functionally classified road system. The unique and historical development patterns within the city combined with the environmental sensitivity of the surrounding shoreline and waters restricts the types of transportation improvements typically implemented in other areas of Florida. It is the purpose of this section to document existing transportation conditions, as well as future transportation characteristics as indicated in the City of Key West's currently adopted **Comprehensive Plan**.

### Data and Map Series [9J-5.019(2)(a)] [9J-5.019(5)(a)]

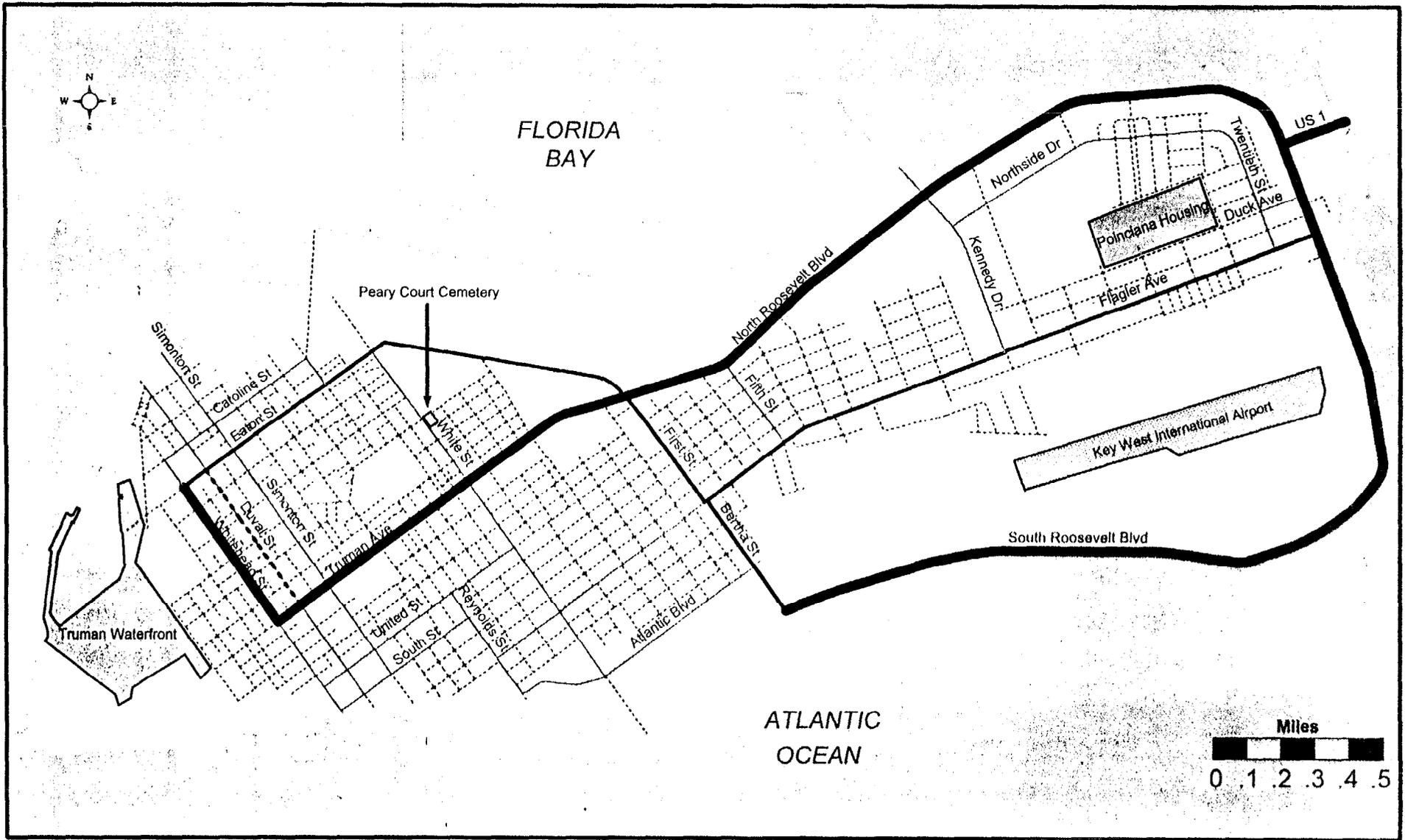
This subsection documents the existing and future transportation inventory as documented in the **City of Key West Comprehensive Plan: Data Inventory and Analysis**, July 1993, and other relevant transportation studies as documented within the text of this section or on their respective maps. It is noted, few of the existing transportation characteristics are indicated to change; thus, this section documents both the existing transportation data requirements as required of 9J-5.019(2) and the future transportation map series as required by 9J-5.019(5). Separate maps are shown for existing and future transportation data requirements as needed. In addition, the locations of Key West base reuse sites included in this report and analysis: the Truman Waterfront, Peary Court Cemetery, and the Poinciana Housing, are illustrated on each of the maps.

### Existing Functional Classification and Jurisdictional Responsibility [9J-5.019(2)(a)1. & 8.] [9J-5.019(5)(b)1.]

The existing functional classification of roadways in Key West is illustrated in **Figure III. C. 1, Existing and Future Functional Classification and Jurisdictional Responsibility**. This figure illustrates the functional classification of roadways: Principle or Minor Arterial, Urban Collector, and other local roadways. It also depicts the jurisdictional responsibility of roads on the island: state, county, and city where applicable. No changes are indicated in the city's **Comprehensive Plan** to either future functional classification or jurisdictional responsibility.

### Existing Public Transit System and Intermodal Facilities [9J-5.019(2)(a)2. & 7.] [9J-5.019(5)(a)2. & 9]

The existing and future Public Transit System and Intermodal Facilities are illustrated in **Figure III. C. 2, Existing and Future Public Transit System and Intermodal Facilities**. This figure illustrates the two transit routes and the Grinnell Street Park N' Ride Facility and its supporting bus shuttle service. Each of the three base reuse sites is within two blocks of an existing transit route. There are no other significant exclusive public transportation transfer facilities or exclusive transit corridors. Additionally, the current **Comprehensive Plan** does not inventory major public transit trip generators and attractors as required in 9J-5.019(2)(a)10. and 9J-5.019(2)(b) 3., and are therefore not included. Also, there are no freight or passenger rail lines or terminals located in the city; therefore, these are not illustrated as required in 9J-5.019(2)(a)6. and 9J-5.019(2)(a) 8.

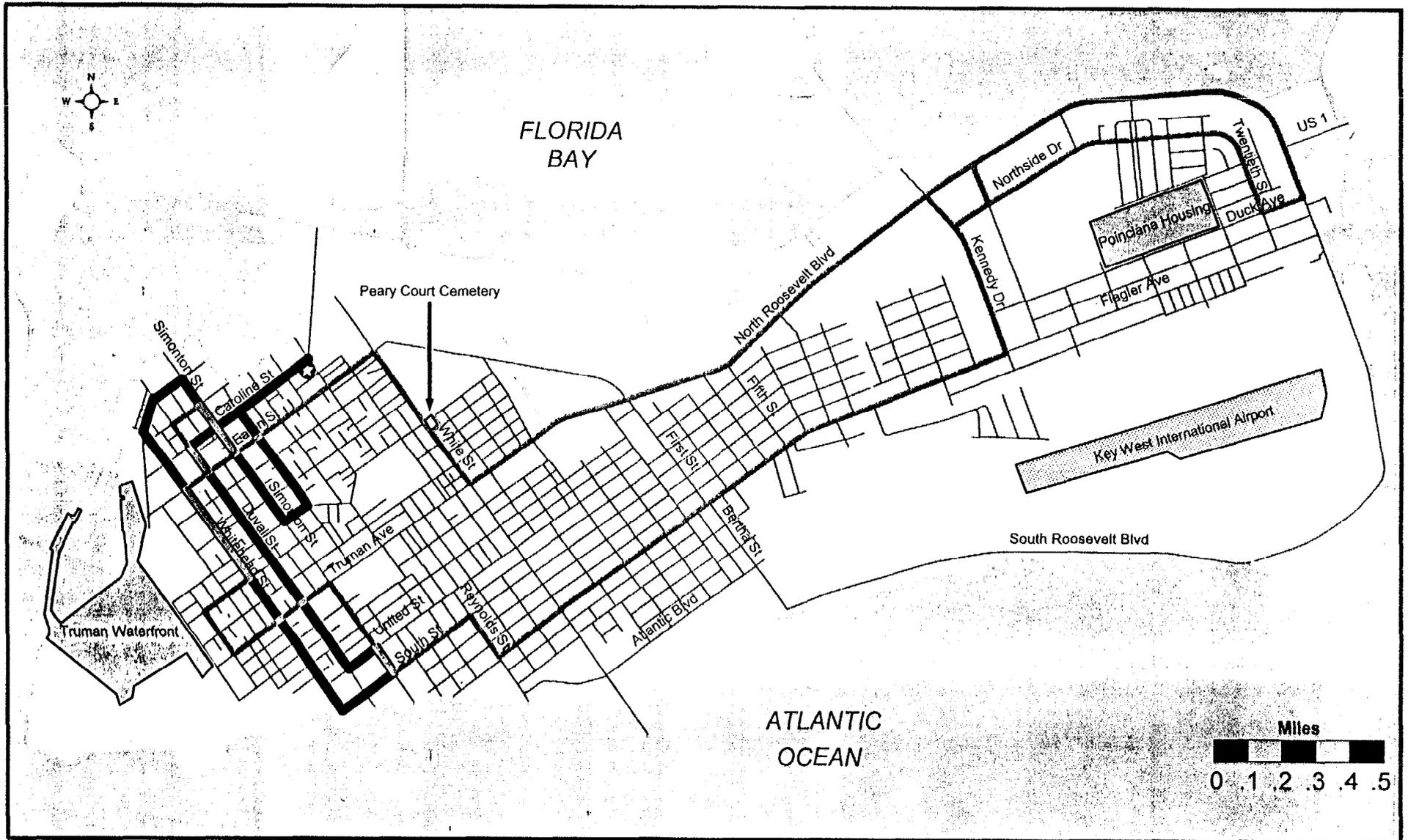


**Legend**

- State Principal Arterial
- County Minor Arterial
- - County Urban Collector
- City Urban Collector
- .... Other Local Road

**Figure III. C. 1**  
**Existing and Future Functional Classification and**  
**Jurisdictional Responsibility**

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**OLIVER** Planning and Engineering



**Legend**

-  Existing Shuttle Bus Route
-  Existing Transit Route
-  Existing Park N' Ride Garage

**Figure III. C. 2**  
**Existing and Future Public Transit System and**  
**Intermodal Facilities**

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**OLIVER** and Associates, Inc.  
 Planning and Engineering

**Existing Significant Bicycle and Pedestrian Ways [9J-5.019(2)(a)3.]**

Existing significant Bicycle and Pedestrian Ways located in the City of Key West according to the **Comprehensive Plan** are illustrated in **Figure III. C. 3, Existing Significant Bicycle and Pedestrian Systems**. The most significant facilities in the city are bicycle / pedestrian paths, located on the waterside of North Roosevelt Boulevard and South Roosevelt Boulevard.

**Future Significant Bicycle and Pedestrian Ways [9J-5.019(5)(a)5.]**

Future proposed significant Bicycle and Pedestrian Ways to be located in the City of Key West according to the **Comprehensive Plan** are illustrated in **Figure III.C.4, Future Proposed Significant Bicycle and Pedestrian Systems**. This map illustrates an increase in bicycle facilities from the existing system by adding additional bicycle routes in the city to increase network connectivity. The development of these routes will increase the accessibility of each of the base reuse sites to other parts of the city.

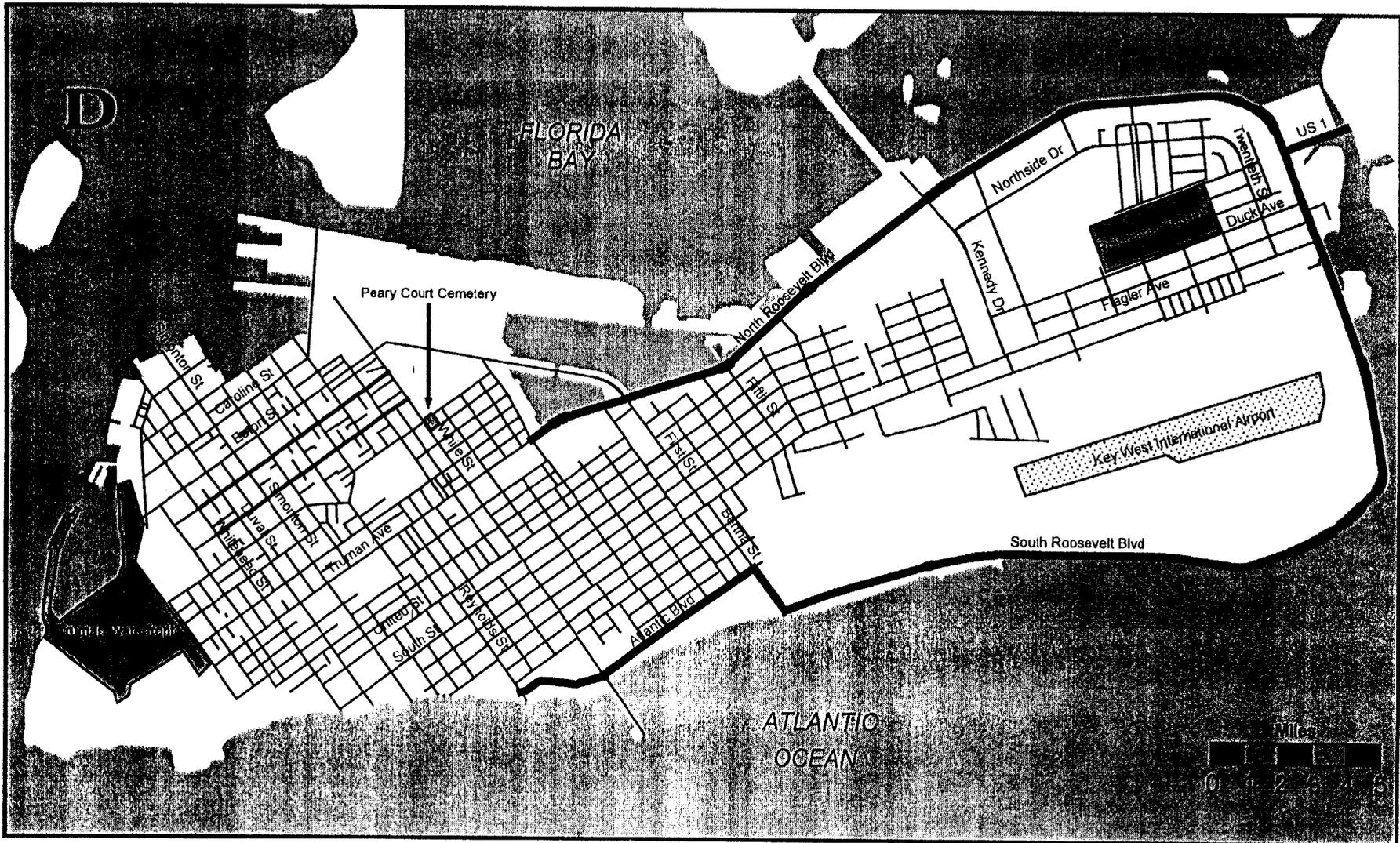
On November 8, 1996, the City of Key West City Commission adopted Resolution 96-36, thereby adopting the Key West Bicycle and Pedestrian Strategic Plan. This plan identified the locations of various bicycle and pedestrian user groups, as well as identifying several short term improvements. The recommendations in the strategic plan have not been amended to the adopted **Comprehensive Plan**. However, the reader is encouraged to review the Key West Bicycle and Pedestrian Strategic Plan in the Appendix.

**Existing and Future Port and Airport Facilities [9J-5.019(2)(a)4. & 5.] [9J-5.019(5)(a)6. & 7.]**

The existing and future port and airport facilities are illustrated in **Figure III. C. 5, Existing and Future Port and Airport Facilities**. The City of Key West is served by one airport, the Key West International Airport, located in the south eastern quadrant of the city. Two deep water port facilities serving the passenger cruise ship industry currently exist, including Pier B and Mallory Dock. Two additional port facilities are indicated in the city's **Comprehensive Plan**, Pier A which is included within the Truman Waterfront area as part of this plan and a proposed vehicle and passenger facility at the Key West Bight. Clear zones and obstructions to flight operations are not a significant factor in the base reuse plan and were therefore, not included.

**Existing and Future Road Lanes [9J-5.019(2)(a)9.] [9J-5.019(5)(b)2.]**

The existing and future number of through lanes and the road type (i.e. divided or undivided) is illustrated in **Figure III. C. 6, Existing and Future Road Lanes and Type**. Most roadways within the city are two lanes and undivided including all local streets. The only significant multilane roadways in the City of Key West are South Roosevelt Boulevard and North Roosevelt Boulevard. No significant lane additions are expected to occur or are indicated in the **Comprehensive Plan**.

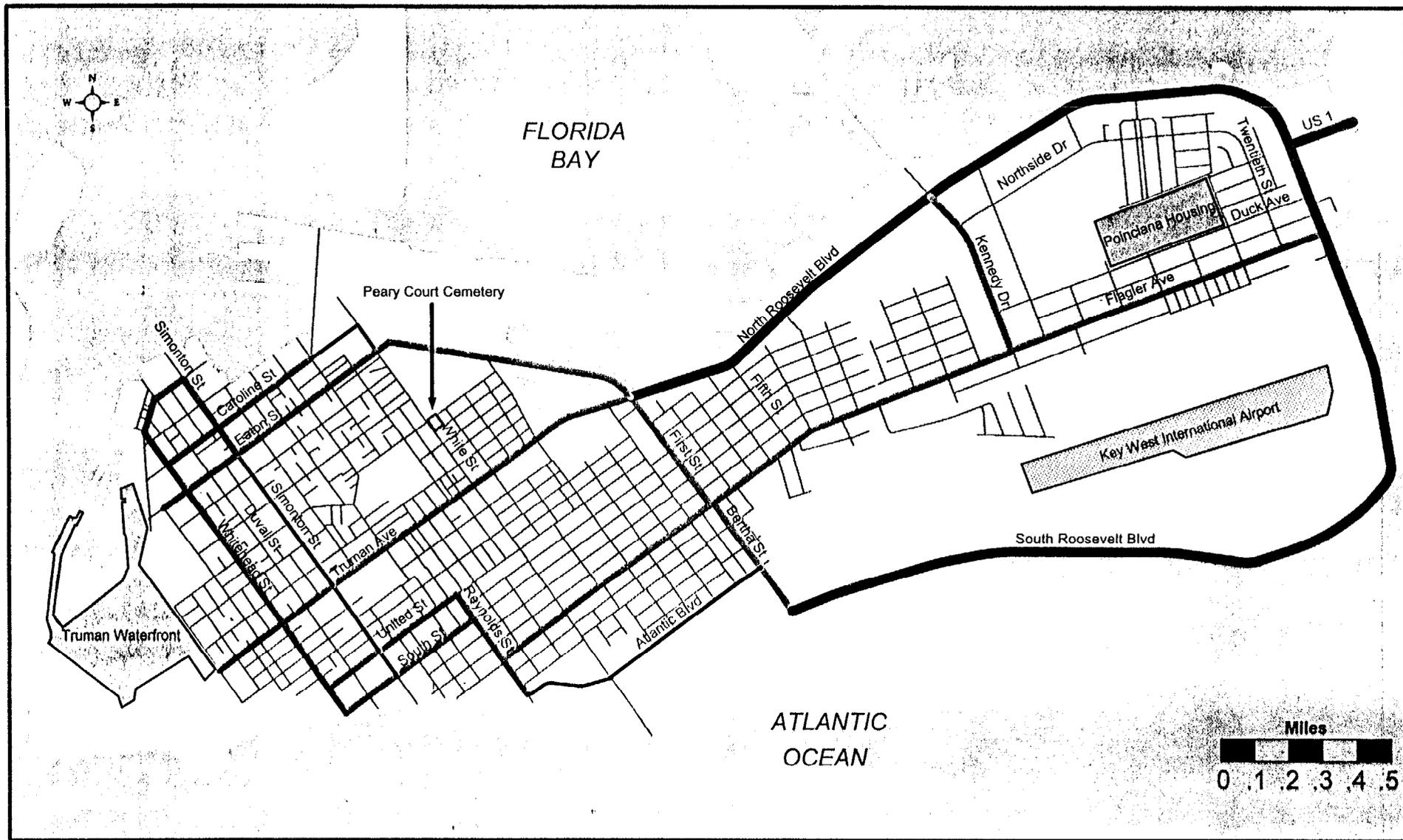


**Legend**

- Bicycle/Pedestrian Path
- Bicycle Lanes

**Figure III. C. 3**  
**Existing Significant**  
**Bicycle and Pedestrian Systems**

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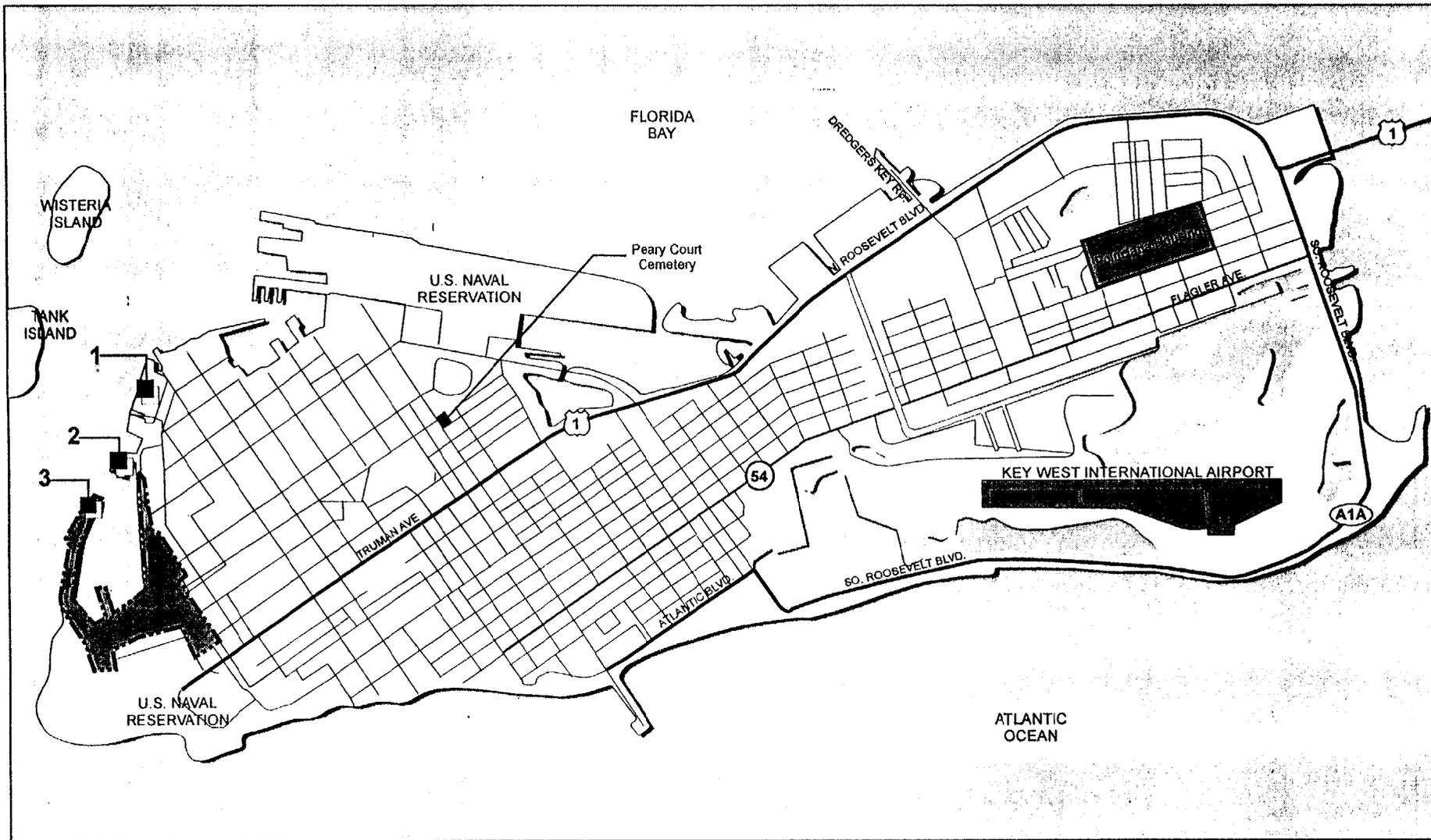


**Legend**

-  Bicycle Route
-  Bicycle Lane
-  Bicycle Path

**Figure III. C. 4**  
**Future Proposed Significant**  
**Bicycle and Pedestrian Systems**

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 Planning and Engineering



**Legend**

- 1 Mallory Dock
- 2 Pier B
- 3 North Mole Pier
-  Truman Waterfront

**Figure III.C.5**  
Existing and Future Port and Airport Facilities

**KEY WEST MILITARY BASE REUSE PLAN**



Not to Scale



U.S. ARMY CORPS OF ENGINEERS

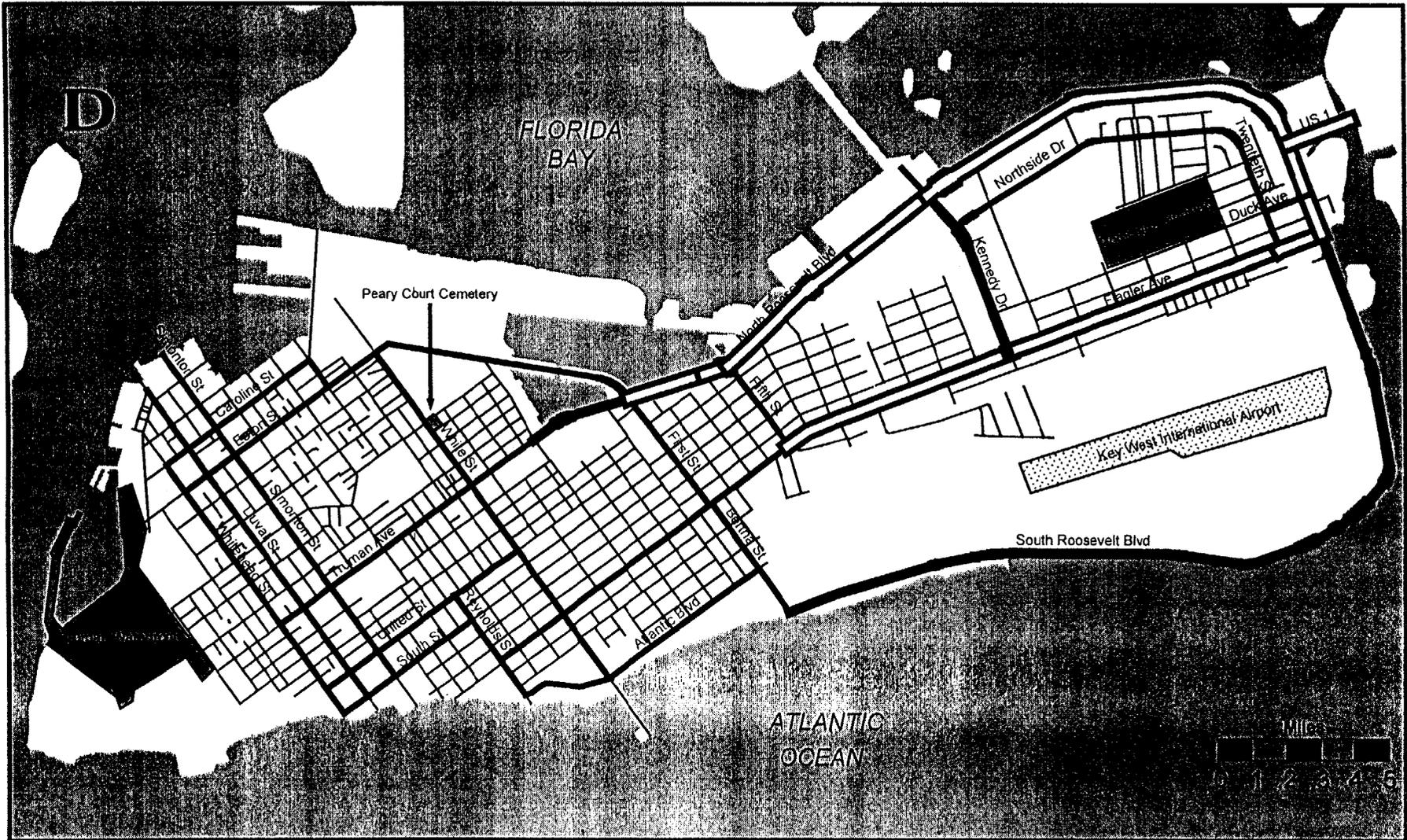


Figure III. C. 6  
Existing and Future Road Lanes and Type

Legend

- 2 Lanes Undivided
- 4 Lanes Undivided
- 4 Lanes Divided

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### **Existing and Future Designated Natural Disaster Evacuation Routes [9J-5.019(2)(a)11.] [9J-5.019(5)(b)5.]**

The existing designated natural disaster evacuation routes are illustrated in **Figure III. C. 7, Designated Natural Disaster Evacuation Routes**. The principle natural disaster threat to the City of Key West is tropical weather systems, notably hurricanes. The only hurricane evacuation route for the lower Keys by passenger vehicle is U.S. 1. According to the Monroe County Emergency Management Department, both North Roosevelt Boulevard and South Roosevelt Boulevard are considered evacuation facilities accessing U.S. 1. This highway will continue to serve as the only road providing for evacuation from the island in the future. The existing adopted roadway level of service performance standard is illustrated in **Figure III. C. 8, Existing Adopted Roadway Performance Standards**. The adopted level of service standard for all functionally classified roadways in the City of Key West is Level of Service "D", as determined using the procedures and capacities found in the Florida Department of Transportation Level of Service Guidelines.

### **Existing Peak Hour, Peak Direction Level of Service [9J-5.019(2)(b)1.]**

The existing 1998 P.M. Peak Hour Levels of Service on functionally classified roadways in the City of Key West is illustrated in **Figure III. C. 9, 1998 PM Peak Hour Level of Service**. A summary of the 1998 level of service analysis is included in **Appendix III. C**. This level of service analysis was accomplished using the data collected as part of the City of Key West Truman Annex Diversion Study, as documented in the Existing Conditions Analysis report dated October 1996. Traffic volumes from 1996 were adjusted to reflect existing 1998 traffic volumes using a "2 percent" annual growth rate. This growth rate is conservative in that it is higher than the increased traffic volumes typically observed in the City of Key West. Thus reported levels of service in this analysis may be worse than the actual conditions occurring in the field.

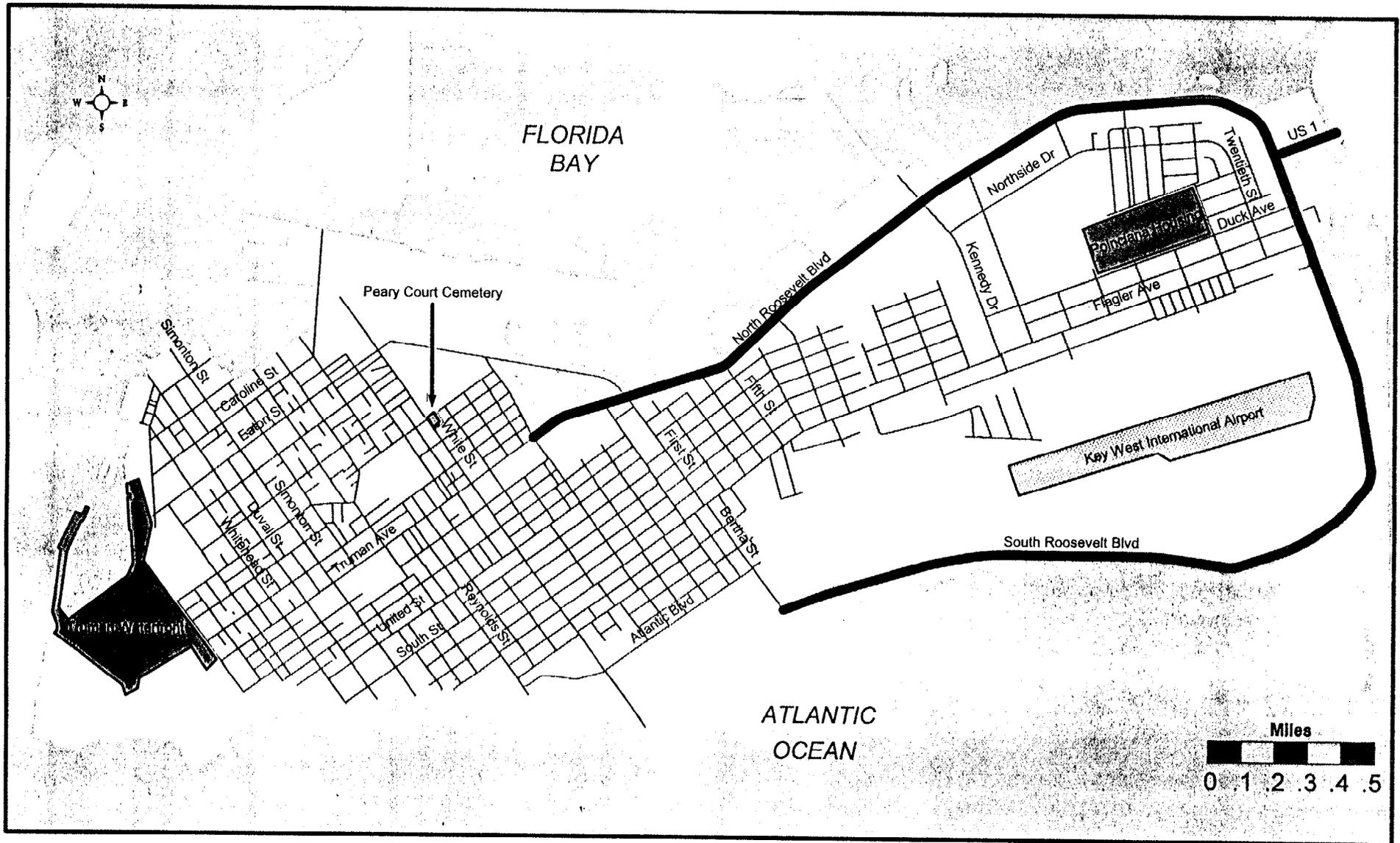
The following roadways are indicated as operating below the adopted performance standard of D:

- North Roosevelt Boulevard, Palm Avenue to Kennedy Drive – LOS F
- Truman Avenue, White Street to Palm Avenue – LOS F
- Palm Avenue, White Street to North Roosevelt Boulevard – LOS F
- Eaton Street, Whitehead Street to White Street – LOS F
- Flagler Avenue, White Street to Kennedy Dr – LOS E & F
- Duval Street, Truman Avenue to Fleming Street – LOS E & F
- First Street, Flagler Avenue to North Roosevelt Boulevard – LOS F
- Bertha Street, Atlantic Boulevard to Flagler Avenue – LOS F

Many of the above level of service deficiencies are documented in the 1996 level of service conditions analysis and reflect on-going level of service deficiencies within the city.

### **Future Peak Hour, Peak Direction Level of Service [9J-5.019(5)(b)4.]**

The future 2003 P.M. Peak Hour Levels of Service, not including the base reuse proposal, is illustrated for functionally classified roadways in the City of Key West in **Figure III.C.10, 2003 PM Peak Hour Level of Service Without Base Reuse**. A summary of the 2003 level of service analysis without base reuse traffic is included in **Appendix III. C**. This level of

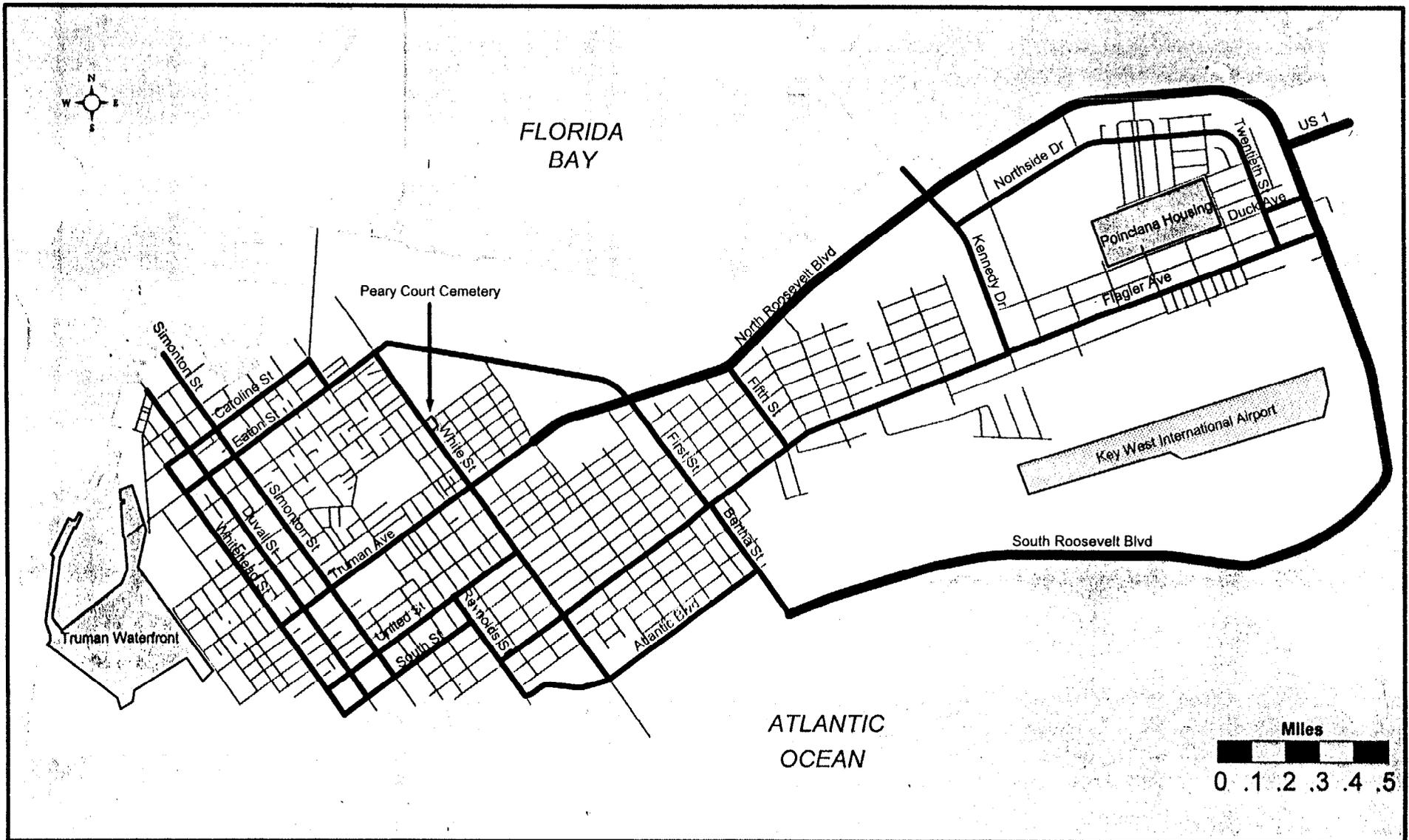


**Legend**

**—** Designated Natural Disaster Evacuation Routes

**Figure III. C. 7  
Designated Natural Disaster  
Evacuation Routes**

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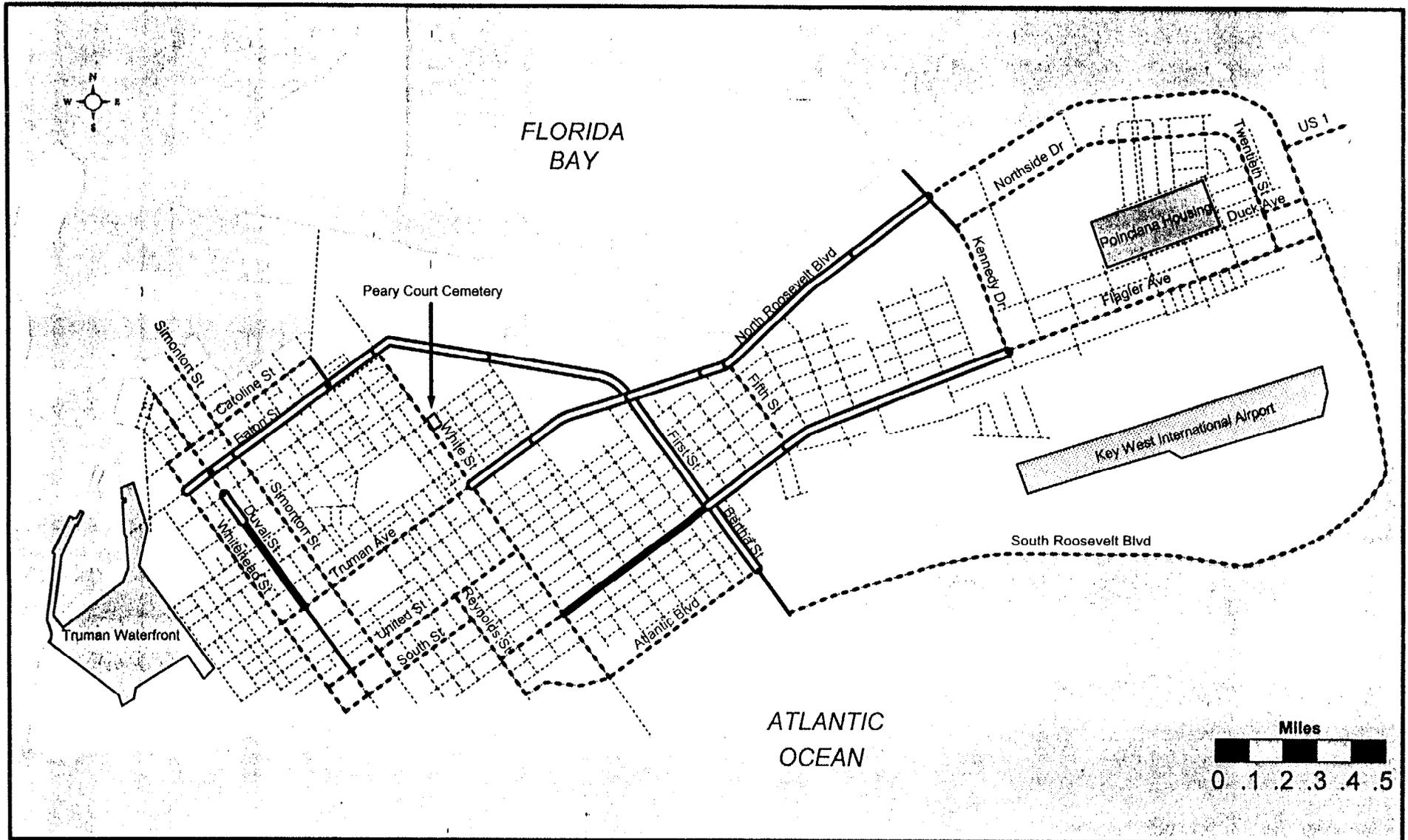


**Legend**

- Level of Service D
- Level of Service Not Determined for Local Roads

**Figure III. C. 8  
Existing Adopted Roadway Performance Standards**

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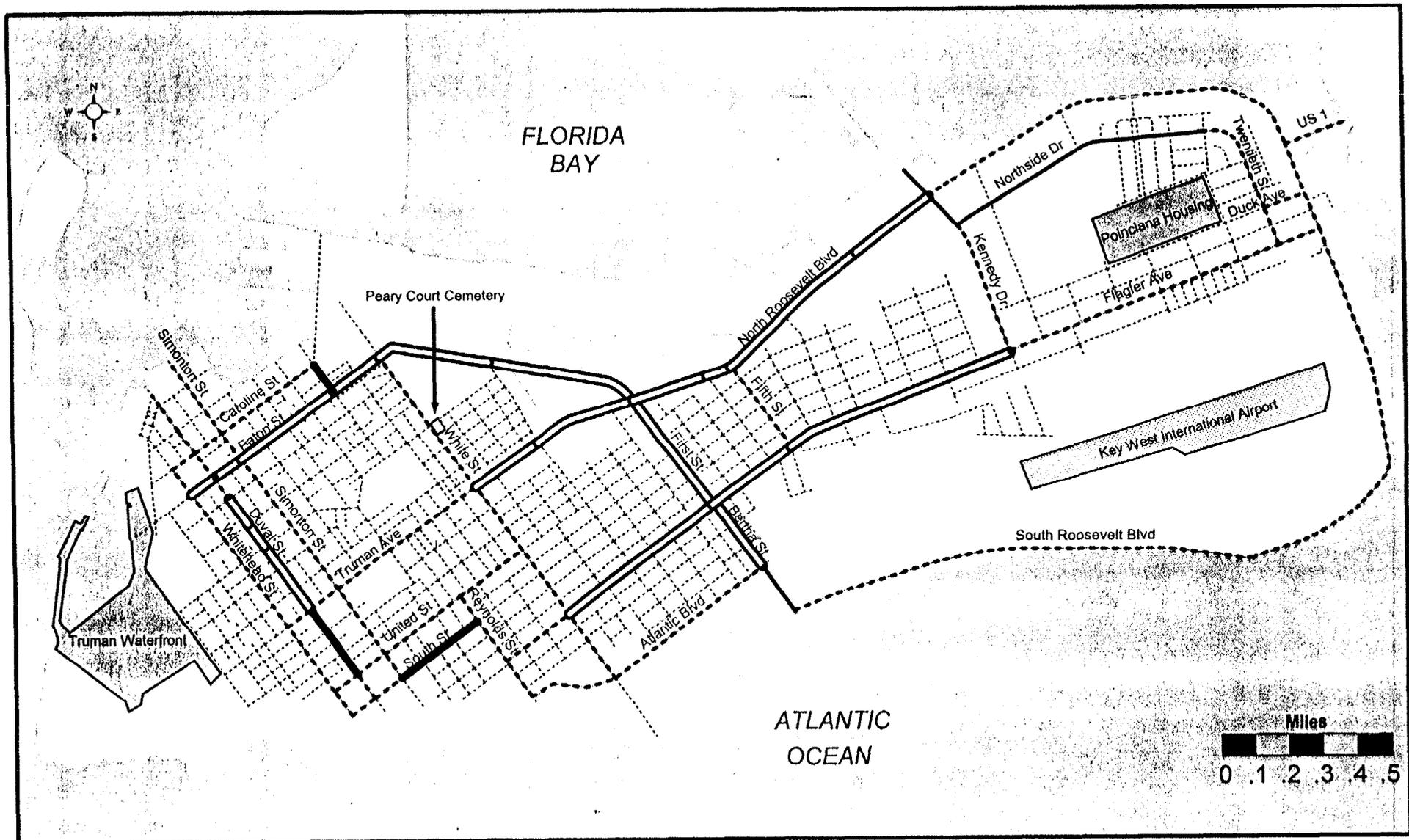


**Legend**

- Level of Service A, B, C
- Level of Service D
- Level of Service E
- == Level of Service F
- .... Level of Service Not Determined for Local Roads

**Figure III. C. 9**  
**1998 PM Peak Hour Level of Service**

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 Planning and Engineering



**Legend**

- Level of Service A, B, C
- Level of Service D
- ▬ Level of Service E

- ▭ Level of Service F
- ⋯ Level of Service Not Determined for Local Roads

**Figure III. C. 10**

**2003 PM Peak Hour Level of Service Without Base Reuse**

**TINDALE**  
**OLIVER** and Associates, Inc.  
 Planning and Engineering

service analysis was accomplished using the same data collected as part of the City of Key West Truman Annex Diversion Study, as documented in the Existing Conditions Analysis report dated October 1996 that was used for the 1998 level of service analysis. In a fashion similar to the 1998 level of service analysis, 1998 AADT's were adjusted to reflect 2003 volumes using a "2 Percent" annual growth rate.

The results of the 2003 level of service analysis without base reuse traffic indicated roadways deficient in the 1998 analysis would continue to operate below the adopted level of service standard.

The following roadway sections were indicated to operate below the adopted level of service standard and were not included in the list of 1998 operating deficiencies, or will continue to operate below the adopted standard and at a lower level of service:

- Flagler Avenue, White Street to First Street – LOS F
- Duval Street, United Street to Fleming Street – LOS E & F
- South Street, Simonton Street to Reynolds Street – LOS E
- Grinnell Street, Eaton Street to Caroline Street – LOS E

All of the reductions in level of service for the year 2003 are caused by the increase in traffic volumes using the "2 Percent" annual growth rate resulting in a 10.4 percent increase in traffic volumes from 1998.

#### **Transportation Analysis [9J-5.019(3)]**

The proposed redevelopment of the three sites composing the **Key West Base Reuse Plan** are not anticipated to adversely impact the availability of transportation facilities, as documented in the **City of Key West Comprehensive Plan**. Direct impacts to the roadway system are described in Section IV. A. Transportation

to the Truman Waterfront are a mix of affordable single family homes and 200+ public housing units comprised of multi-family units of various size and scale.

#### **Tenure of Housing [9J-5.010(1)(a)]**

Studies of Key West home ownership and rental trends indicate a significant shift in recent years. In 1990, rental units represented 58% of the total housing stock in Key West; however, KPMG indicates this may be understated given the large number of ownership units now available for rent on a seasonal basis. They report between 1980 and 1990, the percent of owner occupied homes declined significantly, from 42% to 35.9%, while rental occupancy increased from 42.7% to 49.4% over the same time period.

The home buying market in Key West has become increasingly dominated by "outside investors" and the "seasonal" home market. "New Town" (on the eastern side of the island), is 58% ownership compared to the "Old Town" section on the western end of the island, which has only 37% ownership.

In face of these trends the City of Key West is committed to increasing its reserve of affordable housing. At the Poinciana Housing parcel, 178 units are slated for affordable housing by the Key West Housing Authority; they are proposing a mix of rental and home ownership units. In addition, the city is very interested in providing affordable housing at the Truman Waterfront site. According to the Bahama Village Redevelopment Plan, the Key West Housing Authority has already requested sites for affordable housing through the base closure process. The existing affordable units in the Bahama Village area are generally rental units, with affordable home ownership opportunities available primarily through the purchase of existing single family residences.

#### **Age of Year-Round Housing Units [9J-5.010(1)(a)]**

The existing residences located on the Poinciana Housing parcel are already counted in Key West's housing stock, and are part of 2,882 units built between 1960 and 1969, which comprise 23.1% of the city's housing. The proposed 148 new housing units at the Poinciana Housing parcel and the Truman Waterfront site will add approximately 1-3 percent to the housing stock built after 1980, based on the figures provided in the **1993 City of Key West Comprehensive Plan**. The housing surrounding the Truman Waterfront site in the Bahama Village neighborhood is comprised primarily of traditional Caribbean-influenced single family residences and newer multi-family structures, many of which were developed with public assistance.

#### **Rental Rates and Value of Owner-Occupied Housing Units [9J-5.010(1)(a)]**

As of May 1997, the average cost of an existing single-family home in Key West is \$263,200, while rental rates based on the **Key West Base Reuse Plan** Economic and Market Analysis, range from \$750 to \$1,750 per month. As measured by the State of Florida's Price Level Index, Monroe County is the most expensive housing market in the State. The problem in Key West is further exacerbated by the city's "Building Permit Allocation and Vested Rights Ordinance", otherwise known as the "Rate of Growth Ordinance" or "ROGO". This Ordinance, intended to satisfy Hurricane evacuation requirements, limits the number of permits issued for new permanent and transient development to 1,093 units, or 91 units per year during the period of April 1, 1990 to April 2002. As of August 1997, only a limited number of permits are available for distribution. KPMG Peat Marwick LLP in their preliminary Economic and Market Analysis indicates that

"... the lack of affordable housing in Key West is a direct result of natural market forces. A finite amount of land available for new development; a conspicuous number of larger older homes turned into transient (hotel) units in response to a healthy lodging market; second home buyers and speculators competing with the local market for a limited supply of product; and local growth management regulations, while well intended for purposes of environmental protection and public safety measures associated with hurricane evacuation, adding yet another pressure point to escalating home prices."

However, there has been a commitment by the City of Key West to develop affordable housing at the Poinciana Housing parcel. After a study of the economic conditions in the City of Key West, the city determined that affordable housing development by the private sector is not economically feasible. If affordable home ownership units are to be developed, they will likely be publicly funded.

The city has enacted policies to safe guard public investment in affordable housing ownership. These policies are based on the concern that rapidly escalating market pressures will lead to a rapid increase in equity over a short period of time, which will be claimed by sale. Due to the escalated sale price, the unit would no longer be considered part of the affordable housing stock. These policies seek to keep publicly funded units in the pool of affordable housing.

#### **Monthly Cost of Owner-Occupied Units [9J-5.010(1)(a)]**

Affordable home ownership units are proposed for the Poinciana Housing parcel and such units maybe proposed for the Truman Waterfront site. As these units are affordable, public funds will probably be used. As such, these federal and state public funding programs may contain guidelines discussing the allowable monthly cost of owner-occupied units. The Key West Housing Authority will set its rates according to its internal policies and procedures. As the funding for these units is not in place at this time, the details will be developed based on the criteria of the specific funding package.

#### **Ratio of Rent or Cost of Housing to Median Household Income [9J-5.010(1)(a)]**

The use of this ratio does not overtly appear in the City of Key West housing policies, although it may be referenced in the criteria related to other public funds. If the funds are to be used in assistance with home ownership, the State of Florida SHIP income targeting guidelines are used. If rental units are developed, the City of Key West is targeting incomes at 80% of the median adjusted income, which may increase to 120% in certain circumstances, at which time that rate may not be occupied by over 40% of the units. As they apply, Low Income Housing Tax Credit, Program, MRB, SAIL, and HOME programs shall supercede the income standards set by the City of Key West.

#### **Inventory Compared to County Averages [9J-5.010(1)(b)]**

When the analysis of the Key West housing market is applied to Monroe County as a whole, several significant variables stand out.

- The City of Key West average household size is estimated to be approximately 2.34 which is slightly larger than the average household size for Monroe County which was 2.24 persons per household in 1995.

- The economic base of Monroe County is more dependent on the retail and service sectors than the City of Key West. Key West has approximately 60% of its employment in the service and retail trade, while Monroe County has approximately 75% of its employment in the retail and service sectors.
- Monroe County has been rated the most expensive county as compared to other counties in Florida relative to housing.

Based on these factors, it appears that Key West and Monroe County continue to be expensive places to live, due in large part to the large reliance on the heavily cyclical and relatively lower paying service and retail sector jobs. This places continued economic pressure on area residents, especially those in Key West. The larger household size in Key West may indicate that residents are coping with this pressure by sharing housing costs.

#### **Inventory of Housing Conditions [9J-5.010(1)(c)]**

Of the three former military sites, the only existing units are on the Poinciana Housing parcel. They will not affect the count of substandard or overcrowded housing units provided in the **1993 City of Key West Comprehensive Plan** because the units are in relatively good condition. However, since the units have been unoccupied, minor repairs and renovations may be needed.

#### **Inventory of Subsidized Renter-Occupied Housing [9J-5.010(1)(d)]**

Currently, there are no occupied housing units on any of the subject sites. In the future, the City of Key West has committed to providing affordable housing at the Poinciana Housing parcel. Since affordable housing development is very difficult without public funding, these units may be subsidized. It has already been determined that the 178 units at the Poinciana Housing parcel will be a mix of subsidized affordable rental and home ownership units. The specific program, number, and type of units will be determined at a later date.

There may be subsidized rental units at the Truman Waterfront site; however, specific proposals will be developed at a later time. The largest component of subsidized renter occupied housing is located adjacent to the Truman Waterfront area. According to the Bahama Village Redevelopment Plan, there are over 200 units of publicly assisted rental housing in the area.

#### **Inventory of Licensed Group Homes [9J-5.010(1)(e)]**

The proposed development plan will provide additional special housing accommodations at the Poinciana Housing parcel. The northwest portion of the site is designated for approximately 50 units of emergency and transitional housing for the homeless. As described in the agreement between the Key West Housing Authority and the Local Redevelopment Authority, the Housing Authority will sublease this portion of the site to an organization of homeless service providers. The group called the Key West Continuum of Care, will select service providers from among their members based on the needs of the homeless population. Services may include short term, transitional, and permanent housing; affordable child day care; job training and referral; stabilization of personal affairs; and psychological counseling. The objective of the Homeless Coalition is to provide adequate services designed to break the cycle of homelessness and economic dependence, and to make the transition toward economic independence.

Additionally, the provision of foster care in the existing or proposed residential areas is not discouraged and left to the discretion of the residents.

#### **Inventory of Mobile Home Park Related Uses [9J-5.010(1)(f)]**

There are no mobile home parks in any of the subject sites.

#### **Inventory of Historic Housing [9J-5.010(1)(g)]**

There is no historically significant housing on any of the subject sites.

#### **Inventory of Housing Construction [9J-5.010(1)(h)]**

This plan proposes an estimated increase of ~~148~~ 85 new residential units and the reuse of 212 existing housing units. At the Poinciana Housing parcel, 16 new multi-family units may be constructed. Of the 228 multi-family units on the site, 50 will be used for transitional housing and 178 will be offered as affordable rental and home ownership housing. The city has expressed interest in providing affordable housing at the Truman Waterfront site; however, no decisions have been made regarding the type and tenure of the 132 potential housing units at the site. The Department of Community Affairs (DCA) has vested the existing units on the Poinciana Housing Parcel; any additional unit construction will be subject to the Building Permit Allocation Ordinance.

#### **Projected Number of Households [9J-5.010(2)(a)]**

Previous studies of the City of Key West provide a snapshot of the household size and income range. There were 10,424 households in Key West in 1990, as opposed to 9,199 reported in the 1980 Census. The average household size, estimated to be approximately 2.34, is slightly larger than the average household size for Monroe County, 2.24 persons per household in 1995.

According to Monroe County and the University of Florida Bureau of Economic and Business Research (BEBR), the largest contribution to population growth in Key West, is in-migration, representing roughly 70% of total growth between 1990 and 1995. The remaining growth resulted from natural causes, i.e. births over deaths.

Housing construction in Key West is governed by the Building Permit Allocation Ordinance which limits the number of permits issued for new permanent and transient development to 91 units per year through April 2002. Currently only limited number of permits are available for distribution. The projected number of households will not exceed 91 units per year.

#### **Current and Anticipated Housing Needs [9J-5.010(2)(b)]**

The relatively young age of the Key West population, large household size, and continued in-migration point to an increase in demand for housing, especially affordable housing. An assessment of affordable housing needs conducted by the Shimberg Center for Affordable Housing at the University of Florida, indicated in 1995 the City of Key West had a deficit of 4,192 affordable housing units. In addition, many households are cost burdened, paying in excess of 30% of their gross household income for rent (plus utilities) or mortgage (principal, interest, taxes and insurance). The city's Comprehensive Plan estimates over two-thirds (69.4%) of the very low, low, and moderate income households are cost burdened.

Uses proposed for the Truman Waterfront will create employment opportunities. It is anticipated and desired these employment opportunities will be filled by residents of Bahama Village. In this way there will be minimal need for additional housing for future employees at the Truman Waterfront. Furthermore, ~~any potential additional need for affordable housing created by uses at Truman Waterfront may be considered to be mitigated by the 178 affordable housing dwelling units at the Poinciana Housing parcel.~~

#### **Land Required for Housing [9J-5.010(2)(c)]**

The Military Base Reuse Plan provides 30.12 acres at the Poinciana Housing parcel for affordable housing. In addition, ~~a portion of the 14.30~~ approximately 7 acres at Truman Waterfront may be residential development.

#### **Housing Need to be Met by the Private Sector [9J-5.010(2)(d)]**

The demand for all segments of the Key West housing market is increasing. Yet due to the finite supply of land and other forces, the market is driving up prices. The increase in cost makes it difficult for developers to pursue anything but the high end housing market; there is little financial incentive. In face of these market pressures, the demand for affordable housing in the City of Key West remains high. In order to meet this need, the Housing Authority of the City of Key West feels public funds must be used to make affordable housing projects feasible. It will pursue affordable housing projects on a case by case basis, using public sector and private sector funds as appropriate, available, and permitted by regulation.

Therefore, the extent of private sector participation depends on the details of the project plan, which will be further defined later in the planning process. If there are provisions made for market rate housing, the private sector may be able to act alone to provide housing. If emphasis is placed on affordable housing, the private sector may act in conjunction with the public sector to fill specific, targeted housing needs.

#### **Existing Housing Delivery System [9J-5.010(2)(e)]**

The Key West regulatory framework and the existing market conditions provide the parameters of the existing housing delivery system. As discussed previously in this section, ROGO limits the number of permits issued for new permanent and transient development to 1,093 units, or 91 units per year during the period of April 1, 1990 to April 2002.

Existing market conditions also define the Key West housing delivery system. KPMG Peat Marwick LLP, in their preliminary Economic and Market Analysis Source indicates "... the lack of affordable housing in Key West is a direct result of natural market forces. A finite amount of land available for new development; a conspicuous number of larger older homes turned into transient (hotel) units in response to a healthy lodging market; second home buyers and speculators competing with the local market for a limited supply of product; and local growth management regulations, while well intended for purposes of environmental protection and public safety measures associated with hurricane evacuation, adding yet another pressure point to escalating home prices." As a result, the development of affordable housing by the private sector is simply not cost effective. Affordable housing will not be built without public funding, as recognized in the Key West Housing Affordability Policy of July 1998. This creates a system in which the private sector pursues development opportunities out of reach of the affordable housing market, the city and private sector work together to provide affordable housing, and the city manages and maintains its existing system of subsidized and public housing.

**Means for Providing Housing with Supporting Infrastructure [9J-5.010(2)(f)1.]**

The framework for providing affordable housing at the Poinciana Housing site is already in place. The military constructed the 212 existing multi-family housing units, paved the roads, and connected the site to the electrical, water, and sewer systems. In order to provide the new development capacity, the Housing Authority already holds in reserve the 16 units necessary to satisfy the requirements of the Rate of Growth Ordinance. The next step is to transition the utility supply from military ownership to multiple owners. The units are in good condition, needing only minor repairs and adaptations to make them habitable. There will also be a formalized conservation area near the mangroves, a new recreational trail, increased landscaping, and new street connections to the community. The proposed site will be used solely for affordable housing and special needs housing oriented toward the homeless. A comprehensive effort has been made to utilize the Poinciana Housing site, to help satisfy the unmet needs of the Key West Housing market.

The city is also interested in providing affordable housing at the Truman Waterfront site. While no housing exists on the site, there is substantial infrastructure available for the area in terms of connecting to existing street systems. Future developers of the site will need to determine the methods and means of connecting the site to the sanitary sewer system and ground water discharge system. There is substantial infrastructure in place in the Bahama Village neighborhood adjacent to the Truman Waterfront site. Extension of the neighborhood roadway network and connection to existing commercial corridors will provide an existing framework for future development expansion along the edge of both areas and into the Truman Waterfront site.

**Means for Eliminating of Substandard Housing Conditions [9J-5.010(2)(f)2.]**

There are existing housing units at the Poinciana Housing parcel. According to the lease agreement between the Key West Housing Authority and the LRA, the units will be inspected at the time of transfer to city ownership. They will work together to identify any substandard units and bring them into compliance with all applicable regulations. The LRA will oversee the renovation and new construction at the site. The Key West Housing Authority will manage the units once renovation and construction have been completed.

**Means for the Structural and Aesthetic Improvement of Housing [9J-5.010(2)(f)2.]**

Through the public participation processes of the **Military Base Reuse Plan**, recommendations have been made regarding the design of the proposed site and the character of the proposed structures which build on historic building types and design principles. These recommendations have been incorporated into the goals, objectives and policies presented in this plan.

**Means for Providing Adequate Affordable Housing and Mobile Home Sites [9J-5.010(2)(f)3.]**

The conveyance of former military base sites is an excellent opportunity to provide sites for affordable housing. The city is implementing plans for 178 affordable housing units on the Poinciana Housing parcel and is considering appropriate options for the Truman Waterfront site.

Furthermore, it would be beneficial to emphasize use of CRA funds or other new funding mechanisms to address housing development issues near the Bahama Village neighborhood and the Truman Waterfront site.

A mechanism for eliminating substandard housing is the continued utilization of the Bahama Conch Community Land Trust (BCCLT). The BCCLT is a non-profit organization able to acquire and hold property, in order to provide development opportunities and implement economic development initiatives. They operate in the Bahama Village area, and also undertake improvements specified in the Bahama Village Redevelopment Plans. Consideration may be given to expanding the role and resources of the BCCLT. This may be an effective resource for encouraging affordable housing in the city as a whole. Land banking, the ability to acquire and hold property, is an effective tool for encouraging affordable housing development. Currently, the BCCLT is the only organization in the city with this capability. They are permitted by their charter to provide this service city wide; however, at this point, they operate primarily in the Bahama Village area.

**Means for Providing Adequate Residential Group Home and Foster Care Sites [9J-5.010(2)(f)4.]**

The city has already presented plans for use of 50 multi-family units on the Poinciana Housing parcel for special housing needs, primarily target toward assisting the homeless population. The provision of foster care services remains at the discretion of the residents of the area.

**Means for Identifying Conservation, Rehabilitation, or Demolition Activities and Historically Significant Resources [9J-5.010(2)(f)5.]**

Housing on the Poinciana Housing parcel is not historic in nature. As such, no special historic preservation measures need to be taken, although development standards which build on the historic building types and design principles have been recommended.

## E. Public Facilities Element

### 1. Sanitary Sewer

#### Operational Responsibility, Geographic Service Area and Land Uses Served [9J-5.011(e)(1)(2)]

All three sites are within the service area of the Key West Wastewater Treatment Plant. The plant, located on Fleming Key, is a secondary treatment facility which uses a complete mix extended aeration activated sludge process. Treated wastewater is discharged through an ocean outfall. The treatment facility is operated by Operations Management International, Inc. (OMI). The City of Key West has operational and maintenance responsibility for the treatment plant.

The U.S. Navy owns and operates collection systems within the Truman Waterfront, Peary Court Cemetery, Naval Hospital, United White Trailer Court and the Poinciana Housing parcels. Off-site collection systems are owned and operated by the City of Key West.

Existing land uses served by the systems in the Truman Waterfront, Peary Court Cemetery, and Poinciana Housing parcels are shown below, see **Table III.E.1, Land Uses Within Sites Currently Served by City of Key West Wastewater Treatment Plant.**

Site	Land Use	Acreage
Truman Waterfront	Military Industrial and port-related; military support services	<del>44.9</del> <u>50.41</u>
Poinciana Housing	Military housing	34.17
Peary Court Cemetery	Military/Historic Cemetery; open space	1
	TOTAL	<del>80.07</del> <u>85.58</u>

Source: Key West Final Base Reuse Plan, October 1997

#### Design Capacity and Current Demand [9J-5.011(1)(e)(3) and (4)]

The Key West Wastewater Treatment Plant has a design capacity of 10.0 million gallons per day (mgd) average annual daily flow; they are permitted a capacity of 7.2 mgd average annual daily flow. The City of Key West has applied for a permit to increase the permitted capacity to 10.0 mgd average annual daily flow; according to FDEP correspondence to the city dated September 22, 1998, the application is complete and a draft permit is undergoing internal review. All expectations are that the permit will be issued for 10.0 mgd.<sup>1</sup> According

<sup>1</sup>Ms. April Vargas-Bell, Utilities Department, City of Key West, Key West, Florida, September 29, 1998.

to the Utilities Department at the City of Key West, the average annual daily flow is approximately 7.83 mgd. Upon construction of the wastewater treatment plant, the Navy contributed 23% of the financial cost. In return, they own 23% of the total design capacity of the facility and the city must allocate this amount for their sanitary sewer purposes. Actual generation rates by the Navy are significantly lower than 23% (or 2.3 mgd); average annual daily flow in 1997 was 0.88 mgd.

**Table III.E.2, Wastewater Demand**, summarizes demand for the wastewater treatment plant.

<b>TABLE III.E.2</b>	
<b>WASTEWATER DEMAND KEY WEST WASTEWATER TREATMENT PLANT</b>	
<b>User</b>	<b>Generation average annual daily flow (mgd)</b>
Military	0.88
Other city	6.95
Total	7.83
Source: City of Key West Utilities Department, September 29, 1998	

Approximately 40% of wastewater is estimated to be from infiltration inflow (I&I). The benefits of the city's aggressive correction of key system components will take five years to be realized.

**Level of Service [9J-5.011(1)(e)(5)]**

The **City of Key West Comprehensive Plan** establishes the following level of service standards pertaining to sanitary sewers: <sup>2</sup>

- Residential Uses: 100 gallons per capita per day for permanent residents based on 90 gallons per capita per day for seasonal residents
- Non-residential Uses: 660 gallons per acre per day

**Facility Capacity Analysis [9J-5.011(1)(f)(1)]**

**Existing Conditions [9J-5.011(1)(f)(1)a]**

The city's sanitary sewer system is in need of repair. During dry weather the system works well; during periods of high tide and heavy rainfall, the system

<sup>2</sup>City of Key West, City of Key West Comprehensive Plan: Data, Inventory and Analysis, (Key West, FL: Government Printing Office, July 1993), 4-11.

overflowed due to faulty pipes and caused leakage into the groundwater. As of March 1998, the average flow reaches about 7.83 million gallons per day. Flows as high as 11.0 million gallons per day are attributable to unusually heavy I&I resulting from extreme rain or wind driven tides; however, the new pump system allows the city to handle peak flows. Infiltration of saltwater accounts for 40% of the wastewater being pumped through the city's sewer system.<sup>3</sup>

**Planning Period Increments [9J-5.011(1)(f)(1)(b) and (c)]**

Pursuant to a Consent Judgment Order by the Florida Department of Environmental Protection (FDEP), signed July 1997, the city will rehabilitate the sanitary sewer system within five years to reduce I&I by 40% by the year 2002. The city will install deep injection wells for treated wastewater, by the end of 1999, to end ocean discharge. A long term plan exists to register the city's sewer system plant to the Advanced Wastewater Treatment (AWT) standards in five to seven years, once funding becomes available.

The city has initiated an Evaluation and Appraisal Report (EAR) which is expected to update wastewater projections and assess reserved capacity for approved development. Until that analysis is complete the best available data is for existing generation. Therefore, in assessing the adequacy of wastewater facilities to accommodate development as the military reuse sites, an estimate of maximum development potential relative to existing plant capacity follows, see Table III.E.3, **Maximum Development Generation for Sanitary Sewer.**

TABLE III.E.3	
MAXIMUM DEVELOPMENT GENERATION FOR SANITARY SEWER	
Existing Capacity (mgd)	10.00
Existing Average Daily Generation (mgd)	7.83
Maximum Development Generation for Truman Waterfront, Peary Court Cemetery & Poinciana Housing (mgd)	<del>6.11</del> <u>0.104</u>
Excess Capacity (mgd)	<del>2.06</del> <u>2.07</u>

Source: Bermello, Ajamil & Partners, November 1998

However, the analysis uses the most conservative approach for long range planning purposes.

Based on available information, there appears to be adequate capacity for future development on the Truman Waterfront, Peary Court and Poinciana Housing parcels, assuming the Florida Department of Environmental Protection (FDEP) permit is issued. Actual availability of wastewater treatment and transmission capacity will be reviewed at the time of development plan submittal per concurrency management requirements.

<sup>3</sup>Mr. David Fernandez, Director, Utilities Department, City of Key West, Key West, Florida, September 14, 1998 .

The projected demand for wastewater at the Truman Waterfront, Peary Court Cemetery, and Poinciana Housing parcels is summarized below, see **Table III.E.4, Projected Wastewater Demand, Truman Waterfront and Poinciana Housing Parcels.**

TABLE III.E.4			
PROJECTED WASTEWATER DEMAND TRUMAN WATERFRONT AND POINCIANA HOUSING PARCELS			
Parcel	Maximum Allowable Population	Acres	Generation Average Annual Daily Flow (mgd) <sup>1</sup>
Truman Waterfront	312 <del>162</del>	44.9 <del>50.41</del>	0.059 <del>0.050</del>
Poinciana Housing	849	34.17	0.053
Peary Court Cemetery	0	1	0.001
TOTAL	1,161 <del>1,011</del>	80.07 <del>85.58</del>	0.113 <del>0.104</del>

Source: Bermello, Ajamil & Partners, August 1998

<sup>1</sup> 2.34 persons per household, draft EAR

Please note the Poinciana Housing parcel has remained in continuous operation at various levels of occupancy. Therefore, some portion of the existing generation is already accounted for in **Table III.E.4** from above.

**General Performance of Existing Facilities [9J-5.011(1)(f)(2)]**

***Adequacy of Current Level of Service***

According to the City of Key West Utilities Department, the existing level of service generally appears adequate to assess concurrency issues.

***General Condition and Expected Life of the Facilities***

The general condition of the sanitary sewer treatment plant is good; however, the collection system is antiquated and requires repair.

***Impact of Facilities on Adjacent Natural Resources***

System impacts to natural resources are not clearly documented. However, in order to address concerns relating to the ocean outfall of treated wastewater, the city has committed to the installation of deep injection well within the next five to seven years.

**Facilities Replacement, Expansion and New Facility Siting [9J-5.011(1)(f)(3)]**

The City of Key West has recently updated its facility pumps. A permit to operate at 10.0 million gallons per day average annual daily flow is expected for approval by the FDEP, by year-end 1998. The city shall install deep injection wells for treated wastewater. The permit for the first well is being processed, as of August 1998. Once in operation, outfall

from the well will be needed only for redundancy and backup. The second well shall be installed in 2006, at which no outfall will be needed. The city shall monitor the condition of its wastewater collection and transmission lines to prioritize replacement needs.

The city has budgeted over 30 million dollars to provide for adequate annual repairs and improvements to the sanitary sewer collection and distribution system. Heavy infiltration, resulting from extreme rain or wind driven tides, remains a primary concern; I&I is responsible for more than 40 percent of total flow. An analysis, performed in 1986 for the **1993 City of Key West Comprehensive Plan**, suggested the building of a larger plant and the repair of the existing collection system to handle the capacity of the infiltration flow for a budget of \$90 million. After careful assessment, the eventual replacement of the collection system pipes was suggested, rather than repairing the pipes. Overtime, the leakage problem would continue to get worse and would pose a hazard to public health and environmental conditions. In addition, infiltration inflow would overwhelm the pumps, as well as the plant. The city has, in fact, begun a \$53 million collection system replacement program; half of the collection system in Key West will have been replaced within the next 5 years; seventy percent replacement of the system will be complete in ten years. Once the infiltration problem is resolved, the pipes will most likely operate more efficiently.<sup>4</sup> The city expects to replace over 50 percent of the sanitary sewer system by the year 2000. An estimated 36 million dollars will be spent over the next five years on repairs.<sup>5</sup>

#### **Septic Tank Analysis [9J-5.011(1)(f)(4)]**

None of the three sites utilize, or expect to utilize, septic tanks for wastewater treatment.

## **2. Solid Waste**

#### **Operational Responsibility, Geographic Service Area and Land Uses Served [9J-5.011(e)(1)(2)]**

All three sites are within the service area of the City of Key West Solid Waste System. The mandatory collection of solid waste from all residences and commercial businesses within city limits is done by franchise hauler, Browning Ferris Industries (BFI); this waste is disposed at the city's "Waste-to-Energy" facility located on Stock Island. The facility is owned and operated by the City of Key West.<sup>6</sup> All waste generated by the city, including household, yard and wood, is transported, processed and incinerated at the facility. Burnable waste is incinerated and used to generate electricity sold to the city Electric System. Unburnable waste (metal) is recycled and transported by Resource Recycling to Beers Metal Yard. Ash residue, the byproduct of incineration, is hauled to the federally approved monofill disposal site in Okeechobee by Chambers Waste Services, under contract with the City of Key West. The City of Key West has a general recycling program which treats, transports, and deposits recyclable items to a transfer station constructed on Stock Island. Recyclables are collected from the transfer station by a contract hauler and transported to the Miami area for resale. A used motor oil recycling program is also in operation. Gas stations throughout the city serve as depositories for used motor oil. A truck

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<sup>4</sup>Mr. David Fernandez, October 16, 1998 .

<sup>5</sup>Mr. David Fernandez, September 14, 1998.

<sup>6</sup>Interview with Mr. David Fernandez, Director, Utilities Department, City of Key West, Key West, Florida, September 14, 1998.

transports the oil to Miami, which is then sold to a recycling company. Recycled concrete is turned into aggregate and transported to Rockland Recycling. In addition, two hazardous waste storage sites are in use for the disposal of household-type hazardous wastes, one in Cudjoe Key area and the other in the Long Key Area. The city is responsible for operational and maintenance costs of the waste disposal plant.

The U.S. Navy owns and operates their own waste disposal trucks for the transportation of residential, commercial, and institutional solid waste generated on the naval bases.

Existing land uses served by the waste disposal plant in the Truman Waterfront, Peary Court Cemetery, and Poinciana Housing parcels are shown below. **see Table III.E.5, Land Uses Within Sites Currently Served by City of Key West Waste-to-Energy Facility.**

TABLE III.E.5		
LAND USES WITHIN SITES CURRENTLY SERVED BY CITY OF KEY WEST WASTE-TO-ENERGY FACILITY		
Site	Land Use	Acreage
Truman Waterfront	Military Industrial and port-related; military support services	44.9 50.41
Poinciana Housing	Military housing	34 17
Peary Court Cemetery	Military/Historic Cemetery; open space	1
	TOTAL	80.07 85.58

Source: Key West Final Base Reuse Plan, October 1997

**Design Capacity and Current Demand [9J-5.011(1)(e)(3) and (4)]**

The Waste-to-Energy disposal facility contains two mass-burn incinerators with rated capacities of 75 tons per day (TPD) each, for a total rated design capacity of 150 tons per day (TPD). The City of Key West presently has excess solid waste disposal capacity; the facility handles 129.82 average tons per day (based on figures from October 1997 through September 1998 provided by the City of Key West on November 5, 1998). The maximum capacity of the facility is 150 TPD.

**Table III.E.6, Solid Waste Disposal Demand**, summarizes current demand for the solid waste disposal facility.

TABLE III.E.6	
SOLID WASTE DISPOSAL DEMAND CITY OF KEY WEST WASTE-TO-ENERGY FACILITY	
User	Generation average annual daily flow (TPD)
Total	129.82
Source: City of Key West Waste-to-Water Facility	

**Level of Service [9J-5.011(1)(e)(5)]**

The **City of Key West Comprehensive Plan: Data Inventory and Analysis** establishes the following level of service pertaining to solid waste generation for a minimum of five years:<sup>7</sup>

- Residential Uses: 3.8 pounds (lbs) per capita per day
- Non-residential Uses: 9.1 lbs per acre per day

**Facility Capacity Analysis [9J-5.011(1)(f)(1)]**

**Existing Conditions [9J-5.011(1)(f)(1)a]**

The City of Key West Waste-to-Energy Facility has adequate solid waste disposal capacity to meet existing conditions.

**Planning Period [9J-5.011(1)(f)(1)(b) and (c)]**

The city will implement a retrofit 5 year plan to install “baghouses” for the improvement of air pollution exhaust. As a method of ongoing improvement, a plan is in effect to rebuild existing ash conveyors.<sup>8</sup> Based on solid waste demand projections, the city does not anticipate a deficit in the capacity of the Waste-to-Energy facility throughout the planning period. The city has initiated an Evaluation and Appraisal Report (EAR) which is expected to update solid waste projections and assess reserved capacity for approved development. Until that analysis is complete, the best available data is for existing generation. Therefore, in assessing the adequacy of solid waste facilities to accommodate development on the military reuse sites, an estimate of maximum development potential relative to existing plant capacity, see **Table III.E.7, Maximum Development Generation for Solid Waste**.

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<sup>7</sup>City of Key West, City of Key West Comprehensive Plan: Data, Inventory and Analysis, (Key West, FL: Government Printing Office, July 1993), 4-30.

<sup>8</sup>Mr. David Fernandez, September 14, 1998.

TABLE III.E.7 MAXIMUM DEVELOPMENT GENERATION FOR SOLID WASTE	
Existing Capacity (tpd)	150.0
Existing Average Daily Generation (tpd)	129.8
Maximum Development Generation for Truman Waterfront, Peary Court Cemetery & Poinciana Housing (tpd)	4.8 <u>2.16</u>
Excess Capacity (tpd)	14.4 <u>18.05</u>

Source: Bermello, Ajamil & Partners, November 1998

However, the analysis uses the most conservative approach for long range planning purposes.

Based on available information, there appears to be adequate capacity for future development on the Truman Waterfront, Peary Court and Poinciana Housing parcels, assuming the Florida Department of Environmental Protection (FDEP) permit is issued. Actual availability of solid waste treatment and transmission capacity will be reviewed at the time of development plan submittal per concurrency management requirements.

The projected generation of solid waste at the Truman Waterfront, Peary Court Cemetery, and Poinciana Housing parcels is summarized below, see **Table III.E.8, Projected Solid Waste Demand Truman Waterfront and Poinciana Housing Parcels.**

TABLE III.E.8 PROJECTED SOLID WASTE DEMAND TRUMAN WATERFRONT AND POINCIANA HOUSING PARCELS			
Parcel	Maximum Allowable Population	Acres	Average annual daily Generation (TPD) <sup>1</sup>
Truman Waterfront	342 <u>162</u>	44.9 <u>50.41</u>	0.782 <u>0.537</u>
Poinciana Housing	849	34.17	1.014 <u>1.613</u>
Peary Court Cemetery	0	1	0.005
TOTAL	1191 <u>1,011</u>	80.07 <u>85.58</u>	1.804 <u>2.155</u>

Source: Bermello, Ajamil & Partners, November 1998

<sup>1</sup> 2.34 persons per household, draft EAR

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**General Performance of Existing Facilities [9J-5.011(1)(f)(2)]**

***Adequacy of Current Level of Service***

The current level of service is considered adequate.

***General Condition and Expected Life of the Facilities***

The Waste-to-Energy facility became operational in April 1987. The facility is in good condition, with a life expectancy of 15 years.

***Impact of Facilities on Adjacent Natural Resources***

The closing of the Stock Island Landfill in 1997, in accordance with a Consent Order negotiated by the City of Key West with the State of Florida Department of Environmental Protection (FDEP), substantially decreased leachate generation potential.

**Facilities Replacement, Expansion and New Facility Siting [9J-5.011(1)(f)(3)]**

The city will correct existing solid waste system deficiencies and increase the solid waste system capacity. They expect to achieve the most cost-effective solid waste collection system by the year 2005. The city shall: periodically re-evaluate the feasibility of composting, as a means for accommodating a substantial portion of the solid waste stream; periodically evaluate all of its recycling programs to determine their cost effectiveness; and, periodically investigate refinements to the motor oil recycling program to improve its capacity.<sup>9</sup>

**3. *Drainage Facility***

**Operational Responsibility, Geographic Service Area and Land Uses Served [9J-5.011(e)(1)(2)]**

All three sites are located within the service area of the stormwater drainage system for the City of Key West. The city is experiencing some difficulties with the drainage system; in some areas on the island, following a storm, drainage of water takes up to three days to occur. The city is in the process of implementing an improvement systems program for stormwater drainage. Here, three chamber collection basins will be installed to provide retention and treatment prior to disposal in the injection wells.

Existing land uses served by the systems in the Truman Waterfront, Peary Court Cemetery, and Poinciana Housing parcels are shown in the following table, see **Table III.E.9, Land Uses Within Sites Currently Served by City of Key West Stormwater Drainage Facility.**

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<sup>9</sup>Mr. David Fernandez, September 14, 1998.

TABLE III.E.9		
LAND USES WITHIN SITES CURRENTLY SERVED BY CITY OF KEY WEST STORMWATER DRAINAGE FACILITY		
Site	Land Use	Acreage
Truman Waterfront	Military Industrial and port-related; military support services	<del>44.9</del> <u>50.41</u>
Poinciana Housing	Military housing	34.17
Peary Court Cemetery	Military/Historic Cemetery; open space	1
	TOTAL	<del>80.07</del> <u>85.58</u>

Source: Key West Final Base Reuse Plan, October 1997

Existing stormwater drainage facilities at each site are described below.

**Truman Waterfront** - The stormwater collection system at Truman Waterfront dates to World War II, and what is still functional drains directly to surface waters. Replacement of these lines will be necessary as part of redevelopment, and present environmental standards would require stormwater retention and treatment to remove pollutants.

**Poinciana Housing** - Stormwater at the Poinciana Housing site is currently drained into the pond on the north side of the site via several stormwater drainage lines on both the east and west end of the property. This mangrove-lined pond is tidally influenced, and, as such, is not appropriate for water detention purposes. Redevelopment of this property may need to address water quality impacts to this water body through the on-site treatment and discharge or the use of injection wells. Using either on-site detention ponds or infiltration trenches, the first inch of stormwater can be treated and discharged. The use of injection wells would remove the need for treated discharges.

**Peary Court** - This area does not have impervious surfaces; it is an open, grassy land. Therefore, stormwater treatment is not needed.

#### **Design Capacity and Current Demand [9J-5.011(1)(e)(3) and (4)]**

The **City of Key West Comprehensive Plan** identified 30 individual main drainage systems and several secondary systems outfalling into the primary system. Stormwater drainage in Key West is problematic.<sup>10</sup> During heavy rain periods, some areas of the island take as many as three days to drain. At extreme high tides, several ocean outfalls backup into the city streets.

#### **Level of Service [9J-5.011(1)(e)(5)]**

The City of Key West Comprehensive Plan Evaluation and Appraisal Report establishes the following level of service pertaining to stormwater flow for a minimum of five years capacity:

<sup>10</sup>City of Key West, *City of Key West Comprehensive Plan: Data, Inventory and Analysis*, (Key West, FL: Government Printing Office, July 1993), 4-36.

Nonresidential development and redevelopment shall adequately accommodate runoff to meet all federal, state and local requirements. Stormwater shall be treated in accordance with the provisions of Chapter 17-25, FAC. in order to meet receiving water standards in Chapter 17-302.500, FAC. Stormwater facilities which discharge into outstanding Florida waters will provide treatment pursuant to Section 17-25.025 (9), FAC. One inch of runoff shall be retained on site. Post-development runoff shall not exceed peak pre-development runoff for a 25-year storm event, up to and including an event with a 24-hour duration.<sup>11</sup>

**Facility Capacity Analysis [9J-5.011(1)(f)(1)]**

**Existing Conditions [9J-5.011(1)(f)(1)a]**

As mentioned before, the existing stormwater drainage system requires upgrading in Key West. At extreme high tides, several ocean outfalls backup into the city streets.

**Planning Period Increments [9J-5.011(1)(f)(1)(b) and (c)]**

The city has budgeted a \$1.6 million rehabilitation to take place in the future. Only target areas experiencing severe flooding due to limited funding will receive improvements. They envision the rehabilitation of the existing stormwater collection systems and the installation of 18 (eighteen) new stormwater injection wells. However, in order to meet current stormwater drainage needs, the City of Key West will require the construction of 40-50 more injection wells and the addition of pollution control devices on 35 existing stormwater outfall sites. Such devices will allow the settling and removal of impurities by use of a three chambered system. Another area of concern for the stormwater drainage system in the City of Key West is the untreated stormwater outfall from North and South Roosevelt Boulevards in the Atlantic Ocean.

Revision of stormwater facilities for development on and redevelopment of the sites will be conducted as needed to meet the level of service requirements. Since this treatment is primarily a technical/engineering solution determined on a site planning basis, there should be no impediments to meeting the level of service standards.

**General Performance of Existing Facilities [9J-5.011(1)(f)(2)]**

**Adequacy of Current Level of Service**

The current level of service is considered adequate.

**General Condition and Expected Life of the Facilities**

Conditions of the existing stormwater drainage systems in Key West require upgrading. As the system is upgraded, and new development and redevelopment are designed to meet the level of service, the condition of the facility is expected to improve.

**Impact of Facilities on Adjacent Natural Resources**

There are some concerns regarding the outfall of untreated stormwater into the Atlantic Ocean.

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<sup>11</sup>City of Key West, p. 4-39.

### Facilities Replacement, Expansion and New Facility Siting [9J-5.011(1)(f)(3)]

After analyzing the Master Drainage Plan, with estimating implementation costs at \$30,000,000, the City of Key West decided to undertake a more practical approach. To resolve the problems concerning drainage, the city opted to clean and rehabilitate the existing system, rather than build a new system; these facilities were found to be packed with dirt and sand. As of now, the system has been cleaned and is reconditioned three times a year. The city plans to correct existing drainage facility deficiencies and increase the drainage facility capacity. Nine injection wells were installed in FY 1997 and five will be installed in FY 1998. These wells are specially designed with a triple chamber boxing to remove 95 percent of the stormwater pollutant load. The city has allocated \$ 1.6 million to rehabilitate the existing stormwater collection systems and install eighteen stormwater injection wells in the future, but 40 to 50 more wells may be needed. The drainage system will be upgraded, if necessary, so that stormwater outfall meets the standards of Chapter 17-25, FAC. and the Florida Keys National Marine Sanctuary Management Plan. This will ensure stormwater systems which discharge into surface water bodies do not degrade the ambient water quality. The pond on the Poinciana Housing site has been considered as a potential stormwater outfall site.

#### 4. Potable Water

##### Operational Responsibility, Geographic Service Area and Land Uses Served [9J-5.011(e)(1)(2)]

Potable water is provided to the entire City of Key West by the Florida Keys Aqueduct Authority (Authority), a political subdivision of the State of Florida, created to provide domestic water service to all of the Florida Keys.

The Authority owns and operates a wellfield and treatment facility in Florida City, Florida. Water is simultaneously treated as it is drawn out of the wellfield. Treated water is transmitted to the city, via a transmission main, to a storage tank and distribution system.<sup>12</sup> The FKAA does not track water usage specifically for the city; rather, the Keys as a whole are reviewed as one service area.<sup>13</sup>

Existing land uses served by the systems in the Truman Waterfront, Peary Court Cemetery, and Poinciana Housing parcels are shown in **Table III.E.10, Land Uses Within Sites Currently Served by Florida Keys Aqueduct Authority.**

<sup>12</sup>City of Key West, City of Key West Comprehensive Plan: Data, Inventory and Analysis. (Key West, FL: Government Printing Office, July 1993), 4-19.

<sup>13</sup>Interview with Ms. Jolynn Cates, Florida Keys Aqueduct Authority, Engineering Department, Key West, Florida, September 9, 1998.

TABLE III.E.10 LAND USES WITHIN SITES CURRENTLY SERVED BY FLORIDA KEYS AQUEDUCT AUTHORITY		
Site	Land Use	Acreage
Truman Waterfront	Military Industrial and port-related; military support services	<del>44.9</del> <u>50.41</u>
Poinciana Housing	Military housing	34.17
Peary Court Cemetery	Military/Historic Cemetery; open space	1
	TOTAL	<del>80.07</del> <u>85.58</u>

Source: Key West Final Base Reuse Plan, October 1997

#### Design Capacity and Current Demand [9J-5.011(1)(e)(3) and (4)]

The Consumptive Use Permit, approved in 1995, allows an average daily withdrawal of up to 15.83 million gallons per day (mgd) and a maximum daily withdrawal of up to 19.12 mgd of potable water, for the total service through the year 2005. The Authority's water treatment plant has an existing design capacity of 22.0 mgd average annual daily flow. The current system demand and maximum daily wellfield withdrawal for fiscal year 1997 was 14.7 mgd and 18.36 mgd, respectively. Information for storage tanks which service Key West (and in part also service Stock Island and Key Haven) indicate approximately 4.2 mgd, on average, may be pumped to the Key West area.<sup>14</sup>

Potable water provided to the Navy is independent from that supplied to the City of Key West. Of this use, the Navy has a average demand of approximately 1.2 - 1.3 mgd; they are allocated approximately 2.0 mgd of potable water through an agreement with FCAA dating back to 1976.<sup>15</sup>

**Table III.E.11, Potable Water Demand, Florida Keys Aqueduct Authority,** summarizes current demand for the potable water treatment plant.

<sup>14</sup>Ms. Jolynn Cates, September 9, 1998.

<sup>15</sup>Florida Keys Aqueduct Authority. Comprehensive Annual Financial Report, (Key West, FL: Government Printing Office, February 1998), p. 6.

years, modifications will be made to the South Florida Water Management District (SFWMD) permit to allow an increase in allocation of potable water to the City of Key West. Based on projected water needs, the Authority adopted a Capital Improvement Master Plan to address the entire water system's need for providing dependable, quality potable water service to the projected population of Monroe County. The city shall establish a line item in the annual capital improvement program to provide for annual repairs and improvements to the potable water distribution system.<sup>18</sup>

**Table III.E.12, Projected Potable Water Demand**, summarizes the projected generation of potable water at the Truman Waterfront, Peary Court Cemetery, and Poinciana Housing parcels:

TABLE III.E.12			
PROJECTED POTABLE WATER DEMAND TRUMAN WATERFRONT AND POINCIANA HOUSING PARCELS			
Parcel	Maximum Allowable Population	Acres	Demand Average Annual Daily Flow (mgd) <sup>1</sup>
Truman Waterfront	342 162	44.9 50.41	0.056 0.048
Poinciana Housing	849	34.17	0.050
Peary Court Cemetery	0	0	0.001
TOTAL	1,161	80.07 84.58	0.107 0.099
Source: Bermello, Ajamil & Partners, November 1998			

<sup>1</sup> 2.34 persons per household, draft EAR

The city has initiated an Evaluation and Appraisal Report (EAR) which is expected to update potable water projections and assess reserved capacity for approved development. Until that analysis is complete, the best available data is for existing generation. Therefore, in assessing the adequacy of potable water facilities to accommodate development on the military reuse sites, an estimate of maximum development potential relative to existing plant capacity is shown in **Table III.E.13 Maximum Development Generation Demand for Potable Water**.

<sup>18</sup>Florida Keys Aqueduct Authority, p. 7.

<b>TABLE III.E.13</b>	
<b>MAXIMUM DEVELOPMENT GENERATION DEMAND FOR POTABLE WATER</b>	
Existing Capacity (mgd)	22.00
Existing Average Daily Generation (mgd)	15.83
Maximum Development Generation for Truman Waterfront, Peary Court Cemetery & Poinciana Housing (mgd)	<del>0.11</del> 0.099
Excess Capacity (mgd)	<del>6.06</del> 6.07
Source: Bermello, Ajamil & Partners, November 1998	

However, the analysis uses the most conservative approach for long range planning purposes.

Based on available information, there appears to be adequate capacity for future development on the Truman Waterfront, Peary Court and Poinciana Housing parcels, assuming that the Florida Department of Environmental Protection (FDEP) permit is issued. Actual availability of potable water withdrawal and treatment capacity will be reviewed at the time of development plan submittal per concurrency management requirements.

#### **General Performance of Existing Facilities [9J-5.011(1)(f)(2)]**

##### ***Adequacy of Current Level of Service***

The existing level of service is considered adequate.

##### ***General Condition and Expected Life of the Facilities***

General conditions of the facility are favorable. FKAA has taken measures such as plant upgrade and distribution piping replacement to ensure the city with an adequate potable water supply. Significant improvements to the infrastructure of the water transmission and distribution systems have been made. In 1989, the Authority upgraded their systems to accommodate increasing the design capacity to 22.0 mgd. A softening unit was added to increase treatment capacity to 18.6 mgd.

##### ***Impact of Facilities on Adjacent Natural Resources***

The water treatment plant draws raw water from nine wells with depths of 20 to 60 feet which draw water from the Biscayne Aquifer (Aquifer). The impact of water withdrawal on the Aquifer is carefully monitored through onsite testing programs designed to detect saltwater intrusion. No deleterious impacts have been identified by the FKAA.

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**Facilities Replacement, Expansion and New Facility Siting [9J-5.011(1)(f)(3)]**

The potable water distribution system shall be upgraded regularly through ongoing maintenance and pipe replacement whenever necessary. The Kermit H. Lewin Reverse Osmosis Facility (formerly the Stock Island Reverse Osmosis Plant) is under rehabilitation to bring the plant back online, to provide an emergency source of water to the Lower Keys. A new reverse osmosis water treatment plant, in Marathon, is under construction as a means of instituting a cost effective method of providing contingent service for the Middle and Lower Keys. The Authority is currently planning the expansion of the emergency back-up pump station to increase the capacity of diesel driven pumps. These pumps supply uninterrupted water service, in the event of a power outage. A new distribution and transmission upgrade program is being implemented, and outdated pumps and equipment are being replaced.

**Natural Drainage Features and Aquifer Recharge Areas [9J-5.011(1)(g)]**

Aquifer recharge in the city is not correlated to potable water usage because the city's potable water source is located on the mainland. Further, no natural drainage features on the island exist which are relevant to aquifer recharge. The city does provide direct recharge to the surficial aquifer through storm water drainage systems

**Existing Programs which Regulate Aquifer Recharge [9J-5.011(1)(h)]**

Restrictions are imposed by the SFWMD based on rainfall and water table elevations of the Aquifer. The wellfield is located adjacent to the outskirts of the Florida Everglades and is within an environmentally protected pine forest. This location requires restrictions to be enforced by State and local regulatory agencies.

## **F. Coastal Management**

### **Inventory of Existing Uses in Coastal Area [9J-5.012(2)(a)]**

The entire City of Key West is within the coastal area; therefore, all three base reuse sites are within the coastal area. The city's Existing Land Use Map shows all three sites as military uses. This is consistent with the site's pre-alignment, military status; however, actual use can be summarized as follows:

Truman Waterfront Parcel: Deepwater port, miscellaneous industrial uses, open space.

Poinciana Housing Parcel: Multi-family housing.

Peary Court Cemetery: Historic cemetery and open space.

### **Conflicts Among Uses [9J-5.012(2)(a)]**

The existing uses on the sites have been appropriate for their military designation. In addition, they have been appropriately located to support their principal uses: the Truman Waterfront port is adjacent to deep water navigational channels and other military facilities; the Poinciana Housing Parcel is located within an existing single family and multi-family residential area; and, Peary Court Cemetery is a green space surrounded by mixed use development. The military use of the sites has generally prevented the public from accessing them; therefore, the proposed realignment of the sites creates an opportunity to restore waterfront access to Bahama Village through the Truman Waterfront site, and better integration of Poinciana Housing into the adjacent community.

### **Need for Water-Dependent and Water-Related Sites [9J-5.012(2)(a)]**

The **City of Key West Comprehensive Plan** does not identify a need for additional water dependent or water related sites. However, at community meetings held during the preparation of the **Final Base Reuse Plan**, participants identified the need to establish access between Bahama Village and the waterfront, the need for additional waterfront recreational areas, the possible need for port expansion areas, and a desire for additional marina facilities. The consensus-built concept plan for the Truman Waterfront Parcel, and associated proposed land use classifications, bears out the public's desire for more opportunities for water dependent sites. The City Commission refined this vision on January 12, 1999, in two important ways: first, by eliminating the potential second cruise ship berth; and second, by emphasizing a preference for additional recreational use development.

### **Economic Basis of Sites [9J-5.012(2)(a)]**

All three sites were under military ownership, and as such were supported by the United States government. The economic basis of the proposed uses is more complex; in general, economic development activity on the Truman Waterfront Parcel is expected to help offset the loss of military-related jobs due to the realignment process. The port and marina facilities are expected to generate the most positive economic impact for the community. However, other portions of the Truman site will not generate direct or indirect revenue for the city, although they may help enhance quality of life, the recreational experience, and public access to the waterfront. The Poinciana Housing Parcel, by providing affordable

housing, also addresses a critical economic issue in the community. The Peary Court Cemetery is a historic site, and as such is not expected to have any significant economic impact.

#### **Affect of Proposed Uses [9J-5.012(2)(b)]**

The proposed land uses are not expected to have any net negative impact on natural resources, including vegetative cover, wetlands, wildlife habitat, and living marine resources. This finding is based on the overall paucity of natural resources on the three sites, the proposed development plan and associated land uses, and the extensive local, state and federal regulations which govern the impact of development on natural systems. Each site is addressed individually below.

*Truman Waterfront Parcel:* The Truman Waterfront Parcel was created entirely out of material deposited on tidal wetlands for the purposes of supporting military activities, most recently a submarine basin. As a result, most of the site is environmentally barren: paved surfaces, structures, and hardened shorelines dominate the landscape. Natural resources are concentrated along the shoreline, and consist of ecological communities which have adapted to the hardened surfaces and secondary impacts of a deep water port and military base. Therefore, in measuring the potential impact of the proposed land uses on natural resources, an understanding of how the proposed uses will change the existing impact scenario is helpful. The following outlines identified resources and how proposed uses will impact the resources.

*Sandy Beach and Turtle Nesting Area:* This area will be incorporated into the HPS land use classification. Fort Zachery Taylor State Park has already initiated conveyance activities to ensure this area and associated resources are maintained as part of the park facility. In addition, the resources are protected by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, as well as the Florida Department of Environmental Protection, Division of Beaches and Shores.

*Bird Nesting Areas:* Existing bird nesting areas for Least Terns are located within the HPS HPS-1 land use classification, on the roofs of existing WWII structures. The concept plan for this area shows demolition of the structures for a park facility. Disruption of the birds during nesting season is regulated by the **Key West Comprehensive Plan** and implementing land development regulations, the Florida Fresh Water Fish and Game Commission and the U.S. Fish and Wildlife Service. These nesting areas would be protected regardless of the proposed classification of the site.

An osprey nest has been identified within the area proposed for classification as HNC. This nest is located on an existing water tower. Proposed development in this area, including the potential removal of the water tower, will need to be coordinated with the **Key West Comprehensive Plan** and implementing land development regulations, the Florida Fresh Water Fish and Game Commission and the U.S. Fish and Wildlife Service.

*Coral Colonized Structures:* The existing coral colonies on the harbor bulkhead are all included within the proposed HRCC-4 (port) area. These colonies have adapted to the hardened shoreline and port uses, and would become quickly re-established in areas where disruptions due to bulkhead repair or replacement are planned. Impacts to coral communities are heavily regulated by the **Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers.

**Seagrass Beds:** Seagrass beds of varying densities are located along the edge of the parcel, with the most heavily vegetated areas adjacent to the proposed HPS designation scheduled for incorporation into Fort Zachery Taylor. Remaining seagrass patches are offshore of the area designated as HRCC-4, to the south of the existing cruise ship berth on the north outer mole. The City Commission's decision to limit cruise ship berth expansion should adequately protect existing resources. Furthermore, impacts to seagrasses are heavily regulated by the **Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers.

*Poinciana Housing Parcel:* The Poinciana Housing Parcel was developed in 1969 on top of filled wetlands. The only remaining natural resource on the site is a narrow, mangrove vegetated lake located along the north edge of the site. The entire mangrove area is designed for conservation. Therefore, no impacts to natural resources are expected from the proposed use.

*Peary Court Cemetery:* There are no natural resources on the Peary Court Cemetery site.

### **Areas Subject to Coastal Flooding**

None of the three sites is known to experience coastal flooding during normal storm events.

### **Historic Areas [9J-5.012(2)(c)]**

Proposed land uses are not expected to have any negative affect on historic or prehistoric uses. Extensive historic and archaeological research conducted by the United States Army Corps of Engineers and their consultants, and reviewed and confirmed by the Florida Department of State Division of Historical Resources State Historic Preservation Officer on August 7, 1998, have identified potentially historic sites and recommended management plans for each. The proposed land uses accommodate these management plans. Further, existing Comprehensive Plan policies provided for additional protection at the local level. Details relevant to each site are provided below.

*Truman Waterfront:* Two historic sites have been identified within the Truman Waterfront. A description of recommended maintenance for the two sites is provided below.

The Seminole Battery/Structure 283 is to be restored and receive open space improvements. Information regarding the site restoration will be provided to the State Historic Preservation Officer (SHPO) at the time plans are available. The proposed use is not expected to adversely effect this site.

The Fort Zachary Taylor Coverface/Site 8MO206 is largely part of a parcel intended to be converted to the Florida State Department of Environmental Protection, Division of Parks and Recreation. It will be maintained as a historic site and has been added to Site 8MO206, Fort Zachary Taylor, on the National Register of Historic Places. A small portion at the northwest tip of the site is intended as a transportation facility. This area is located furthest from excavations which produced artifacts. Information about the site will be provided to the SHPO, and any land moving activities for this site will be coordinated with the SHPO as recommended by the Florida Department of State and the National Parks Service. The proposed use is not expected to adversely impact the site.

*Poinciana Housing:* No historically sensitive artifacts or structures have been found or are believed to be present at the Poinciana Housing site; therefore, no historic maintenance will be necessary.

*Peary Court Cemetery:* Peary Court Cemetery is currently protected under a 1990 Memorandum of Agreement (MOA) between the SHPO and the U.S. Navy stipulating the cemetery be preserved in place and maintained by the U.S. Navy. The SHPO and the Department of the Interior may be involved in reviewing and approving plans for re-interment of additional bodies.

### ***Estuarine Conditions [9J-5.012(2)(d)]***

The Truman Waterfront parcel includes a deep water harbor located on the Gulf of Mexico. It is not a true estuary: there is no fresh water flow or fresh and salt water mixing. However, water quality is a critical issue in Key West, and the condition of the resource has important implications for the overall health of the marine environment. There is little specific information on the water quality within, or adjacent to, the Truman Waterfront site. Generally, poor water quality in Key West can be attributed to poor flushing, loss of tidal habitat and discharge of untreated or poorly treated wastewater or storm water. The Truman Waterfront Parcel is the result of a major dredge and fill project which resulted in significant habitat loss at the time of construction. The stormwater system appears to discharge untreated stormwater from portions of the site directly into the harbor. An environmental reconnaissance of the harbor conducted in 1997, as part of the base reuse planning process, noted silty, barren bottom in the majority of the basin. However, coral communities exist on hard surfaces within the harbor (including the bulkhead). This is typical of semi-enclosed areas, and not necessarily representative of poor existing conditions. However, coral communities on the basin bulkhead appear healthy (which is generally indicative of good flushing) and water clarity appears good. Therefore, the existing harbor conditions appear well adapted to port and related marine uses.

The proposed land uses will allow the site to continue as a deep water port. In addition, an existing marina may be expanded and a new marina developed in the inner harbor. Construction and operation of marina facilities can impact water quality and nearby submerged resources. Although the concept plan shows these marinas as an option which may be permitted adjacent to the proposed classification, they will be extensively studied through the regulatory process set forth by the **Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers.

The impacts of boat traffic in the navigational channels outside of the harbor were raised as a concern during base reuse planning community meetings in late 1997. Research conducted at that time with the National Oceanic and Atmospheric Administration (NOAA), the Florida Department of Environmental Protection (FDEP), Florida International University (FIU) and the University of Miami Rosenstiel School of Marine and Atmospheric Science (RSMAS) did not reveal any specific information about boat-generated turbidity in this area. The research did indicate the occurrence of fine, white sediment in most marine communities near Key West, and that strong currents in the vicinity of the Key West Shipping channel appear to suspend, and then flush suspended sediments quickly from the vicinity. Bathymetric data in the vicinity does not appear to indicate an accumulation of sediments over the last twenty years, and adjacent federal navigational channels have not required maintenance dredging in the same period of time. Finally, there is no data indicating habitat degradation in the area has occurred due to boat-generated turbidity from

Truman Waterfront. Since the channels near the Truman Waterfront are widely used by pleasure craft operators, the United States Coast Guard, and cruise ships, any serious consideration of boat traffic within existing dredged channels would need to address all users, if indeed such review is ever deemed warranted.

Proposed uses are consistent with existing uses, and are not expected to have any negative impacts on water quality. Redevelopment of the site will have a positive impact on water quality by providing for better stormwater treatment.

### **Natural Disaster Planning [9J-5.012(2)(e)]**

#### ***Hurricane Evacuation***

The City of Key West has coordinated hurricane evacuation with the Monroe Hurricane Evacuation Model, and has limited new residential development in consideration of hurricane evacuation clearance concerns. Proposed land use classifications for the Truman Waterfront Parcel and the Poinciana Housing Parcel include residential densities. However, development of new residential units on the sites is contingent upon the availability of units through the city's Building Permit Allocation System. Therefore, the proposed uses are not expected to affect hurricane evacuation for the City of Key West or Monroe County.

#### ***Post-disaster Redevelopment***

Redevelopment of uses will be consistent with the city's post-disaster redevelopment plan. All redevelopment will be to current coastal construction standards.

#### ***Infrastructure in Coastal High Hazard Areas***

The **City of Key West Comprehensive Plan** identifies the Coastal High Hazard area as an area subject to storm surge impact from a category 1 hurricane. No part of the Poinciana Housing Parcel or Peary Court Cemetery is within the Coastal High Hazard Area. A portion of the Truman Waterfront Site--essentially the area known as Mole Pier--is within the Coastal High Hazard Area. Mole Pier forms the outer edge of the Truman Waterfront Harbor. Portions of both the inner and outer edges of the Mole are used for berthing ships; as such, the Mole includes infrastructure essential to the operation of a port facility, including an access road and water, wastewater and electrical lines. The continued use of the Mole as part of the city's deepwater port will require continued port-related investment in infrastructure within this portion of the Coastal High Hazard Area.

### **Beach and Dune Systems [9J-5.012(2)(f)]**

A small beach with no dune systems is located in the Truman Waterfront Parcel, adjacent to Fort Zachery Taylor. This area does not appear to be experiencing erosion or accretion. The portion of the Outer Mole closest to the beach area has a groin, or support system, which extends perpendicular to the bulkhead. The purpose of this system is unclear: large and small sediments were either deposited or captured by the system, and are now sparsely covered by algae. There is no clear pattern of new deposition from the nearby beach, and there does not appear to be a negative coastal process connection between the beach and the bulkheaded areas to the north.

**Public Access Facilities [9J-5.012(2)(g)]**

Public access to the waterfront is a ~~tenet~~ <sup>tenet</sup> of the Truman Waterfront Parcel plan, which provides for a continuous harbor-walk along the entire basin. Future connection to the city's existing waterfront walkway is contingent upon possible agreements with private owners, particularly at Admiral's Cove, at the northern terminus of the proposed Truman harborwalk. The policies guiding development of the Truman Waterfront Parcel specifically provide for the harborwalk and enhanced multi-modal connections between adjacent communities and proposed recreational areas. Tenet

The Poinciana Housing Parcel will also provide public areas for recreation, and guiding policies encourage a looped-pathway for bicycles and pedestrians. The Peary Court Cemetery will also provide access, as is prudent from a historic site management perspective.

**Infrastructure Inventory [9J-5.012(2)(h)]**

Both the Truman Waterfront and Poinciana Housing parcels have existing water, sewer, stormwater and roadway infrastructure; the Peary Court Cemetery does not have any existing infrastructure. Redevelopment of the Truman Waterfront will require upgrading of infrastructure to meet current levels of service and other standards.

**Marina Siting Plan [9J-5.012(4)]**

Only one parcel, the Truman Waterfront Parcel, could be developed with marina facilities. The **City of Key West Comprehensive Plan** and implementing **Land Development Regulations** include extensive marina siting criteria. Any new marina development would need to be consistent with these plans. However, marina uses, including small craft docking facilities, are already located along the Truman Waterfront Basin, and these uses may be vested against regulations that came into affect after the basin was constructed. Any marina facilities, whether existing or new, will be within the area defined as the port facility, and will need to be consistent with the overall operational goals of the port.

**Port Facilities Sub-Element**

From its early beginnings as a cargo trading point with Cuba and the West Indies and a base for U.S. naval ships, Key West has relied on its port facilities to advance island development and economic opportunities. While the nature and type of Key West's maritime commerce has changed, the Port of Key West continues in this role.

Today's Port of Key West serves the community in several important ways. It is an economic engine for the Florida Keys, providing the Keys' community with economic revenues and jobs associated with the Port's cruise business. In its fiscal year ~~96/97~~ <sup>97/98</sup>, the port was visited by ~~447~~ <sup>333</sup> cruise ships and nearly ~~565,000~~ <sup>566,100</sup> cruise passengers, making it one of the most active cruise ports in North America. The Port's proximity to active shipping lanes makes it an important safe harbor for maritime vessels in distress. It also serves as an important strategic location for the U.S. Armed Forces and provides an essential staging point for emergency supply of the Florida Keys and specifically, Key West, if a natural disaster were to disrupt/damage U.S. Highway 1.

~~This plan, the 1998 Port of Key West Master Development Plan (MDP), was developed to ensure the port has the capabilities to provide cruise and other maritime industries with the infrastructure needed for safe operation and appropriate growth well into the 21<sup>st</sup> century. This plan also brings port facilities within the Chapter 288 Military Base Reuse Plan into compliance with the State's comprehensive planning process, namely, Rule 9J-5.012, Coastal Management Element, Florida Administrative Code (F.A.C.).~~

~~The 1998 Port of Key West MDP is divided into several sections. In Section 1, an inventory of the Port of Key West's existing facilities is presented. Land uses surrounding port facilities, public access, and ecological and environmental conditions are also discussed in this section. Ongoing planning efforts and projects are presented in Section 2. An analysis of the market trends and growth associated with the cruise industry and their potential impact to the Port of Key West is presented in Section 3. Building from the analysis presented in preceding sections, the recommended long range development plan for the Port of Key West is submitted in Section 4. Section 5 describes the probable impacts port expansion and maintenance will have on natural resources, the built environment, and the local economy. A discussion of capital improvements is in Section VI.~~

### **Existing Port Facilities, 1998**

This section provides an inventory and analysis of the built environment as well as terrestrial and marine environmental conditions at and near the port. Existing conditions are reviewed from the following standpoints:

- Port of Key West overview
- Inventory of port facilities
- Adjacent land uses
- Public access
- Infrastructure serving port facilities
- Ecological and environmental conditions
- Natural disaster planning
- Hazardous materials handling and cleanup

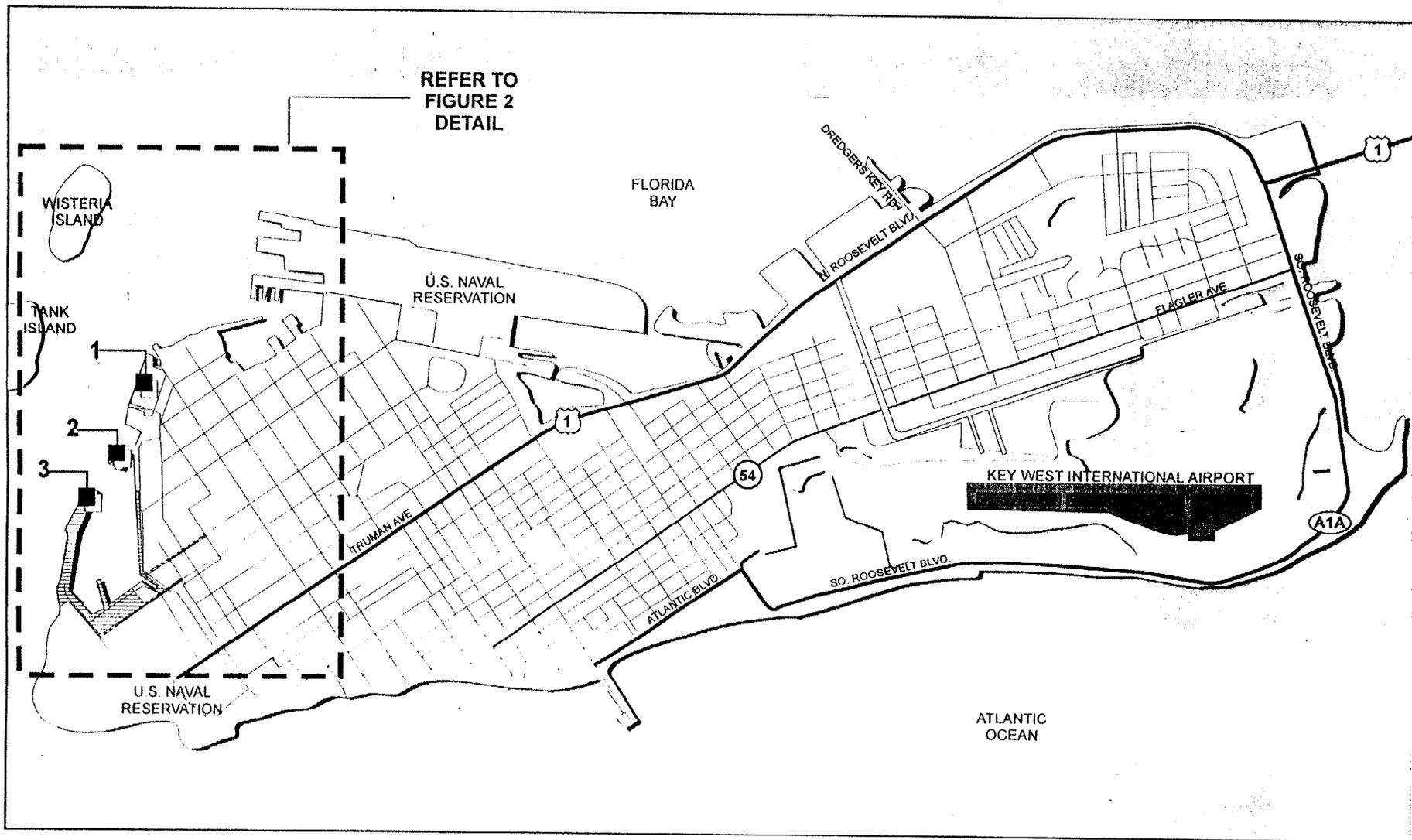
The objective of this section is to illustrate the physical, urban, and natural context within which the Port of Key West operates. Subsections of Rule 9J-5.012, Coastal Management Element, addressed in this and subsequent MDP sections are indicated in brackets, **see Table III.F.1, Rule 9J-5.012, Coastal Management Element, FAC .**

#### **Port of Key West Overview [Rule 9J-5.012 (5) (b), F.A.C.]**

A water-dependent use managed by the Key West Department of Transportation, the Port of Key West consists of three deepwater port facilities found along the western shore of the island: Mallory Dock, Pier B, and North Mole Pier, **see Figures III.F.1, Location of Port Owned & Administered Lands, and III.F.2, Location of Port Owned & Administered Lands (Detail).**

Mallory Dock and Pier B are proximate to Key West's historic settlement area in the northwest portion of the island. Mallory Dock and an adjacent upland parcel--Mallory Square--are fully owned and administered by the port. Pier B is administered by the port and subject to a revenue sharing agreement with the facility's owner, Hilton Hotels.

<b>TABLE III.F.1.</b>	
<b>RULE 9J-5.012, COASTAL MANAGEMENT ELEMENT, F.A.C. REQUIREMENTS RELATING TO DEEPWATER PORTS</b>	
<b>Rule 9J-5.012 Subsection</b>	<b>Requirements Relating to Deepwater Ports</b>
(2) (a)	Inventory/analysis of existing land uses, including a discussion of conflicts among shoreline uses, water-dependent and water-related uses.
(2) (b)	Inventory/analysis of natural resources, including vegetative cover, coastal flooding, wildlife habitats, living marine resources.
(2) (c)	Impacts of proposed development and redevelopment on historic resources.
(2) (d)	Estuarine pollution conditions, and actions needed to maintain estuaries, including identification of known point and non-point source pollution problems; and identification of state, regional, and local regulatory programs to maintain environmental quality.
(2) (e) 1.	Natural disaster planning concerns: Hurricane evacuation planning;
(2) (e) 2.	Natural disaster planning concerns: Post-disaster redevelopment;
(2) (e) 3.	Natural disaster planning concerns: Coastal high-hazard areas.
(2) (f)	Beach and dune systems.
(2) (g)	Public access facilities inventory.
(2) (g)	Capacity and need for public access facilities
(2) (h)	Existing infrastructure inventory and analysis.
(2) (h)	Analysis of future infrastructure facility needs.
(3) (a) (b) (c)	Master Plan Goals, Objectives, and Policies.
(5) (b)	Landside transportation needs to support the deepwater port.
(5) (b)	Maintenance of in-water facilities.
(5) (b)	Management of dredged material.
(5) (b)	Hazardous material handling and cleanup.
(5) (b)	Handling and cleanup of petroleum products.
(5) (b)	Location and boundary of port owned or administered lands.
(5) (c)	Goals, objectives and policies.
(5) (d)	Port maintenance and expansion plans.
(5) (d)	Impacts of port expansion and maintenance



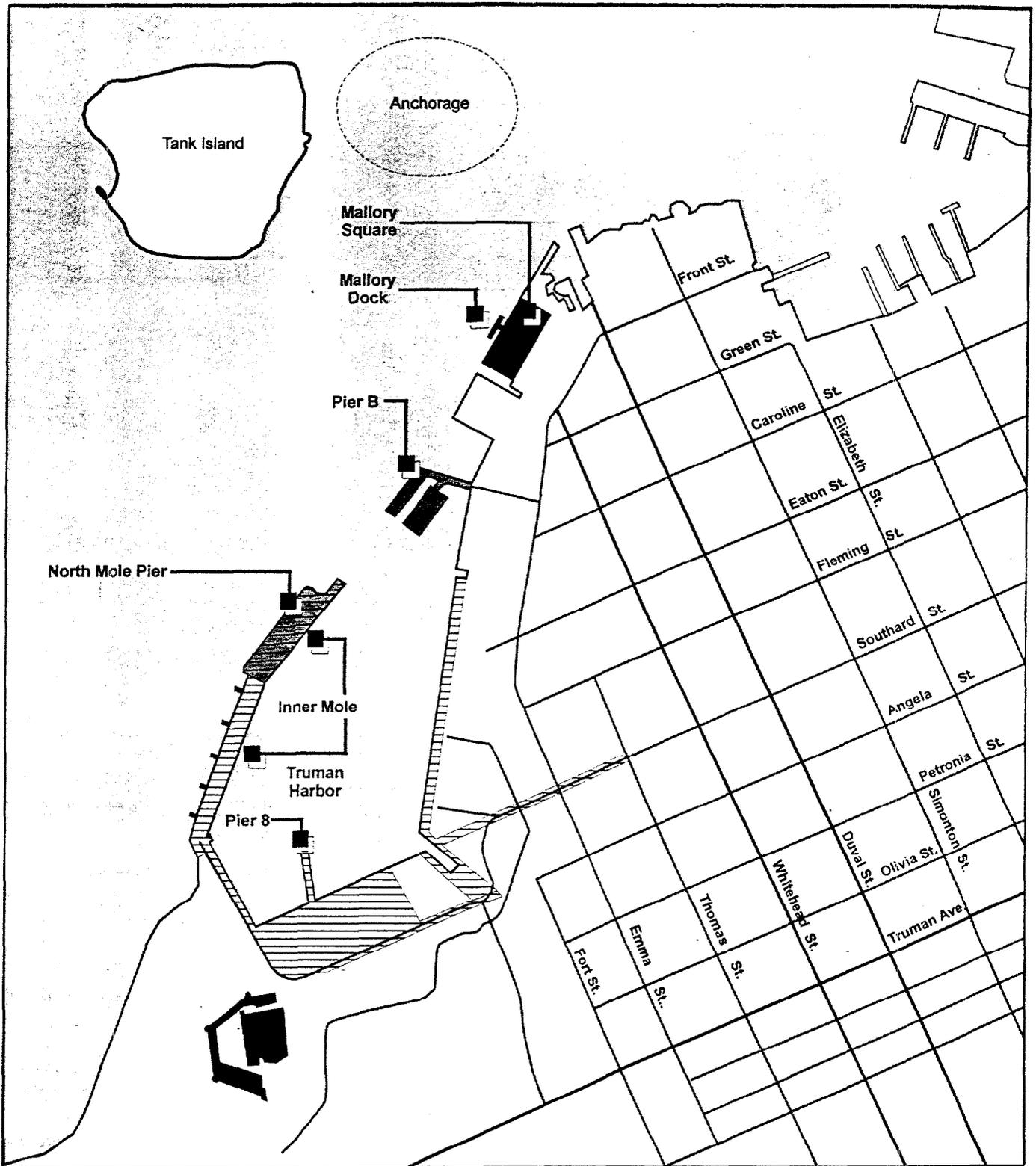
**Legend**

- 1 Mallory Dock
- 2 Pier B
- 3 North Mole Pier
- Area Proposed for Federal Port Conveyance

**Figure III.F.1  
General Location of Port Owned & Administered Lands**

**PORT OF KEY WEST MASTER PLAN**





**Legend**

-  Port Owned
-  Port Administered
-  Area Proposed for Federal Port Conveyance

Figure III.F.2  
General Location of Port Owned & Administered Lands

**PORT OF KEY WEST MASTER PLAN**



Not to Scale

A third ship berth, North Mole Pier, is administered by the port through a license agreement with the U.S. Navy. North Mole Pier lies within the Truman Waterfront property, a ~~44.9~~ 50.41 acre U.S. Navy surplus property consisting of vacant land, several vacant structures, Seminole Battery--a historic heavy gun battery and underground bunker--and maritime uses. A portion of this property is proposed for conveyance to the Port of Key West as part of a federal conveyance under the Base Closure Community Redevelopment Act of 1994. ~~A full description of this process and areas proposed for federal conveyance is presented in Section 2, Ongoing Planning Efforts and Projects.~~

Ships are also permitted by the port to anchor their vessels in a location west of Wisteria Island, and transport passenger and crew via tender to Mallory Dock. Usage of this anchorage area is infrequent.

A single channel and two turning basins adjacent to the western edge of Key West provide ship traffic access to the Port's docking facilities, **see Figure III.F.3, Location of Port Channels and Turning Basins**. Vessels arriving from the Florida Straits enter the port through the 13 mile Federally maintained Key West Main Ship Channel which terminates at the North Turning Basin found northwest of Mallory Dock. A second, non-Federally maintained turning basin--South Turning Basin--is located west of the Truman Harbor and Mole Pier.

The Port of Key West is principally a passenger port; no significant freight or cargo is handled at port owned and administered facilities. Port-of-call operations by cruise ships are the mainstay of the Port's business. This traffic typically originates from home ports (ports-of-embarkation) in Miami and Ft. Lauderdale and calls on Key West as part of a 3-, 4-, 7-, or 10-day cruise ship itinerary. The Port of Key West does not serve as a home port for cruise ships, and as such, no passenger terminals are present within port owned and administered properties.

The Port of Key West has experienced an expanding cruise business over the past decade, **see Table F.III.2, Cruise Passenger and Ship Traffic, FY 1991/92 - FY ~~1998/99~~ 1997/98**. Between fiscal years 1991/92 and 1996/97, cruise passenger throughput more than quadrupled from 139,685 to ~~564,370~~ 561,101 passengers.<sup>19</sup> ~~Based on the Port's advanced bookings, the port cruise passenger and ship volumes are expected to continually to increase in fiscal year 1997/98.~~

Several industry factors are felt to have contributed to Key West's success in attracting cruise operations to the port, including:

- Cruise line increases in Caribbean itinerary offerings and capacity;
- Replacement of smaller cruise vessels operating in the Caribbean with 2,000-plus passenger mega-cruise ships, now the industry mainstay. This trend is evidenced by the Port of Key West's yearly increase in average passenger volumes per vessel, **see Table F.III.2, Cruise Passenger and Ship Traffic, FY 1991/92 - FY ~~1998/99~~ 1997/98**.

<sup>19</sup>The Port's fiscal year extends from October to September.

- Cruise line substitution of Bahamian ports-of-call with Key West; and,
- The opening of North Mole Pier in 1995, Key West's only facility large enough to accommodate mega-cruise vessels—generally defined as vessels with capacities greater than 1,750 passengers and lengths greater than 820'.

TABLE III.F.2					
CRUISE PASSENGER AND SHIP TRAFFIC, FY 1991/92 - FY 1998/99*					
PORT OF KEY WEST					
	Passengers	% Change	Ships	% Change	Average Passengers per Vessel
FY 1991/92	139,685	-	n/a	-	n/a
FY 1992/93	255,577	83.0%	n/a		n/a
FY 1993/94	439,033	71.8%	438		1,002
FY 1994/95	398,370	-9.3%	368	-16.0%	1,083
FY 1995/96	393,345	-1.3%	333	-9.5%	1,181
FY 1996/97	565,168	43.5%	417 <u>333</u>	25.2%	1,353
FY 1997/98*	566,101	9.7%	419 <u>385</u>	0.5%	1,478
<b>Average Annual Growth, FY 1991/92 - FY 1996/97</b>		<b><del>32.2</del> <u>26.2</u>%</b>			

Source: Port of Key West, 1998

Notes: \*Port of Key West estimates based on present cruise ship advanced bookings.  
n/a - data not available.

The impacts to Key West's economy associated with port operations are significant. Gross revenues associated with port operations exceeded \$3.25 million in fiscal year 1996/97 and are forecast to climb to over \$3.71 million in fiscal year 1997/98, see **Table F.III.3, Gross Port Revenues by Berthing Position, FY 1994/95 - FY 1998/99, Port of Key West.** After expenses, port revenues are placed in the general fund of the City of Key West. Significant economic impacts accrue to Key's merchants from passenger and crew expenditures. By example, a 1995 survey conducted by Price Waterhouse, LLP, for the Florida Caribbean Cruise Association (FCCA) concluded average expenditures equal \$41 per passenger in Key West.

	Berthing Position				Totals
	Anchorage	Mallory Dock	Pier B	North Mole Pier	
FY 1994/95	\$192,800	\$932,018	\$758,655	n/a	\$1,883,473
FY 1995/96	n/a	n/a	n/a	n/a	n/a
FY 1996/97	\$0	\$540,600	\$936,722	\$1,778,400	\$3,255,722
FY 1997/98*	\$0	\$574,887	\$706,028	\$2,424,286	\$3,705,201
<b>Totals</b>	<b>\$192,800</b>	<b>\$2,047,505</b>	<b>\$2,401,405</b>	<b>\$4,202,686</b>	<b>\$8,844,396</b>

Source: Port of Key West, 1998

Notes: \*Port of Key West estimates based on present cruise ship advanced bookings.  
n/a - data not available.

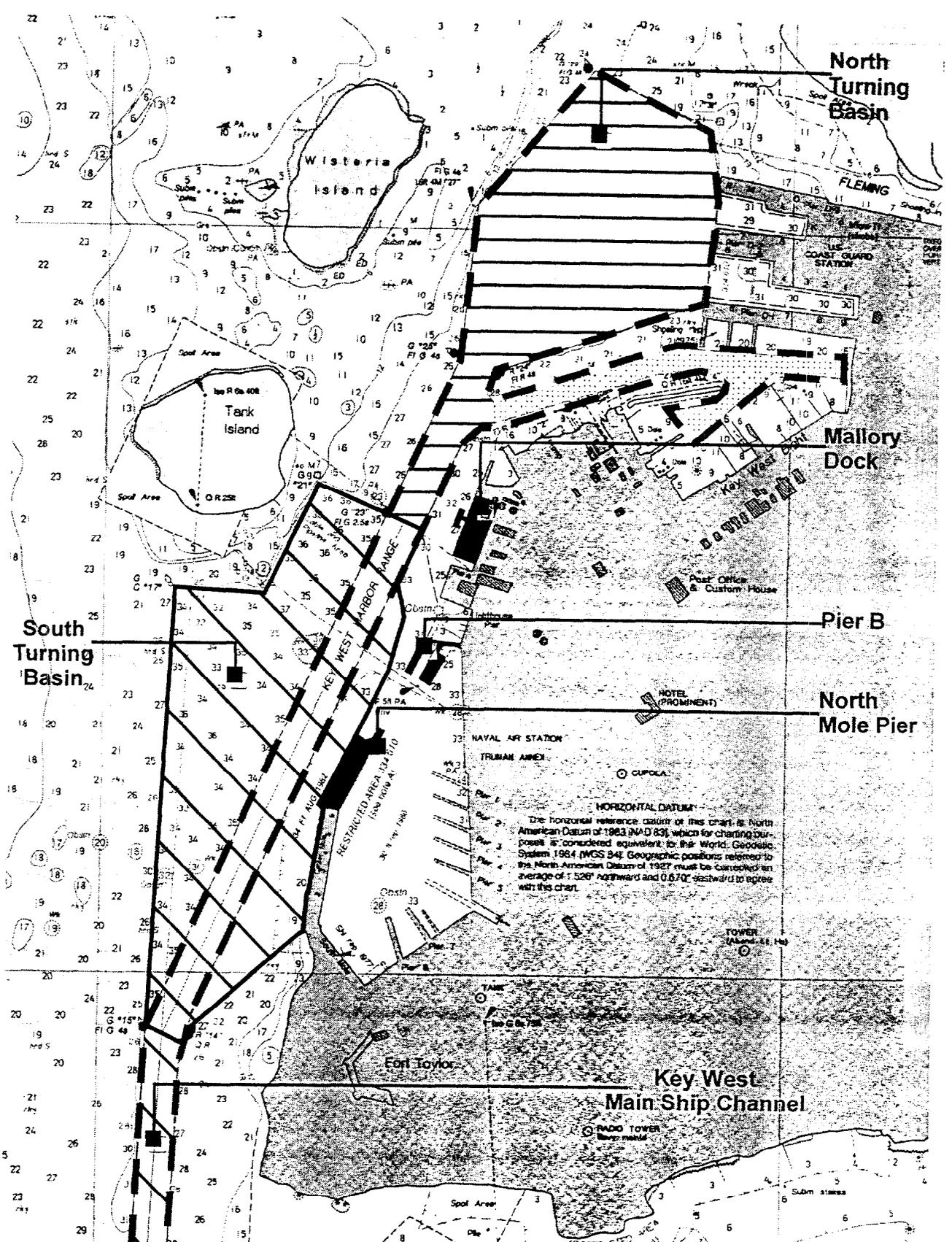
### *Inventory of Port Facilities*

North Mole Pier and Truman Waterfront were designed for deep water operations for the U.S. Navy. The facilities rely upon deep water-access. In-water facilities include marine structures, piers, hardlined shoreline areas, and a haul-out area.

### *Channels and Turning Basins*

The Port's principal shipping channel and turning basins are shown, on **Figure III.F.3, Location of Port Channels and Turning Basins**. These waterways provide access to berthing areas at the port, as well as to operations at U.S. Naval and Coast Guard facilities at the Trumbo Point Annex found along the northwestern edge of the island.

To access port facilities, ships approach from the Atlantic Ocean and enter the Key West Main Ship Channel, a 13-mile federally maintained channel with a depth of (-) 34', see **Figure III.F.3, Location of Port Channels and Turning Basins, and Table F.III.4, Channel and Turning Basin Specifications, Port of Key West**. The Key West Main Ship Channel passes through the Port's South Turning Basin and terminates west of the Trumbo Point Annex at the North Turning Basin. A smaller, (-) 12' deep channel branches off the Key West Main Ship Channel, south of the North Turning Basin, and provides access to non-Port marina uses at the Key West Bight.



- Legend**
- (34') PROJECT
  - (30') PROJECT
  - (12') PROJECT
  - KEY WEST FEDERAL HARBOR PROJECT

**Figure III.F.3**  
 Location of Port Channels and Turning Basins  
**PORT OF KEY WEST MASTER PLAN**



TABLE III.F.4				
CHANNEL AND TURNING BASIN SPECIFICATIONS, PORT OF KEY WEST FY 91/92 - FY 96/97*				
PORT OF KEY WEST				
Type	Name	Depth (feet NGVD)	Length (nautical miles)	Federally Maintained (Y/N)
Channels	Key West Main	-34.00	13	Yes
	Key West Bight	-12.00		No
Turning Basins	South Turning Basin	-34.00		No
	North Turning Basin	-30.00		Yes

Source: National Oceanic & Atmospheric Administration, August 1993  
Port of Key West, 1998

### **Marine Structures**

Mallory Dock, Pier B, and North Mole Pier comprise the Port's marine structures. Provided below is a detailed description of each.

#### **Mallory Dock**

Mallory Dock provides a single cruise ship berthing position along its 120' long, 16' wide open pile tee head pier and breasting dolphins, **see Figure III.F.4, Existing Marine Structures**. Water depth adjacent to the Mallory Dock is approximately (-) 30' and abuts the Key West Main Ship Channel. This berthing location can safely accommodate small cruise ships up to 400' in length. No structures are found on the deck of the tee head pier.

The Mallory Dock tee head pier connects to Mallory Square, a ±5 acre plaza, owned and administered by the port and city. Mallory Square offers direct pedestrian access to Key West's historic center and principal tourism areas. Mallory Square is also the site for Key West's nightly 'Sundown Celebration'. Parking areas are also provided.

Structural reconnaissance of Key West's three cruise ship berthing facilities was conducted in June of 1996 (Gee & Jenson, 1996). Mallory Dock's tee head pier, breasting dolphins, and mooring bollards were found to be in good condition.

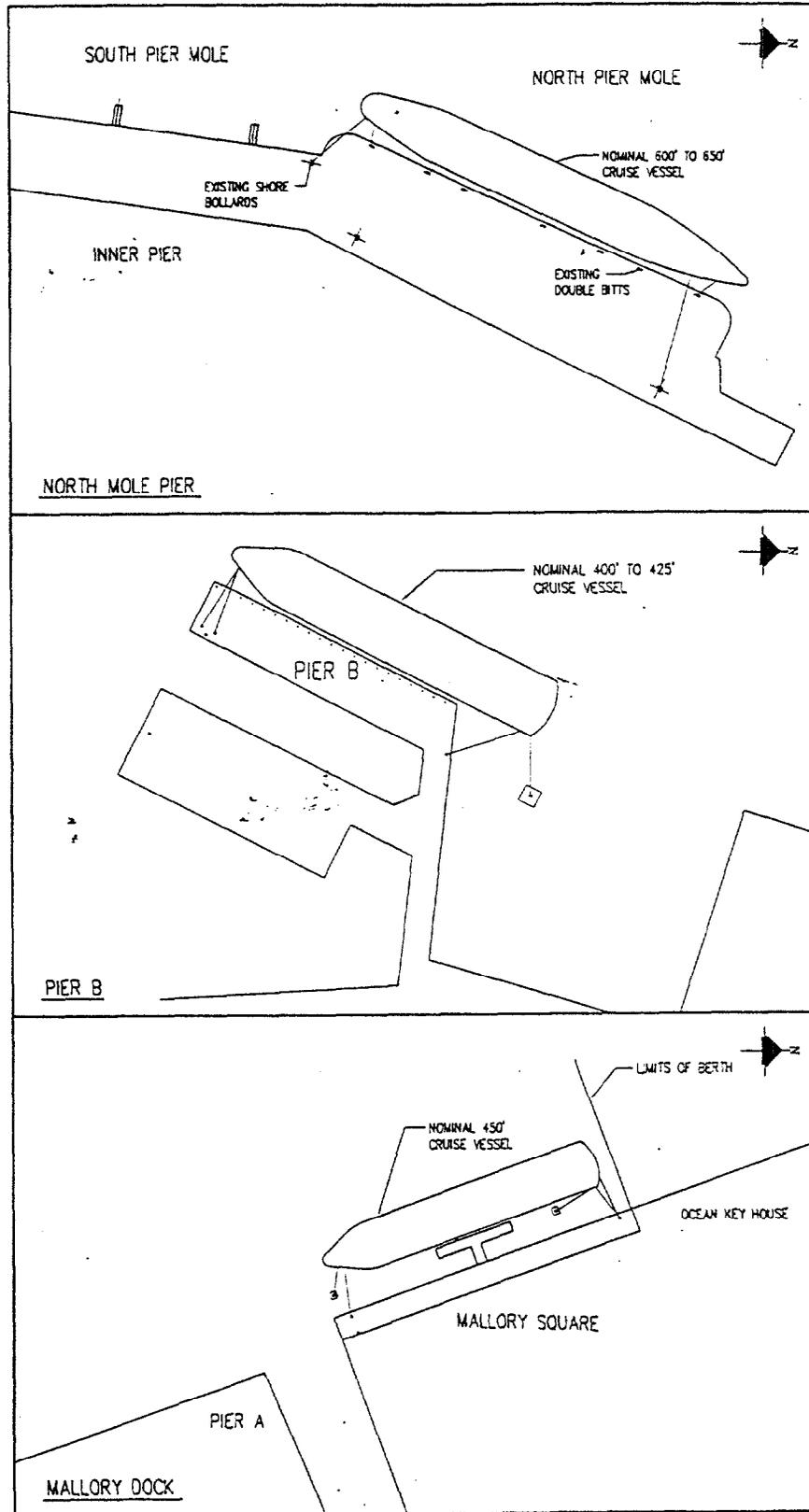


Figure III.F.4  
Existing Marine Structures

PORT OF KEY WEST MASTER PLAN



### **Pier B**

Pier B is a privately owned cruise port facility located outside of the Truman Waterfront. Information on Existing Facilities, Data and Analysis for Pier B is contained in Chapter 5A Port and Related Facilities Data Inventory Analysis of the City of Key West Comprehensive Plan Data Inventory and Analysis (1994).

A second marine structure is found between Pier B and a small marina on the shoreline. Its configuration is not suitable to accommodate vessel traffic. It presently serves as a breakwater for a small boat marina located to the east along the shoreline. Pier B is linked to the shore by a 35' wide pier, which terminates at the Key West Hilton Hotel complex and adjacent marina.

Pier B was significantly upgraded and strengthened in the early 1990's; its structural condition was defined as good upon review in 1996 (Gee & Jenson, 1996).

### **North Mole Pier**

Designed to serve in the dual role as a breakwater protecting Truman Harbor and a seaward berthing location for large U.S. Navy ships, North Mole Pier presently serves as the Port's single berthing location for large cruise vessels. The seaward berthing face of North Mole Pier measures 600' long by 180' wide on its northeastern end and 160' wide on its southwestern side. The seaward berth is found adjacent to the Key West Federal Channel and South Turning Basin. Water depth adjacent to the pier is (-) 32'. Significant support infrastructure exists within the North Mole Pier marine structure, including electrical distribution and communication cables, POL pipeline, and sanitary sewer and wastewater lines.

Pedestrian and vehicular access to North Mole Pier is accomplished along the southern portion of the breakwater--commonly referred to as South Mole Pier--which links to the larger Truman Property. For cruise ship operations, passengers are transported via tram to the Downtown area.

Structural review conducted in 1996 found North Mole Pier marine facilities to be in good condition, with exception made for the fair condition pier fenders (Gee & Jenson, 1996).

### **Buildings**

No port owned or administered structures are found at North Mole Pier or Pier B. Structures present at Mallory Square include Key West's Convention Center, the Waterfront Playhouse, the Chamber of Commerce, and public restrooms. The city is responsible for administering and maintaining these buildings. Mallory Square underwent significant rehabilitation in 1995: open space areas were enhanced; new parking areas were provided; and, pedestrian connections back to the city were strengthened.

### ***Areas in Need of Redevelopment***

No areas in need of redevelopment are found at port owned or administered facilities. As described, Mallory Square was redeveloped and enhanced in 1995.

### **Adjacent Land Uses [Rule 9J-5.012 (2) (a), F.A.C.]**

#### ***Urban Context Area***

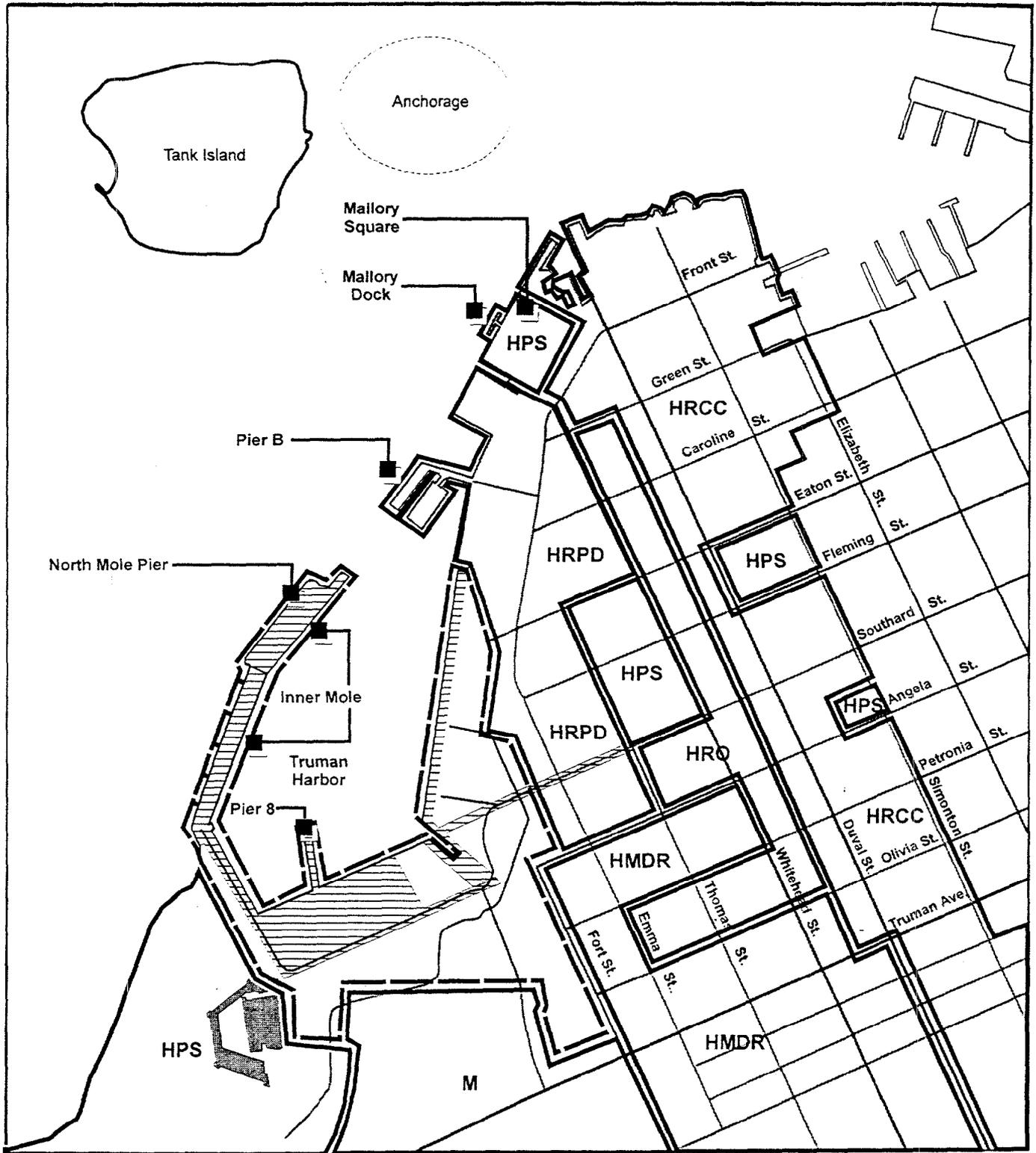
Port of Key West facilities lie within close proximity to the heart of historic Key West and are closely related to the urban fabric of the area. The thriving commercial areas of northern Duval Street and the Key West Bight are located south and east of Mallory Dock and Pier B. These areas are within walking distance and benefit greatly from cruise passenger operations at these piers. Truman Annex, a planned unit residential development built on previously surplus Navy land, and remains one of Key West's premier historic attractions. Duval and Whitehead Streets link with U.S. Highway 1 and provide the principal north/south vehicular access to Mallory Dock and Pier B, with Front Street serving as an east/west connector street.

North Mole Pier is a component part of the U.S. Navy's Truman Harbor and the surplus Truman Waterfront property. Fort Zachary Taylor and its associated recreation area lies directly south of this facility. The residential areas of Bahama Village, Key West's historic Bahamian community, and Truman Annex are located to the west. Vehicular access to North Mole Pier is presently provided from Southard Street and Truman Avenue (via Fort Street).

#### ***Existing Land Uses***

##### ***Mallory Dock***

Mallory Dock and Square have an existing land use designation of HPS, Public Services, **see Figure III.F.5, Existing Land Uses**. Land uses immediately south and west of the port, which include northern Duval Street and a the Key West Bight, are designated as HRCC, Historic Residential/Commercial Core. Mallory Dock and Square are bound to the southwest by Pier A, a privately owned parcel subject to the Truman Annex redevelopment area (existing land use designation HRPD, Planned Redevelopment & Development District).



**Legend**

- HPS Public Services
- HMDR Medium Density Residential.
- HRO Residential / Office
- HRCC Residential / Commercial Core
- M Military
- HRPD Planned Redevelopment and Development



- Truman Waterfront
- Area Proposed for Federal Port Conveyance

Figure III.F.5  
Existing Land Uses

**PORT OF KEY WEST MASTER PLAN**



### ***Pier B***

Pier B is located within a HPRD district, which is characterized by a residential uses (16-22 units per acre) and a mix of commercial and hospitality properties. The Key West Hilton Hotel and marina are located adjacent to Piers B and Bravo; Truman Annex, a mixed-use redevelopment project, is located to the south. No other existing land use classifications are found proximate to Pier B.

### ***North Mole Pier***

North Mole Pier and the surrounding Truman Waterfront property is designated as a Military (M) land use. Fort Zachary Taylor Park, located south of Mole Pier is designated as a HPS. Modifications to land use classifications are proposed as part of the **Chapter 288 Military Base Reuse Plan**, and are described in detail in the Future Land Use Element.

### ***Historic and Cultural Resources***

No historic structures or sites are located within port owned or administered areas. Historic properties located proximate to port facilities include: Fort Zachary Taylor, and the Seminole Battery (North Mole Pier); Ernest Hemingway House, the Key West Lighthouse, and the Old Post Office and Customs House (Mallory Pier and Pier B). Ongoing port operations and future development are not anticipated to impact these historic resources.

### **Public Access [Rule 9J-5.012 (2) (g), F.A.C.]**

Port of Key West and U.S. Coast Guard safety and security guidelines prohibit public access to areas immediately adjacent to ship docking areas when cruise, military, and other large vessels are in port. When these vessels are not present, public access to Mallory Dock is permitted. For Mallory Dock, city policy requires ships to vacate this berthing position several hours prior to sundown. This policy allows for Key West's nightly 'Sundown Celebration' by providing the safe usage of the areas adjacent to Mallory Dock, as well as unobstructed views of the setting sun by celebration participants.

For Pier B, public access is provided at the will of the facility's owner, Hilton Hotels.

Under the jurisdiction of the U.S. Navy, North Mole Pier and the much larger Truman Annex property are off-limits to the public. The **Key West Base Reuse Plan** for the Truman Annex property promotes a high degree of public access to port conveyed properties and includes provision of a harborwalk running the length of Truman Waterfront. Once this area is conveyed by the Navy, access will become possible. The Port of Key West recognizes the importance of public access and water views in this area, and will continue in its current policies of allowing and encouraging public access to port areas when large vessels area not present.

### ***Conflicts Among Uses***

There are no identified conflicts within the shoreline uses of the Port of Key West.

### **Infrastructure Serving Port Facilities [Rule 9J-5.012 (2) (h), F.A.C.]**

This section summarizes the existing infrastructure systems presently in place to service port facilities--roadways, potable, water and wastewater systems, drainage systems, solid waste facilities, and energy and communication systems. Where applicable, estimates of port facility demand on these systems is tabulated.

#### **Transportation Network**

##### *Facilities*

The transportation network serving Port of Key West facilities is presented in **Figure III.F.2, Location of Port Owned & Administered Lands (Detail)**. The northwestern portion of the city is designed on a grid. Principal north/south thoroughfares include Duval and Whitehead Streets; Caroline and Southard Streets and Truman Avenue are the primary east/west linkages.

Roadways in northwest Key West are generally congested, especially during the afternoon and evening hours. Multimodalism in the area is also high, with individuals often selecting walking or bicycling as their primary means of transport. The Key West Port and Transit Authority (KWPTA) Department provides fixed route bus service in Key West operating in a loop system (known as Conch Loop).

##### *Port Demand*

Cruise ships generate significant amounts of pedestrian traffic when in port. The proximity of Mallory Dock and Pier B to the city's primary commercial and tourist areas allow and encourage disembarking cruise passengers to walk during their six to eight hour stay in Key West. Port operations in these areas generate only nominal levels of vehicular trips.

The U.S. Navy does not permit disembarking cruise passengers to walk from North Mole Pier to exit the Truman Waterfront property. The port provides transport to all cruise passengers on trams, locally known as 'Conch Trains'. These trams travel to/from North Mole Pier to the commercial areas of northern Duval Street and the Key West Bight. Other vehicular traffic generated by port operations at North Mole Pier is only nominal.

#### **Potable Water Facilities**

##### *Facilities*

Potable water is provided to the entire City of Key West by the Florida Keys Aqueduct Authority (FKAA). FKAA owns and operates a wellfield and treatment facility in Florida City, Florida; treated water is transmitted to the city via transmission main, to a storage tank and distribution system. The FKAA does not track water usage specifically for the city; rather, the Keys, as a whole, are reviewed as one service area. FKAA's water treatment plant has an existing design capacity of 22.0 million gallons per day (mgd) average annual daily flow.

There is significant capacity to meet the existing levels of service demanded by the Florida Keys, see **Table F.III.5, Potable Water System Demand and Excess Capacity, 1997**. The Florida Keys' Consumptive Use Permit allows an average daily withdrawal of up to 15.83 mgd and a maximum daily withdrawal of up to 19.12 mgd of potable water, for the total service through the year 2005. Average and maximum withdrawal for fiscal year 1997 were 14.7 mgd and 18.36, respectively, leaving an estimated average excess capacity of 1.17 mgd and a maximum excess capacity of 0.76 mgd. Potable water provided to the Navy is independent from that supplied to the City of Key West. Of this use, the Navy has a average demand of approximately 1.2 - 1.3 mgd; they are allocated approximately 2.0 mgd of potable water through an agreement with FCAA.

<b>TABLE F.III.5</b>						
<b>POTABLE WATER SYSTEM DEMAND AND EXCESS CAPACITY 1997</b>						
User	Averages (mgd)			Maximums (mgd)		
	Annual Daily Flow	Permitted Capacity	Excess Capacity	Average Daily Flow	Permitted Capacity	Excess Capacity
Florida Keys	14.7	15.83	1.17	18.36	19.12	0.76
Navy Reserved Capacity (within total)	(1.2)	(2.0)	(.08)	(1.3)	(2.0)	(0.7)
<b>Totals</b>	14.7	15.83	1.17	18.36	19.12	0.76
Sources: Florida Keys Aqueduct Authority Comprehensive Annual Financial Report, February 1998 Conversation with Jolynn Cates, FCAA, September 9, 1998						

**Port Demand**

Demand for potable water is negligible at the Port of Key West. Cruise ships are the sole consumers of potable water, available and supplied via hose connection at Mallory Dock only. For 1997, potable water demand is conservatively estimated to have been below 0.01 mgd.

**Wastewater Facilities**

**Facilities**

Port facilities are located within the service area of the Key West Wastewater Treatment Plant. The plant, located on Fleming Key, is a secondary treatment facility which uses a complete mix extended aeration activated sludge process. Treated wastewater is discharged through an ocean outfall. The treatment facility is operated by Operations Management International, Inc. (OMI). The City of Key West has operational and maintenance responsibility for the treatment plant.

The Key West Wastewater Treatment Plant has a design capacity of 10.0 million gallons per day (mgd) average annual daily flow; they are permitted a capacity of 7.2 mgd average annual daily flow. According to the Utilities Department at the City of Key West, the average annual daily flow is approximately 7.83 mgd. The city has applied for a permit to increase the permitted capacity to 10.0 mgd average annual daily flow; according to FDEP correspondence to the city dated September 22, 1998, the application is complete and a draft permit is undergoing internal review. The Utilities Department expects the permit will be issued for 10.0 mgd.

*Port Demand*

Port operations do not place demands on the present Key West wastewater system. Wastewater lines are not present at Mallory Dock and Pier B. Lines are located at North Mole Pier, but are not available for use by non-U.S. Navy operators.

**Stormwater/Drainage Facilities**

Port facilities are located within the service area of the stormwater drainage system for the City of Key West. The city is experiencing some difficulties with the drainage system; in some areas on the island, following a storm, drainage of water takes up to three days to occur. The city is in the process of implementing an improvement systems program for stormwater drainage through the installation of three chamber collection basins to provide retention and treatment prior to disposal in the injection wells.

*Port Demand*

Stormwater and drainage facilities were recently added to Mallory Square when modified in 1995. North Mole Pier also has stormwater and drainage facilities integrated within the pier structure. Stormwater and drainage facilities are not integrated into the Mallory Dock and Pier B marine structures.

**Solid Waste Facilities**

*Facilities*

Port facilities are located within the service area of the City of Key West Solid Waste System. The mandatory collection of solid waste from all residences and commercial business within the city limits is done by franchise hauler, Browning Ferris Industries (BFI); this waste is disposed at the city's "Waste-to-Energy" facility located on Stock Island. This facility is owned and operated by the City of Key West.

The Waste-to-Energy disposal facility contains two mass-burn incinerators with rated capacities of 75 tons per day (TPD) each, for a total rated design capacity of 150 tons per day (TPD). The City of Key West presently has excess solid waste disposal capacity; the facility handles 129.82 average

tons per day.<sup>20</sup> The maximum capacity of the facility is 150 TPD. The city is expected to increase the solid waste system capacity over the next few years.

#### *Port Demand*

Port operations generate only negligible amounts of solid waste. Port solid waste generally includes discarded boxes and litter from garbage receptacles located at port facilities. The port does allow for the offloading of cruise ship solid waste at port facilities.

#### *Energy*

##### *Facilities*

City Electric System (CES) provides electrical service from the south end of the Seven Mile Bride (Central Keys) to Key West. Average daily power consumption within this service area is 120 mega watts. Power distribution to non-federal properties in Key West constitutes approximately 85 percent of this daily consumption rate. In recent years, CES power distribution has increased by an average annual rate of 3 percent.

##### *Port Demand*

Power distribution cabling is integrated into each of the Port's facilities. Port consumption of power, however, is thought to be nominal.

#### *Communications*

##### *Facilities*

Bell South provides the City of Key West with communications services.

##### *Port Demand*

Communications facilities are not available at Mallory Dock and Pier B. North Mole Pier has communication cabling located within the pier structure; these facilities, however, are not utilized in port operations.

#### ***Ecological and Environmental Conditions***

Natural resources generally relevant to port owned and/or administered facilities are shown in Figure III.F.6. The following text and accompanying graphic illustrate site specific natural resources for these facilities as well as the area proposed for federal port conveyance. Key West's deepwater port facilities, consist of hardened shorelines and marine structures with direct access to the Gulf of Mexico; there are no existing or planned potable water wells or wellhead protection areas found within the sites; nor are there rivers, lakes, bays, wetlands, floodplains, or true estuaries, and commercially viable minerals do not exist. Further, all port facilities are located on areas described by the Monroe County Soils Survey as Udorthents, Urban Land Complex.

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<sup>20</sup>Based on figures from October 1997 through September 1998 provided by the City of Key West on November 5, 1998.

### **Natural Resources Inventory [Rule 9J-5.012 (2) (b), F.A.C.]**

#### *Marine Communities*

Marine communities proximate to all port facilities include coral-colonized structures and barren silty bottom, see **Figure III.F.6, Natural Conditions**. Seagrass beds are located adjacent to the seaward portion of South Outer Mole. Each is described below:

- **Coral-Colonized Structures.** The seawalls, piles, and adjacent concrete and steel debris of port marine structures support a wide variety of soft and hard corals, truncates, sponges, and other reef-building organisms. These organisms provide habitat for a large number of fish and marine invertebrates.
- **Barren Silty Bottom.** The seafloor adjacent to pier structures and within Truman Harbor consists of a thick layer of silt. Except for occasional burrowing marine animals, these areas provide little or no habitat for plants or animals.
- **Seagrasses.** Seagrasses are found in shallow sandy areas adjacent to the seaward edge of South Mole Pier. Dense beds of turtle grass (*Thalassia testudinum*) and manatee grass (*Syringodium filiforme*) are located adjacent to the southern base of South Mole Pier. Scattered patches of shoal grass (*Halodule wrightii*) mixed with turtle grass, *Acetabularia* spp. and other green algae are found further to the north adjacent to the central seaward portion of South Mole Pier. These seagrass beds provide habitat for a large number of juvenile reef fishes and invertebrates.

### **Natural Upland and Shoreline Communities**

No natural upland or shoreline communities are found at port facilities or the area proposed for federal port conveyance. Port upland areas are environmentally barren: paved surfaces, small structures, and hardened shorelines dominate the landscape. In addition, all wildlife habitats are associated with marine communities.

### **Listed Species**

Waterways adjacent to port marine structures provide occasional navigation habitat for the West Indian manatee. No terrestrial listed species have been observed at port facilities or within the area proposed for federal port conveyance. Truman Beach located south of the conveyance area has been documented as a nesting area for the federally threatened loggerhead sea turtle (*Caretta caretta*; U.S. Navy et al., 1996). Other listed species occurring near the conveyance area include least turns (*Sterna antillarum*) and osprey (*Pandion haliaetus*) (U.S. Navy et al., 1996).

### **Other Areas of Special Concern**

The Port of Key West lies within the Florida Keys National Marine Sanctuary, an approximately 2,800 km<sup>2</sup> area of coastal and oceanic waters and submerged lands surrounding the Florida Key and the Dry Tortugas, as designated by the Florida Keys National Marine Sanctuary Act of 1990. In addition to delineating the boundaries of the marine sanctuary, the Act does the following:

- Requires the National Oceanic and Atmospheric Administration (NOAA) to develop a comprehensive management plan with implementing regulations;
- Prohibits oil drilling and exploration within the Sanctuary;
- Prohibits operation of tank ships or ships greater than 50 meters in the "Area to be Avoided"; and,
- Requires the development and implementation of a water quality protection program.

### **Estuarine Conditions [Rule 9J-5.012 (2) (d), F.A.C.]**

No natural upland or shoreline communities are found at port facilities or the area proposed for federal port conveyance. However, water quality is a critical issue in Key West, and the condition of the resource has important implications for the overall health of the marine environment. There is little detailed information on the water quality within, or adjacent to, port facilities. Generally, poor water quality in Key West can be attributed to poor flushing, loss of tidal habitat and discharge of untreated or poorly treated wastewater or storm water.

### **Management of Dredged Materials [Rule 9J-5.012 (5) (b), F.A.C.]**

The future generation of spoil material at the Port of Key West may occur as part of regular maintenance of existing federal navigational channels. This work appears to be the responsibility of the federal government. The city's first priority, should the need for dredging be verified and permitted, is to ensure that beach compatible material are used to nourish city recreational areas. Any remaining material will likely be disposed in upland areas in accordance with local, state, and federal regulations.

### **Beach and Dune Systems [Rule 9J-5.012 (2) (f), F.A.C.]**

No natural upland or shoreline communities are found at port facilities or the area proposed for federal port conveyance.

A small beach with no dune systems is located in the Truman Waterfront Parcel, adjacent to Fort Zachary Taylor. This area is proposed for conveyance to Fort Zachary Taylor State Park for administration. This beach is not expected to be affected by port activities.

The seaward portion of South Outer Mole closest to the beach area identified above has a groin, or support system, which extends perpendicular to the bulkhead. The purpose of this system is unclear: large and small sediments were either deposited or captured by this system, and are now sparsely covered by algae. There does not appear to be a negative coastal processes connection between the beach and the bulkhead areas to the north.

### **Natural Disaster Planning [Rule 9J-5.012 (2) (e), F.A.C.]**

#### ***Hurricane Evacuation Planning***

Mallory Dock, Pier B, North Mole Pier, and a portion of the area proposed for federal port conveyance lie within a Coastal High Hazard Area, as identified in the Coastal Management Element of the City of Key West's Comprehensive Plan. Accordingly, the City of Key West has designated these areas as Class 1 Hurricane Evacuation Zone. The Port of Key West coordinates all hurricane evacuation procedures with the City of Key West and Monroe County. No residential areas are located within port areas; once port facilities are secured, employees are required to evacuate port areas, following routes and times established by the city and county. Cruise ships are not to be in port during a hurricane. No high hazard structures requiring special attention and securing are found at the Port of Key West.

#### ***Post Disaster Redevelopment***

The port plays an important role in Key West's economy. As such, in the aftermath of a disaster, it is anticipated any damaged port facilities would need to be rebuilt according to applicable codes and provisions.

### **Hazardous Material Handling and Cleanup [Rule 9J-5.012 (5) (b), F.A.C.]**

The Port of Key West is a passenger port, and as such, does not handle hazardous materials, bulk petroleum, or provide fuel bunkering services.

In the case of a fuel spill by vessels operating in the port, the Port of Key West will notify and coordinate with the U.S. Coast Guard to ensure the necessary actions and equipment needed to contain and cleanup the spill.

### ***Ongoing Efforts***

This section summarizes the major ongoing planning efforts and proposed projects that will shape the Port of Key West over the near term, the most significant being the proposed federal port conveyance of a portion of the Truman Waterfront property (see Section 2.A).

### ***Truman Waterfront Port Conveyance***

#### ***Key West Military Base Reuse Plan***

In 1995, the Federal Base Realignment Closure Commission (BRAC) designated the realignment of the Naval Air Station (NAS) in Key West. This designation will implement the overall Federal Base Reuse Process, and coordinate the closure of a military base for conversion to civilian use. As a result, certain land and facilities at NAS were declared surplus by the Department of the Navy. The Truman Waterfront was one of six Navy surplus properties. This site contains ~~44.9~~ 50.41 acres of land which includes two general areas known as Mole Pier--of which North Mole Pier is a part--and a 37.3 harbor and upland area.

The **Base Reuse Plan**, a federally approved document established by the City of Key West, was a significant part of the Base Reuse Process. The purpose of the Plan was to provide long-term, sustained, economic growth in Key West through the adaptive reuse of surplus military land and facilities through public participation. The Base Reuse planning process, including an exhaustive public participation program, determined appropriate and feasible redevelopment uses which reflected the community's vision for base reuse. The main objectives of the **Base Reuse Plan** were to help diversify the economy, encourage balanced growth, provide employment opportunities, strengthen local tax base and assist in the expansion of existing businesses and industries.

For the Truman Waterfront parcel, it was concluded in the **Base Reuse Plan** to seek conveyance of a portion of this property as a no-cost conveyance of federal surplus real property suitable for use as a port facility. The purpose of this conveyance is to provide a no-cost means for local entities to acquire surplus federal property to assist in the creation of employment and to revitalize communities negatively impacted by base closures. The port facility conveyance remains in perpetuity, as long as the property is used in the development and operation of a port facility for the use and benefit of the public at all times, in safe and serviceable condition.

The area sought for federal port conveyance is shown, **see Figure III.F.2, Location of Port Owned & Administered Lands (Detail)**. This area includes ±18 acres of land, and includes the following facilities:

- Mole Pier, including two small buildings (1,679 S.F.) and utility infrastructure;
- Pier 8 and the adjacent Navy surplus building no. 149;
- Marine structures found within Truman Harbor, including the east, south, and west quay walls and the PHM haul-out ramp; and,
- Roadway and utility infrastructure located through the center of the Truman Waterfront.

### ***Existing Scheduled Capital Improvements***

Proposed capital improvements include those scheduled for existing port facilities--Mallory Dock, Pier B, and North Mole Pier--and projects anticipated for the area proposed for federal port conveyance. Proposed improvements to existing port facilities include: roadway and street improvements to Grinnell, Caroline, and Palm Avenues; expansion of berthing capabilities at Pier B to accommodate larger cruise ships; and expansion and rehabilitation of berthing facilities at Mallory Dock to accommodate larger cruise ships. The port has submitted a funding application for these projects to the Florida Seaport Transportation and Economic Development (FSTED). The matching requirement required for this funding is anticipated to be provided by City of Key West and/or Monroe County.

Anticipated port conveyance improvements planned for marine and landside facilities include: possible improvement of berthing capabilities of North Mole Pier; upgrade of Pier 8 and development of a passenger terminal for use in ferry operations (Truman Annex Phase II); and replacement of failing sheet piles in Truman Harbor along the south quay wall. These projects were also included in the Port's FSTED application.

Additional planned capital improvements for the port conveyance area that have not been scheduled or considered for funding include: creation of a public 'harborwalk' along the perimeter of Truman Harbor; development of two marinas; renovation of the PHM haul-out ramp; renovation of several smaller buildings included as part of the conveyance; port entrance, roadway, and security improvements.

### ***Future Demand for Port of Key West***

Cruise operations are the principal water dependent uses at the Port of Key West. Over the past decade, these operations increased significantly. Between fiscal years 1991/92 and ~~1996/97~~ 1996/97, cruise passenger throughput grew at an average annual growth of ~~32.2~~ 26.2 percent, **see Table III.F.2, Location of Port Owned & Administered Lands (Detail)**. Passenger growth is forecast to continue in fiscal year 1998/99; present cruise ship bookings for the year place estimated passenger arrivals at ~~approximately 656,700~~ over 600,000 passengers. Cruise

ships arrivals have also been increasing, albeit at a slower rate of growth. This has occurred, in part, because larger passenger ships are calling on the Port of Key West and contributing greater passenger throughput levels with fewer ship calls.

Cruise ships calling at the Port of Key West typically originate from the homeports of Miami and Fort Lauderdale, **see Table III.F.7, Scheduled Cruise Ship Arrivals, TY 1998/99, Port of Key West**. These ports are the primary ports-of-embarkation for eastern and western Caribbean itineraries. Itinerary lengths generally range in duration from 3-, 4-, 7-, and 10-days.

Cruise itineraries originating from these facilities often include Key West as a port-of-call. Factors contributing to Key West's inclusion include: proximity to major homeports, namely Miami and Port Everglades; broad appeal of Key West as a travel and leisure destination; competitiveness of Key West's cruise tariff rates in the region; and, availability of multiple cruise ship berths, including one which can accommodate mega-cruise vessels.

The cruise market as a whole is expected to grow due to overall industry growth and expansion plans, expected operations levels in the Caribbean, and, continued expansion of cruise operations at Miami and Port Everglades.

Further, other factors, such as the opening of Cuba; changes in the Passenger Services Act; and, continued competitiveness of Key West tariffs against competing ports-of-call, could impact specific calls at Key West.

However, the city's own decisions to limit and guide cruise ship growth is perhaps the most decisive factor affecting future growth. The market is there. It is essentially how the city chooses to use it in its overall decisions about the economy and quality of life.

TABLE 7. SCHEDULED CRUISE SHIP ARRIVALS, FY 1998/99, PORT OF KEY WEST

Name	Operator	LOA (Feet)	Pax Capacity*	Draft (feet)	Homeport	Itinerary Duration	Key West Traffic, FY 1998/99	
							Scheduled Calls	Estimated Total Passenger Volumes
Astor	Transocean	579.1	590	19.0	Unknown	Unknown	1	590
Asuka	NYK Cruises	632.5	584	20.3	Unknown	Unknown	1	584
Celebration	Carnival	732.5	1,486	24.9	Miami	7	1	1,486
Century	Celebrity	848.2	1,784	25.0	Pt. Everglades	7	15	28,760
Columbus	Hapag Lloyd Cruises	472.4	420	16.7	Unknown	Unknown	2	840
Costa Romantica	Costa	723.8	1,356	24.0	Pt. Everglades	7	11	14,916
Costa Victoria	Costa	829.8	1,928	25.5	Pt. Everglades	7	12	23,136
Delphin	Delphin Seer	512.3	474	Unknown	Unknown	Unknown	2	948
Deutschland	Peter Oeilmann Cruises	574.2	636	19.0	Unknown	Unknown	1	636
Dolphin IV	Canaveral Cruises	501.0	585	25.0	Pt. Everglades	3/4	25	15,210
Ecstasy	Carnival	859.5	2,040	25.5	Miami	4	53	108,120
Enchantment of the Seas	Royal Caribbean	915.7	1,954	25.0	Miami	7	27	52,758
Hanseatic	Hapag-Lloyd	405.0	188	16.0	Unknown	Unknown	1	188
Imagination	Carnival	855.0	2,040	25.4	Miami	4	8	15,320
Jubilee	Carnival	732.5	1,486	24.5	Miami	10/11	4	5,944
Leeward	Norwegian Cruise Line	521.3	950	18.4	Miami	3	78	74,100
Maxim Gorki	Phoenix Reisen	643.0	625	29.0	Unknown	Unknown	1	625
Melody	Med. Shipping Cruises	671.5	1,098	25.5	Unknown	Unknown	5	5,490
Mercury	Celebrity	865.5	1,870	25.3	Pt. Everglades	7	28	52,360
Noordam	Holland America Line	704.4	1,214	24.3	Pt. Everglades	18	1	1,214
Norwegian Crown	Norwegian Cruise Line	615.3	1,052	22.3	Miami	Unknown	1	1,052
Regal Empress	Regal Cruises Inc.	610.5	893	28.2	Pt. Everglades	8	11	9,823
Royal Viking Sun	Cunard	669.3	740	23.3	Pt. Everglades	Unknown	1	740
Ryndam	Holland America Line	715.2	1,266	24.5	Pt. Everglades	7	2	2,532
Seabourn Legend	Seabourn Cruise Line	438.0	212	17.1	Pt. Everglades	Unknown	1	212
Seabourn Pride	Seabourn Cruise Line	439.0	212	16.4	Pt. Everglades	16	5	1,060
Seabreeze	Premier Cruises	607.0	844	28.2	Pt. Everglades	7	50	42,200
Silver Cloud	Silversea Cruises	511.2	298	17.4	Pt. Everglades	Unknown	1	298
Sovereign of the Seas	Royal Caribbean	874.0	2,282	25.0	Miami	4	53	120,948
Splendour of the Seas	Royal Caribbean	867.0	1,804	24.5	Miami	10/11	7	12,828
Topaz	Thomson	640.1	978	28.9	Unknown	Unknown	30	29,340
Tropicale	Carnival	669.3	1,016	23.0	Miami	4	28	28,448
Veendam	Holland America Line	715.2	1,284	24.5	Pt. Everglades	Unknown	3	3,792
Victoria	P&O Cruises	660.1	728	28.2	Unknown	Unknown	1	728
Vistafjord	Cunard	827.0	695	28.9	Pt. Everglades	Unknown	1	695
<b>TOTALS</b>							<b>473</b>	<b>555,715</b>
<b>AVERAGES</b>		<b>664.0</b>	<b>1,073.9</b>	<b>22.8</b>				

\*Lower berth capacity, according to Lloyds of London cruise ship specifications.

Source: Lloyd's Cruise International Cruise Directory, 1998/99, Port of Key West; &amp; Bermello, Ajamil and Partners

### **High-Speed Passenger Ferry Operations**

A ~~300~~ 279-passenger, high-speed ferry will begin service between Key West and Fort Myers in early 1999. Twice-daily ferry service will be provided by Buquebus, which operates similar high-speed ferries in South America, Spain, and Scandinavia. A privately owned and administered berth and passenger terminal found at the Key West Bight will serve as the Key West staging area for this operation; a terminal along the Caloosahatchee River provides the Fort Myers embarkation point. Other operators are presently considering entering the market to provide service between Key West and Miami and/or Fort Lauderdale.

Key West's high demand as a travel and leisure destination, combined with the time and cost required to reach this destination by land or air makes high-speed passenger ferry operations a desirable option for travel to Key West. Service by high-speed ferries are increasing worldwide due to reduced costs associated with providing these services, improvements in ferry technology, and increasing availability of these crafts.

Success by Buquebus in their Fort Myers/Key West service will likely encourage this operator to expand service from other Florida cities to the Keys, as well as encourage other private enterprises to enter the market. Florida cities that are likely candidates to be linked to Key West include Miami, Fort Lauderdale, West Palm Beach, and Tampa. Over the long term, the potential exists to extend service to several Caribbean designations, including Cuba.

The possibility also exists for the establishment of interlocal agreements between high-speed ferry operators and the port, to allow for use of these crafts during a Hurricane evacuation period.

### **Plan for Port Maintenance and Expansion Through 2010**

This section presents the Port of Key West's recommended expansion and maintenance plan for the period 1999 through 2010.

#### **General Approach to Port Expansion and Maintenance**

Concerns regarding the impacts of cruise ships on the city have prompted recent commission decisions to limit cruise ships berthing on the Truman Waterfront site to the one existing berth. As an overall policy, the city is integrating more public involvement into the decision making process. The Port's general strategy for maintenance and expansion over the next ten years includes the following:

- Integration and activation of the area proposed for federal port conveyance—the Truman Waterfront—into the Port of Key West.
- Modification of Mallory Dock to continue service as a small and medium cruise ship destination.
- Investigation of ways Pier B can be modified to allow its continued use as a cruise berth without negatively impacting operations within Truman Harbor.

- Implementation of a public participation process regarding the expansion of port facilities.

All expansion will be reviewed through an extensive public process, with final approval or denial granted by the City Commission.

### ***Specific Facility Enhancements***

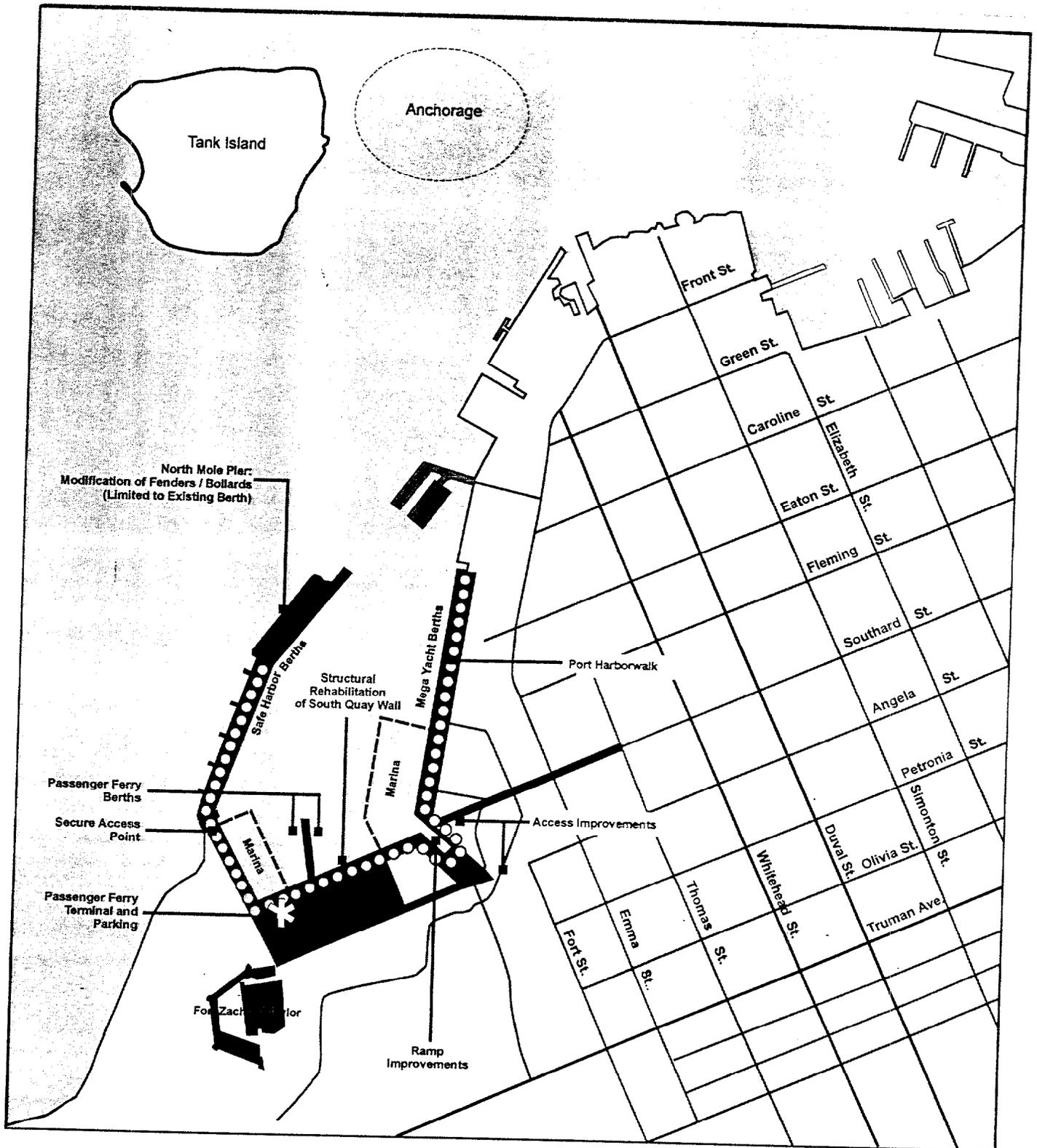
Due to the restriction of Chapter 288 to areas physically within the Base Reuse boundaries, only improvements and policy changes relative to the Truman Waterfront can be adopted in the 288 Plan. All improvements and policy changes are discussed, however, in order to provide a complete picture of port needs. Remaining improvements will be addressed in the future adoption of an overall Port Master Development Comprehensive Plan. Guiding the implementation of these improvements will be the public participation outlined in Section V of the 288 Plan, which seeks to build consensus in the Key West community regarding the timing, impacts, and extent of the port related improvements that have emerged as needs in the 288 planning process.

### **North Mole Pier and the Greater Truman Waterfront Area**

Projects envisioned for the North Mole Pier and the greater Truman Waterfront area include the following, see **Figure III.F.7, Long Range Plan for Expansion and Maintenance, 2010**:

- **Modification of North Mole Pier Fenders and Bollards.** The configuration of fenders and bollards at North Mole Pier may be modified to allow for larger, 900'-plus vessels--such as Carnival's Destiny--to be berthed at this location.
- **Passenger Ferry Pier and Terminal.** Passenger ferry operations may be programmed for Pier 8 found in the southern portion of Truman Harbor. Pier 8 could be enhanced and redesigned to allow for the simultaneous berthing of two passenger ferries. Ferry ticketing, luggage, and support requirements may be provided through modification and reuse of surplus Navy building No. 149. A small parking lot, as well as bus and taxi drop-off areas may be provided.
- **Structural Rehabilitation of Southern Quay Wall.** Stabilization and rehabilitation of the southern quay wall may occur to repair structural deficiencies.
- **Truman Waterfront Harborwalk.** Designed for use by pedestrians, cyclists, in-line skaters, and other recreation enthusiasts, the Truman Waterfront Harborwalk would connect cruise operations on North and South Mole Pier, Fort Zachary Taylor, passenger ferry operations, the federal interagency visitor center, marina uses, and recreation and open space areas.

- **Secure Access to North and South Mole.** To meet U.S. Customs and U.S. Coast Guard safety regulations, a secure access point to North Mole Pier should be provided. Public access to North Mole Pier will occur unimpeded when a cruise vessel is not berthed in this locations.
- **Marina Development.** Two marinas are scheduled for the portions of Truman Harbor. A professional marina facility is envisioned for the southern portion of the basin adjacent to the eastern side of Truman Harbor. A possible mega-yacht berthing area may be designed for the eastern quay wall area.
- **Roadway Access Enhancements.** Roadways Access leading into port facilities located along the Truman Waterfront may be enhanced. ~~These include roadways Southard and Angela Streets.~~
- **Rehabilitation of the Haul-Out Ramp.** The haul-out ramp located in the southeastern corner of Truman Harbor may be enhanced and integrated into the Harborwalk project.
- **Truman Waterfront Intermodal Center.** The development of an intermodal transportation center, which would serve as a focus for serving passengers to other parts of the city, is proposed at the juncture of Mole Pier and the mainland. The facility would link waterborne transportation with land-based transportation, and would also link pedestrian/bicycle facilities (such as the harbor walk and surrounding parklands) to other forms of transit.



**Legend**

-  Proposed Port Owned
-  Port Administered
-  Harbor Walk

Figure III.F.7  
Long Range Plan for Possible Expansion and Maintenance, 2010

**PORT OF KEY WEST MASTER PLAN**

NOTE: Port expansion activities are subject to a review and approval process  
 F:\Landplan\Denny\KeyWest\Figure III.F.7.REV



### **Mallory Dock**

While significant lengthening and modification of this facility is not possible to accommodate large cruise ships, renovation and modification of this facility will allow it to continue in its present role as a safe berthing location for small and medium cruise ships. Over the next three-to-four years, the port shall renovate and strengthen the existing tee head dock and breasting dolphins. The port will also continue to investigate and implement marine structure enhancements which will allow Mallory Dock to accommodate medium sized cruise ships of up to 600' in length.

### **Pier B**

Pier B expansion analysis is provided under Proposed Port and Related Facilities Analysis (Port Master Plan) of the City of Key West Comprehensive Plan: Data Inventory and Analysis (1994).

## ***Probable Impacts of Port Expansion and Maintenance***

This section of the master plan assesses potential impacts of port activities on land use, natural systems, and port infrastructure.

### **Land Use**

Projects identified for North Mole Pier and the greater Truman Waterfront are not expected to negatively impact adjacent land uses. Uses proposed as part of this plan are in accord with the **Key West Base Reuse Plan**. Port uses are an essential element of this plan; significant consideration was taken by planners and the Key West Community to integrate port operations into the overall plan for the Truman Waterfront. Points-of-interest found within or proximate to the Truman Waterfront--Fort Zachary Taylor, the NOAA Environmental Education Center, marinas and open space/recreation areas, and the Bahama Village--are linked to port facilities via the Harborwalk and other design features to create an urban land use pattern promoting public access, continuity, and multi-use. As such, the port facility will provide the cornerstone for redevelopment of the entire reuse site.

Modifications to Mallory Dock are not anticipated to impact land uses surrounding these facilities.

### **Historic Resources**

As there are no historic resources within the Port of Key West or port conveyance areas, the proposed master plan will not impact historic resources.

### **Public Access**

Public access of Key West's waterfront will be greatly enhanced through implementation of projects proposed for the Truman Waterfront. The proposed Port Harborwalk will connect the entirety of uses programmed along Truman Harbor and encourage pedestrians, cyclists, in-line skaters, and other recreation enthusiasts to participate in the enjoyment of Key West's waterfront.

Projects contemplated for Mallory Dock are not anticipated to reduce the level of public access presently enjoyed by residents and visitors to Key West.

#### **Transportation**

Additional impacts to the transportation system are anticipated to arise from projects programmed for North Mole Pier and the greater Truman Waterfront area. Increases in cruise ship and passenger ferry traffic will increase the need for public transportation to/from the principal commercial areas and points-of-interest found along Duval Street and the Key West Bight.

The port will continue to support and implement projects working to mitigate negative impacts associated with increase passenger activities found along the Truman Waterfront. These projects include the Port Harborwalk, as well as a continuation and potential expansion of Conch Train operations.

Projects contemplated for Mallory Dock are not anticipated to negatively impact vehicular traffic levels found in and around these facilities. Road projects planned for Grinnel and Caroline Streets and Palm Avenue will help improve conditions found in these areas.

#### **Potable Water**

Increases in port activity are expected to slightly increase demand for potable water. These impacts may arise for development of the ferry passenger terminal and from service extended to cruise lines.

#### **Wastewater Facilities**

No significant wastewater impacts are expected from port expansion and maintenance operations. Some increased demand will likely occur from development of the ferry terminal at the Truman Waterfront. The port will continue in its policy to refuse wastewater discharges from cruise ships operating at the port.

#### **Stormwater/Drainage Facilities**

Expansion of port facilities at Truman Waterfront will impact stormwater and drainage in the area. Implementation of port facility improvement projects will allow for existing systems in the area to be modified and expanded as needed. Provision of these facilities will allow for the improvement of water quality in Truman Harbor and the waters surrounding North and South Mole Piers.

#### **Solid Waste**

Solid waste impacts associated with expanded port operations are thought to be nominal. The port will continue in its policy to not accept solid waste from cruise ships operating from the port.

### Energy and Communications

Additional power will be needed to accommodate the recommended capital improvement projects for the Truman Waterfront presented in this plan. Increased power demands can be accommodated within existing systems capacity.

Communications facilities needed as part of the Truman Waterfront will also need expansion; these facilities will likely be extended by Bell South.

### Natural Systems

The proposed expansion and maintenance of the port is not expected to have any net negative impact on natural resources. This finding is based on the overall low level and quality of natural resources at port facilities and the extensive local, state and federal regulations which govern the impact of development on natural systems.

- **North Mole Pier and the Greater Truman Waterfront Area.** The Truman Waterfront Parcel was created entirely out of material deposited on tidal wetlands for the purposes of supporting military activities, most recently a submarine basin. As a result, most of the site is environmentally barren: paved surfaces, structures, and hardened shorelines dominate the landscape. Natural resources are concentrated along the shoreline, and consist of ecological communities adapted to the hardened surfaces and secondary impacts of a deep water port and military base. Therefore, in measuring the potential impact of the proposed land uses on natural resources, and an understanding of how the proposed uses will change the existing impact scenario is helpful. The following outlines identified resources and the impact of proposed uses on these resources.

*Coral Colonized Structures at Truman:* As described, coral colonies are present along the seaward portion of South and North Mole Pier and Truman Harbor (see Figure III.F.6). These colonies have adapted to the hardened shoreline and port uses, and would quickly re-establish in areas where disruptions due to bulkhead repair or replacement are planned. Impacts to coral communities are heavily regulated by the **Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers.

*Seagrass Beds:* Seagrass beds of varying densities are located along the edge of the parcel, with the most heavily vegetated areas adjacent to the proposed HPS designation scheduled for incorporation into Fort Zachery Taylor. Remaining seagrass patches are offshore of the area designated HRCC-4 to the south of the existing cruise ship berth on the north outer mole. The City Commission's decision to limit cruise ship berth expansion should

adequately protect existing resources. Impacts to seagrasses are heavily regulated by the **Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers. It is anticipated that any unavoidable resource impacts will be minimized and mitigated through the permitting process. Policies which specifically address port-related impacts are recommended for adoption with this plan.

*Water Quality:* Two potential marinas are proposed within Truman Harbor. These areas are already bulkheaded, and have been used for port and small boat berthing in the past. A floating marina is now located in one of the proposed marina areas. Construction and operation of marina facilities can have primary and secondary impacts on water quality and nearby submerged resources. Although the concept plan shows these marinas as an option which may be permitted adjacent to the proposed classification, they will be extensively studied through the regulatory process set forth by the **Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers.

- **Mallory Dock.** Expansion of these facilities is likely to have nominal impact to coral colonies found along these marine structures (see discussion above).

#### ***Potential Five Year Capital Improvements***

The capital improvement needs identified in the **Chapter 288 Military Base Reuse Plan** are summarized in the Public Facility Needs [9J-5.016(1)(a)] section of the Capital Improvements Element and in the Coastal Management Section's Port Facilities Sub-Element called Plan for Port Expansion and Maintenance Through 2010. Overall, the focus is on the Truman Waterfront site. The projects are suggested future improvements and are extremely preliminary in nature. They have been either discussed by the City of Key West during the Chapter 288 planning process or included in the FSTED grant application, but are not finalized. Further, certain port expansion related projects must undergo extensive public review and approval (as outlined in the proposed policies of this plan) prior to City Commission approval. They also need to be included in the capital improvement element of the City of Key West comprehensive plan. As a next step, the City of Key West will seek to develop preliminary project costs, begin finalizing project scopes, and start fulfilling the procedural requirements for incorporating them into the appropriate documents.

The port receives revenues from fees charged to its users. The largest component of those fees are passenger wharfage and ship dockage charges. Revenues grow and fluctuate relative to port activity as well as tariff changes. It is anticipated that the city will bond certain improvements.

### CAPITAL IMPROVEMENT PROGRAM

Phase	Fiscal Year	Item/Description	Total Budget	By Funding Source		
				Federal	State	Other
I	00-01	Infrastructure Pre Design and Engineering (including stormwater drainage plan)	\$350,000			\$350,000
I	00-01	Secure Property:				
I	00-01	Outermole Entry Feature	\$75,000			\$75,000
I	00-01	Harbor-rescue hidden ladder	\$75,000			\$75,000
I	00-01	Boat Ramp: Secure and Landscape	\$50,000			\$50,000
I	00-01	Landscape, irrigate, etc.	\$200,000			\$200,000
I	00-01	Intermodal Feasibility	\$100,000			\$100,000
I	00-01	Transit Plan for Marina/Cruiseships, Shuttle Service	\$75,000			\$75,000
I	00-01	Federal Harbor Coordination with ACOE, Turbidity Issues	\$50,000			\$50,000
I	01-02	Phase I: Harbor Walk	\$1,000,000			\$1,000,000
I	01-02	Passenger Shelter on Outer Mole	\$150,000		\$75,000	\$75,000
I	01-02	Facility improvements outer mole inner basin including bollards, cleats, fenders, infrastructure	\$200,000		\$100,000	\$100,000
I	01-02	Ferry Service Facility- Immediate Use Development Access conditions, dock, pier, infrastructure, renovate existin	\$670,000			\$670,000
I	01-02	North Mole Bollards and Fenders	\$2,200,000		\$1,100,000	\$1,100,000
I	01-02	Renovate Port Offices	\$75,000			\$75,000
II	02-03	Ferry Service Facility – Long Term Development of Terminal Building: Design and Construction	\$2,000,000	\$2,000,000		
II	02-03	Repair Quay Wall	\$5,300,000	\$2,120,000	\$1,590,000	\$1,590,000
II	02-03	Phase II: Harbor Walk	\$1,000,000			\$1,000,000
III	03-04	Main Entrance at Angela and Petronia Street	\$300,000			\$300,000
III	03-04	Marina (Feasibility Study Only)	\$50,000			\$50,000
III	03-04	Phase III: Harbor Walk	\$1,000,000			\$1,000,000
III	04-05	New Port Offices (Design & Build)	\$450,000			\$450,000
I,II, & III	00-05	Underground Infrastructure at \$400,000 per year	\$2,000,000			\$2,000,000
<b>Total</b>			<b>\$17,370,000</b>	<b>\$4,120,000</b>	<b>\$2,865,000</b>	<b>\$10,385,000</b>

Source: City of Key West and the Port of Key West, 1999

## G. Conservation Element

### Inventory of Natural Resources [9J-5.013(1)(a)]

The three base reuse sites have all been significantly altered from their natural state. In fact, there is strong evidence to suggest the Truman Waterfront and Poinciana Housing parcels consist almost entirely of filled wetland areas. Today natural communities are limited on upland areas, with most wetland and submerged resources having adapted to urban impacts. Resources are described as they relate to each parcel, below.

#### *Rivers, Bays, Lakes, Wetlands*

There are no rivers or lakes within the base reuse sites.

The Poinciana Housing Site contains a brackish water lake that has largely been vegetated by red and black mangroves and exotic species. The remainder of the site is residential development, with sodded lawns and scattered ornamental trees. Natural features at the Poinciana Housing Site are shown in **Figure III.B.5**.

Red mangrove (*Rhizophora mangle*) and black mangrove (*Avicennia germinans*) trees dominate much of the lake area in the Poinciana Housing Site; however, invasive exotic species such as Brazilian pepper (*Schinus terebinthifolius*) and Australian pine (*Casuarina* spp.) are also becoming established. Both the lake and the mangrove areas contain debris and show other evidence of human disturbance.

The lake provides habitat for marine fish and invertebrates, as well as foraging habitat for wading birds.

The Truman Waterfront Site contains marine communities including seagrasses, coral-colonized structures, and barren silty bottom. Natural features and the location of listed species nests at the Truman Waterfront Site are shown in **Figure III.B.6**. Each resource is described below.

*Seagrass Beds:* Seagrasses at the Truman Waterfront Site occur in shallow sandy areas immediately adjacent to the seaward edge of Mole Pier. Dense beds of turtle grass (*Thalassia testudinum*) and manatee grass (*Syringodium filiforme*) are located adjacent to the base of Mole Pier. Scattered patches of shoal grass (*Halodule wrightii*) mixed with turtle grass, *Acetabularia* spp. and other green algae are found further to the north adjacent to Mole Pier. Seagrass beds at the Truman Waterfront Site provide habitat for a large number of juvenile reef fishes and invertebrates.

*Coral-colonized structures:* The seawalls and adjacent concrete and steel debris of the harbor interior support a wide variety of soft and hard corals, tunicates, sponges and other reef-building organisms. These organisms provide habitat for a large number of fish and marine invertebrates. The seawall and other submerged structures on the seaward side of Mole Pier have also been extensively colonized by soft and hard corals and support abundant reef creatures, including many juvenile reef fishes.

*Barren Silty Bottom:* The majority of the harbor bottom at the Truman Waterfront Site consists of a thick layer of silt. Except for occasional burrowing marine animals, this area provides little or no habitat for plants or animals.

### **Groundwater**

In Key West, the surface water and ground water are directly connected by a highly pervious limestone aquifer. Therefore, groundwater resources exist below all three sites, and are connected to surface water flows wherever pervious areas exist. Groundwater does not serve as a drinking water source in Key West, and no known groundwater quality problems exist within the three sites. Past uses of the Poinciana Housing Parcel and Peary Court Cemetery were not industrial in nature. However, uses on the Truman Waterfront site did include transportation of fuel and other materials, and the Navy is conducting an environmental assessment to determine if any site specific contamination exists on the site.

### **Air**

Air quality within the City of Key West is considered good and sources of air pollution are primarily mobile (automobile emissions). None of the base reuse sites is known to contain point sources of air pollution or to experience air quality degradation due to point or nonpoint sources located off the reuse sites.

### **Floodplains**

The majority of the City of Key West lies within the 100 year floodplain. However, portions of the Truman Waterfront Parcel appear to have been filled above the floodplain level.

### **Minerals**

No commercially viable minerals are located in the base reuse sites.

### **Soil Erosion Areas**

No soil erosion areas are located in the base reuse sites.

### **Recreationally or Commercially Important Habitat**

No recreationally or commercially important habitat is located in the base reuse sites. However, the Truman Waterfront Parcel is connected directly with aquatic areas with recognized recreation and commercial value.

### **Wildlife**

Waterways adjacent to the Truman Waterfront Site provide occasional navigation habitat for the West Indian manatee. Truman Beach has been documented as a nesting area for the federally threatened loggerhead sea turtle (*Caretta caretta*; U.S. Navy et al., 1996). Other listed species occurring on or near the Truman Waterfront Site include least terns (*Sterna antillarum*) and osprey (*Pandion haliaetus*) (U.S. Navy et al., 1996). No listed species were observed on the

Poinciana Housing Site. However, the lake and mangrove forest could provide roosting and foraging habitat for protected wading bird species.

**Commercial, Recreational or Conservation Use of Resources [9J-5.013(1)(b)]**

Resources within the three sites are limited due to extensive prior development activities. Further, remaining resources have adapted to impacts associated with urban uses. Although both the Truman Waterfront and Poinciana Housing Parcels include significant recreation areas, these areas are not directly correlated with natural resources. The mangrove area within the Poinciana Housing Parcel is designated for conservation. Surface waters at the Truman Waterfront Parcel will be used for port and other maritime purposes.

**Known Pollution Problems [9J-5.013(1)(b)]**

There are no known pollution problems within the three sites.

**Potential for Conservation [9J-5.013(1)(b)]**

The mangrove area with the Poinciana Housing Parcel is designated for conservation. No other conversation areas appear to warrant conservation within the base reuse sites.

**Current and Projected Water Needs [9J-5.013(1)(a)]**

Potable water is provided to the City of Key West by the Florida Keys Aqueduct Authority, which owns and operates a wellfield and treatment facility in Florida City, Florida. Current water needs are discussed in detail in the Potable Water Sub-Element of the Public Facilities Element; however, information from the Aqueduct Authority indicates the facility has excess capacity to meet current needs.

Recent projected water needs for the city are not available, although it is expected that the city's Evaluation and Appraisal Report will update projections based on trends since the Comprehensive Plan was adopted. However, based on the limited capacity for growth in the Keys due to rate of growth restrictions, as well as the excess withdrawal and treatment capacity, there does not appear to be a problem with meeting future water needs for the base reuse sites or other sites within the city.

**H. Recreation and Open Space Element [9J-5.014]***Recreation and Open Space Inventory*

A total of twenty-four recreation areas are controlled by the City of Key West. The city operates these facilities in three ways: 1) the city owns the land and maintains the facilities; 2) the city owns the land but leases the operation to a non-profit organization; 3) or the city leases the property from another owner and maintains the facility. Recreation facilities differ according to purpose, function, and activity. A Recreation Space Classification System was developed to profile existing recreational space and guide the design of future recreation resources. The system is classified according to space and function. Publicly owned recreational facilities function as either activity-based facilities, passive-based facilities, or both. Activity-based facilities promote participation by providing specific resources to assist in recreational activities, such as a baseball diamond or a tennis court. Passive-based recreation facilities emphasize enjoyment of natural resources or an activity and is not based on participation. A variety of recreational facilities serve the demands for a wide range of interests and age groups. In addition to parks and recreation areas, other activities such as museums, historical sites, scuba diving, and fishing charters are available to the public.

*Design Capacity and Current Demand*

An estimate of current demand for recreational facilities is given below, see Table III.H.1, **Estimated Existing Recreational Facility Demand:**

Facility	Existing City/County Facilities	Existing School Facilities	Total Facilities	Existing Facilities Demand	Surplus (+)/ Deficiency (-)
Tennis Courts	11	4	15	5	10
Racquetball/Handball	1	5	6	4	2
Basketball Courts	5	10	15	8	7
Softball/Baseball Diamond	5	3	8	8	0
Swimming Pool	1	0	1	1	0
Golf Course	1	-	1	1	0
Football/Soccer Field	3	-	3	3	0
Bocci Courts	6	-	6	4	2
Boat Ramps	5	-	5	4	1

Source: City of Key West Comprehensive Plan, July 1993

**Level of Service**

**Table III.H.2, Level of Service Standards for Recreation Sites**, summarizes the minimum level of service the city, or private sector, or both must provide to meet the population's basic recreational facility needs.

<p style="text-align: center;"><b>TABLE III.H.2</b></p> <p style="text-align: center;"><b>LEVEL OF SERVICE STANDARDS FOR RECREATION SITES</b></p> <p style="text-align: center;"><b>CITY OF KEY WEST</b></p> <p style="text-align: center;"><b>1990</b></p>					
<b>Park Facility</b>	<b>Location</b>	<b>1,000 Population</b>	<b>Population Served</b>	<b>Desirable Park Area (Ac)</b>	<b>Facilities</b>
Neighborhood Park	Neighborhood areas, adjacent to elementary school when feasible	2.5 acres	up to 5,000	Minimum of 2.5 acres	Plan apparatus areas, recreation building, sports fields, pave multi-purpose courts, senior citizens area, picnic area, open or free play area, and landscaping
Community Park	Serves residents of a group of neighborhoods, adjacent to Jr. or Sr. High school when feasible	2.5 acres	up to 25,000	Minimum of 10 acres	All the facilities found in a neighborhood park plus facilities to service the entire family. Pools, softball/baseball fields, tennis courts, play areas, picnic area, passive and active recreation areas, multi-purpose courts, and recreation building.

Source: City of Key West Comprehensive Plan, July 1993

**Table III.H.3, Recreation Standards for Facilities**, summarizes the minimum recreation standards for facilities in the City of Key West.

<b>TABLE III.H.3</b>	
<b>RECREATION STANDARDS FOR FACILITIES</b>	
<b>CITY OF KEY WEST</b>	
<b>1993</b>	
<b>Facility</b>	<b>Standard</b>
Tennis Courts	1 Court per 7,000 pop.
Racquetball/Handball	1 Court per 10,000 pop.
Basketball Courts	1 Court per 5,000 pop.
Softball/Baseball Diamond	1 Diamond per 4,500 pop.
Swimming Pool	1 Pool per 45,000 pop. <sup>1</sup>
Golf Course	1 18-hole per 50,000 pop.
Boat Ramps	1 Ramp per 9,500 pop.
Football/Soccer Field	1 Field per 11,000 pop.
Bocci Courts	1 Court per 9,500 pop.

Source: City of Key West Comprehensive Plan, July 1993

<sup>1</sup> This level of service standard is substantially below the State's recommended minimum standard. However, the city has year-round swimming facilities available at public beaches.

## Facility Capacity Analysis

### *Existing Conditions*

According to the **City of Key West Comprehensive Plan**, most recreational facilities are in good operating condition. Those facilities in disrepair are repaired as soon as maintenance can be conducted. The city expects to perform annual inventory of its facilities to evaluate performance and safety.

### *Planning Period Increments*

The following table, **Table III.H.4, Existing and Projected Recreational Facility Demands**, projects future recreational demands and needs for the city.

The existing and projected demands illustrated in **Table III.H.4** below, demonstrates the City of Key West has no existing or projected future deficiencies in recreation facilities.

TABLE III.H.4					
EXISTING AND PROJECTED RECREATIONAL FACILITY DEMANDS					
CITY OF KEY WEST					
Year	1995			2000	
Population	38,502			39,501	
Facility	Existing Facilities	Existing Demand	Existing Surplus/ (Need)	Projected Demand	Projected Surplus/ (Need)
Tennis Courts	15	5	10	5	10
Racquetball/Handball	6	4	2	4	2
Basketball Courts	15	8	7	8	7
Softball/Baseball Diamond	8	8	0	10	0(2)
Swimming Pool	1	1	0	1	0
Golf Course	1	1	0	1	0
Football/Soccer Field	3	3	0	4	0(1)
Bocci Courts	6	4	2	4	2
Boat Ramps	5	4	1	4	1

Source: City of Key West Comprehensive Plan, July 1993

The proposed development of the reuse sites could result in the addition of 1,158 residents, assuming all units were available in the Building Permit Allocation System to develop all residential units. Further, this figure is a conservative estimate and does not reflect what has been a relatively constant occupation of units at the Poinciana Housing site since it was constructed. Nevertheless, a comparison of additional population to the Level of Service, see **Table III.H.5, Maximum Population** reveals adequate existing recreational facilities will accommodate development of the sites, see **Table III.H.6, Recreational Facility Needs**. Further, both the Truman Waterfront and Poinciana Housing sites include significant recreational resources (Truman Waterfront contains ~~19.07~~24.88 acres of proposed park land and Poinciana has one existing playground).

TABLE III.H.5	
MAXIMUM POPULATION	
1995 Population	38,502
Base Reuse Site Population	<del>4,158</del> <u>1,011</u>
TOTAL	<del>39,660</del> <u>39,513</u>

Source: Bermello, Ajamil & Partners, November 1998

TABLE III.H.6 RECREATIONAL FACILITY NEEDS CITY OF KEY WEST			
Population	39,66039,513		
Facility	Existing Facilities	Existing Demand	Surplus/ (Need)
Tennis Courts	15	6	9
Racquetball/Handball	6	4	2
Basketball Courts	15	8	7
Softball/Baseball Diamond	8	9	(1)
Swimming Pool	1	1	0
Golf Course	1	1	0
Football/Soccer Field	3	4	(1)
Bocci Courts	6	4	2
Boat Ramps	5	4	1

Source: City of Key West Comprehensive Plan, November 1993

The analysis of maximum population above shows a potential deficit. However, since the population estimated is based on a maximum development scenario — a scenario which is highly unlikely due to the restrictions as a residential development — it is not expected to occur during either the five year or ten year planning periods. Further, the Truman Waterfront will provide extensive land for recreational development, should those facilities become needed.

### General Performance of Existing Facilities

#### *Adequacy of Current Level of Service*

The level of service for recreational facilities is considered adequate.

#### Facilities Replacement, Expansion and New Facility Siting

Future growth in the resident population and in tourism is not expected to create the need for additional recreational facilities; however, there may be a demand for the enhancement of existing facilities. The City of Key West is expecting to have a growing need for ballfields and water-related opportunities.

#### Truman Waterfront:

The proposed land use of the waterfront includes a recreation and open space linked through multi-modal green ways and view corridors. A large open space and recreation park is planned for the northwestern portion of the site, in the area located between the residential community and the eastern quay wall of Truman Waterfront. This area offers dramatic views of the

waterfront; tennis, bocce, and other dedicated sports areas; community gardens; and, open areas for field sports or passive recreation. Some possible developments could include an amphitheater developed at the center of the open area for public gatherings, outdoor theater and concerts, or a series of other uses. Several ingress/egress points are contemplated for development along the northern end to provide pedestrian and bicycle access; this would encourage activation throughout the park.

A public marina is envisioned for the southern portion of the basin adjacent to the park. The designation of a mega-yacht berthing area, for the northern portion of the northern quay wall, and a small boating facility to provide protection from wind and wave action by breakwater would be ideal. The existing boat launch could be modified as a slip for large visiting boats or research vessels. These uses would help further activate the park and provide mooring facilities for Key West.

~~An additional A second large recreation and open space area is envisioned for the area around the historic Seminole Battery located south of Dekalb Street connects Bahama Village to Fort Zachary Taylor. Uses for this and surrounding This open space areas to includes the TACTS Tower, the north could be tailored to meet water tower and the neighborhood recreational needs of the Bahama Village archaeological preserve at Fort Zachary Taylor. Smaller parks at Once the TACTS tower Navy changes utility service, the water tower, will be abandoned and the archeological preserve at Ft. Zachary Taylor are contemplated possibly demolished. Once the Navy changes its utility service, the water tower will be abandoned and possibly demolished. The Seminole Battery may need to be reconfigured to serve as an alternate site~~  
A third recreation area is envisioned for the proposed amphitheater area around the historic Seminole Battery. Uses for this and the large open space area south of Dekalb Street could be tailored to meet the neighborhood recreational needs of the Bahama Village. These areas could also serve as alternate sites for the proposed amphitheater, the proposed open space area around the Seminole Battery may need to be reconfigured.

Each of these open space and recreation facilities would be linked together by a network of landscaped green ways. ~~One green way is programmed to run along Dekalb Avenue, connecting the waterfront and park area to TACTS tower park, the Bahama Village marketplace, and Seminole Battery.~~

## I. Capital Improvements

### Public Facility Needs [9J-5.016(1)(a)]

The Capital Improvements Element of the **Chapter 288 Military Base Reuse Plan** presents a summary of the capital improvement needs identified in the previous plan chapters. Overall, the focus is on the Truman Waterfront site, since the existing Poinciana Housing parcel infrastructure is sufficient and the Peary Court Cemetery is stable as it currently exists. The Truman Waterfront projects discussed here are suggested future improvements and are extremely preliminary in nature. They have been discussed by the City of Key West during the Chapter 288 planning process or included in the FSTED grant application, but are not finalized. Further, port expansion related projects (such as the ferry) must undergo extensive public review and approval (as outlined in the proposed policies of this plan) prior to City Commission approval. They also need to be included in the capital improvement element of the **City of Key West Comprehensive Plan**. As a next step, the City of Key West will seek to develop preliminary project costs, begin finalizing project scopes, and start fulfilling the procedural requirements for incorporating them into the appropriate documents.

#### *Land Use*

The Land Use Element sets the conceptual framework for development of the Poinciana Housing parcel and Truman Waterfront site, proposing reuse of the multi-family residences on the Poinciana Housing parcel and development of the Truman Waterfront site with public spaces, business, and residential uses. The Peary Court Cemetery is recommended to remain as a cemetery. The principal focus is the full integration and activation of the area proposed for federal port conveyance--the Truman Waterfront--into the Port of Key West to accommodate greater levels of cruise operations, offer new passenger ferry facilities, maintain areas needed to preserve Truman Harbor as a safe harbor facility, and provide enhanced public recreation along the waterfront.

The island is currently implementing large scale infrastructure improvements, specifically wastewater treatment, stormwater collection, and potable water delivery systems. Providing these improvements is critical for the future of the island as a whole, as they will sustain existing development and enable carefully directed future growth.

#### Seaport Intermodal Road Projects

The proposed roadway improvements along Grinnell/Caroline St. and Palm Ave. provide connections between the Truman Waterfront site and the rest of the city. Traditionally, providing connections between the port and the rest of the city was not emphasized. With the new emphasis on public spaces and additional cruise related port activities, it is critical to provide these connections to the rest of the community. Constructing the roadway improvements will provide employees with access to jobs on the site and cruise ship passengers with access to the city, which will further contributing to the economic growth of the community.

#### Pier B

Pier B expansion analysis is provided under Proposed Port Related Facilities Analysis (Port Master Plan) of the City of Key West Comprehensive Plan: Data Inventory and Analysis (1994).

#### Passenger Ferry Pier and Terminal

Passenger ferry operations may be programmed for Pier 8 found in the southern portion of Truman Harbor. Pier 8 could be enhanced and redesigned to allow for the simultaneous berthing of two passenger ferries. Ferry ticketing, luggage, and support requirements may be provided through modification and reuse of surplus Navy building No. 149. A small parking lot as well as bus and taxi drop-off areas may be provided.

#### Modification of North Mole Pier Fenders and Bollards

The configuration of fenders and bollards at North Mole Pier may be modified to allow for larger, 900'-plus vessels--such as Carnival's Destiny--to be berthed at this location.

#### Structural Rehabilitation of Southern Quay Wall

Stabilization and rehabilitation of the southern quay wall may occur to repair structural deficiencies.

#### Truman Waterfront Harborwalk

Designed for use by pedestrians, cyclists, in-line skaters, and other recreation enthusiasts, the Truman Waterfront Harborwalk would connect cruise operations on North and South Mole Pier, Fort Zachary Taylor, passenger ferry operations, the federal interagency visitor center, marina uses, and recreation and open space areas.

#### Roadway Enhancements

Roadway enhancements of various scale are suggested for the Truman Waterfront site. Roadways leading into port facilities, including Southard and Angela Streets, may be enhanced.

#### Mallory Dock

While significant lengthening and modification of this facility is not possible to accommodate large cruise ships, renovation and modification of this facility will allow it to continue in its present role as a safe berthing location for small and medium cruise ships. Over the next three-to-four years, the port shall renovate and strengthen the existing tee head dock and breasting dolphins. The port will also continue to investigate and implement marine structure enhancements which will allow Mallory Dock to accommodate medium sized cruise ships of up to 600' in length.

#### Secure Access to North and South Mole

To meet U.S. Customs and U.S. Coast Guard safety regulations, a secure access point to North Mole Pier should be provided. Public access to North Mole Pier will occur unimpeded when a cruise vessel is not berthed in this location.

#### Marina Development

Two marinas are scheduled for the portions of Truman Harbor. A professional marina facility is envisioned for the southern portion of the basin adjacent to the eastern side of Truman Harbor. A possible mega-yacht berthing area may be designed for the eastern quay wall area.

#### Rehabilitation of the Haul-Out Ramp

The haul-out ramp located in the southeastern corner of Truman Harbor may be enhanced and integrated into the Harborwalk project.

#### Truman Waterfront Intermodal Center

The development of an intermodal transportation center, which would serve as a focus for serving passengers to other parts of the city, is proposed at the juncture of Mole Pier and the mainland. The facility would link waterborne transportation with land-based transportation, and would also link pedestrian/bicycle facilities (such as the harbor walk and surrounding parklands) to other forms of transit.

#### **Traffic Circulation**

Due to the dense development pattern in Key West, a significant number of residents and tourists rely on non-automotive transportation. As a result, the mass transit system is a significant means of transportation. While implementing reuse of the Poinciana Housing parcel and the developing proposals for the Truman Waterfront site, efforts will be made to integrate these sites into the city's mass transit system.

The sites studied in this plan are not located in the vicinity of any aviation facilities, and as such will have no significant impact on aviation facilities.

#### **Housing**

Development related proposals in the housing element of the plan relate to: providing affordable housing; utilizing existing structures to provide transitional and special needs housing; and building a social service center on the Poinciana Housing parcel. The costs of adapting or building these structures will be borne by the organizations developing the site, and as such will not need to be addressed in this capital improvement element.

#### **Public Facilities Element**

The island is currently implementing large scale infrastructure improvements, specifically wastewater treatment, stormwater collection, and potable water delivery systems. These improvements were scheduled to maintain a sustainable level of service to the island. It is anticipated that future development on the Truman Waterfront site will need to address level of service issues. However, resolving these issues will be the responsibility of the developers and solutions will depend on the specifics of the proposals.

#### **Coastal Management**

As the entire City of Key West is within the coastal area, all three sites are within the coastal area. However, none of the proposed land uses are expected to have any net negative impact on natural resources based on the paucity of natural resources on the three sites, the proposed development plan and associated land uses, and the extensive local, state and federal regulation which govern the impact of development on natural systems. No capital improvement related proposals are needed to meet coastal management concerns.

### **Conservation**

The brackish water lake vegetated by red and black mangroves and exotic species on the northwest corner of the Poinciana Housing parcel provides the only area of conservation concern in the base reuse plan. The Truman Waterfront site is urban in character, without areas of native vegetation. The Peary Court Cemetery has been maintained as a fenced open space, and does not contain any environmental resources.

The pond over the Poinciana Housing Parcel has been proposed for a Conservation Mangrove land use classification. No capital improvement related improvements are required to maintain this resource.

### **Recreation and Open Space**

This plan analyzed both the current recreational needs of the city and its potential recreational needs based on the reuse of the former military sites. A calculation of additional population against the Level of Service reveals that the existing recreational facilities will accommodate development of the sites within the 5 to 10 year planning period.

An estimated projection of the potential maximum population shows a possible deficit of recreational facilities, however. Since this analysis is based on the maximum development scenario, a scenario which is highly unlikely due to the restrictions on residential development, it is not expected to occur during either the 5 or 10 year planning periods. Further, the Truman Waterfront contains ~~19.04~~ 30.55 acres of vacant land which may provide extensive land for recreational development and Poinciana has one existing playground, should additional recreational facilities become needed.

### **Intergovernmental Coordination**

The recommendations in the intergovernmental coordination portion of the study are concentrated on policy issues. No capital improvement related issues are discussed.

### **General Monitoring and Review Criteria**

The recommendations in the general monitoring and review criteria portion of the study are concentrated on policy issues. No capital improvement related issues are discussed.

### **Public Education and Public Health Systems [9J-5.016(1)(b)]**

The surrounding public education and public health systems will not be substantively impacted by the proposed developments, as the capacity of the existing systems is sufficient to accommodate the potential population growth. Additionally, the provisions made by the City of Key West to accommodate growth of the island as a whole would also accommodate growth at these sites.

### **Existing Revenue Sources and Funding Mechanisms [9J-5.016(1)(c)]**

Growth on the proposed sites will not change the existing revenues sources and funding mechanisms, and an inventory of the existing revenue sources and funding mechanisms is presented in the **City of Key West 1993 Comprehensive Plan**.

### **Practices Governing the Timing and Location of Public Facilities [9J-5.016(2)(a)]**

The proposals in this plan will comply with the local practices that govern the timing and location of public facilities. Level of Service standards currently evaluate the capacity and guide the timing of public facilities and services in Key West. The local **Comprehensive Plan**, Official Land Use Map, and **Land Development Regulations** guide the location of development and services in Key West.

### **Fiscal Impacts of Deficiencies and Needs by Facility Type [9J-5.016(2)(b)]**

This element presents a preliminary summary of the capital improvement needs identified in the previous plan chapters in section 9J-5.016(1)(a). It discusses construction of new facilities lacking in the present port configuration and renovations of the existing facilities, as needed. It is broken down and phased by type of facility, discussing roadways, Pier B, the Truman Waterfront, and Mallory Dock.

### **Costs of Mitigating Deficiencies [9J-5.016(2)(c)]**

As a next step toward fulfilling the needs identified in this plan, the City of Key West will seek to develop preliminary project costs, begin finalizing project scopes, and start fulfilling the procedural requirements for incorporating them into the appropriate documents.

As most of these projects are in the preliminary planning and design phase, funding sources have not been identified. This plan recognizes that this expansion may put pressure on the financial resources of Key West. Exploration of new funding mechanisms, specifically targeted to future port development or affordable housing may be useful.

**CAPITAL IMPROVEMENT PROGRAM**

Phase	Fiscal Year	Item/Description	Total Budget	By Funding Source		
				Federal	State	Other
I	00-01	Infrastructure Pre Design and Engineering (including stormwater drainage plan)	\$350,000			\$350,000
I	00-01	Secure Property:				
I	00-01	Outermole Entry Feature	\$75,000			\$75,000
I	00-01	Harbor-rescue hidden ladder	\$75,000			\$75,000
I	00-01	Boat Ramp: Secure and Landscape	\$50,000			\$50,000
I	00-01	Landscape, irrigate, etc.	\$200,000			\$200,000
I	00-01	Intermodal Feasibility	\$100,000			\$100,000
I	00-01	Transit Plan for Marina/Cruiseships, Shuttle Service	\$75,000			\$75,000
I	00-01	Federal Harbor Coordination with ACOE, Turbidity Issues	\$50,000			\$50,000
I	01-02	Phase I: Harbor Walk	\$1,000,000			\$1,000,000
I	01-02	Passenger Shelter on Outer Mole	\$150,000		\$75,000	\$75,000
I	01-02	Facility improvements outer mole inner basin including bollards, cleats, fenders, infrastructure	\$200,000		\$100,000	\$100,000
I	01-02	Ferry Service Facility- Immediate Use Development Access conditions, dock, pier, infrastructure, renovate existin	\$670,000			\$670,000
I	01-02	North Mole Bollards and Fenders	\$2,200,000		\$1,100,000	\$1,100,000
I	01-02	Renovate Port Offices	\$75,000			\$75,000
II	02-03	Ferry Service Facility – Long Term Development of Terminal Building: Design and Construction	\$2,000,000	\$2,000,000		
II	02-03	Repair Quay Wall	\$5,300,000	\$2,120,000	\$1,590,000	\$1,590,000
II	02-03	Phase II: Harbor Walk	\$1,000,000			\$1,000,000
III	03-04	Main Entrance at Angela and Patronia Street	\$300,000			\$300,000
III	03-04	Marina (Feasibility Study Only)	\$50,000			\$50,000
III	03-04	Phase III: Harbor Walk	\$1,000,000			\$1,000,000
III	04-05	New Port Offices (Design & Build)	\$450,000			\$450,000
I,II,& III	00-05	Underground Infrastructure at \$400,000 per year	\$2,000,000			\$2,000,000
<b>Total</b>			<b>\$17,370,000</b>	<b>\$4,120,000</b>	<b>\$2,865,000</b>	<b>\$10,385,000</b>

Source: City of Key West and the Port of Key West, 1999

**Impact of New or Improved Public Schools or Public Health Care Facilities [9J-5.016(2)(d)]**

No new public schools or public health care facilities are being proposed by this plan. The surrounding public education and public health systems will not be substantively impacted by the proposed developments, as the capacity of the existing systems is sufficient to accommodate the potential population growth. Additionally, the provisions made by the City of Key West to accommodate growth of the island as a whole would accommodate growth at these sites.

**Timing and Location to Implement Land Use Policies and Goals [9J-5.016(2)(e)]**

The proposals in this plan will comply with the regulatory framework governing the timing and location of public facilities in Key West.

**Local Ability to Pay for Capital Improvements [9J-5.016(2)(f)]**

The largest generator of economic growth in the city, and therefore potential source of additional city revenue, is the port expansion itself. Linkages between the port expansion and revenues generated from its growth may potentially alleviate the financial burden of port expansion. A ten year bond has tentatively been identified to fund five year improvements.

## IV. IMPACT ASSESSMENT

The following section provides a discussion of projected impacts to significant regional resources and natural resources of regional significance, as identified in the Strategic Regional Policy Plan for South Florida prepared by the South Florida Regional Planning Council, August 1995. A discussion of how the **Chapter 288 Military Base Reuse Plan** encompasses the Area of Critical State Concern — Principals for Guiding Development is also presented in this section. Methods for addressing potential impacts are discussed in areas where potential impacts are projected to occur.

### Significant Regional Resources and Facilities

#### A. Transportation Resources and Facilities

This section reviews and analyzes the transportation related impacts of the proposed **Base Reuse Plan** on the City of Key West's functionally classified road system. Pursuant to 288.975(4)(a) the noncontiguous portions of each of the three sites, the Truman Waterfront, Peary Court Cemetery, and the Poinciana Housing site, are discussed individually.

##### *Truman Waterfront - Transportation Impacts*

This section details the anticipated transportation impacts of the **Base Reuse Plan** on the Truman Waterfront. This site represents a significant portion of the coastal lands in the northwestern quadrant of the island. Significant changes to this site include an increase in office and residential land uses, as well as the reactivation of the Mole Pier as a port facility. Additional location and specific development objectives of this site are described in greater detail elsewhere in this report. The following subsections describe the trip generation, trip distribution, trip assignment, and level of service impacts of the proposed redevelopment uses at the Truman Waterfront site in detail.

This analysis incorporates changes made in June 1999 to reflect a decrease in development intensity.

##### *Trip Generation*

The proposed implementation of the **Base Reuse Plan** at the Truman Annex will result in a significant increase in active land usage at the site and a corresponding increase in trip generation. Trip Generation estimates for the site were made using the reference ITE Trip Generation, 6<sup>th</sup> Edition. No adjustments for internal capture were utilized within the Truman Waterfront area, although some internal capture of trips could be expected to occur. Adjustments were made, however, to reflect the increased use of walking as a mode of transportation in Key West. As indicated in other plans and surveys conducted in Key West, approximately 45 percent of tourist trips and 23 percent of non-tourist trips are non-vehicular, primarily walking or

biking. Trip generation for components of the site was reduced accordingly by 40 percent for tourist based trips and 16 percent for non-tourist based trips.

**Table IV.A.1, Truman Waterfront: Existing Land Use Trip Generation** tabulates the existing trip generation characteristics at the site. **Table IV.A.2, Truman Waterfront: Proposed Land Use Trip Generation** tabulates the proposed trip generation characteristics of the site following **Base Reuse Plan** implementation.

The trip generation estimates indicate the existing land uses at the site generate 3,274 daily trip ends per day and 441 179 net trip ends during the p.m. peak hour. The projected trip generation estimates reflecting the improvements proposed in the **Base Reuse Plan** will result in a total of 23,846 15,176 daily trip ends per day and 964 968 net trip ends during the p.m. peak hour. Thus the proposed **Base Reuse Plan** will result in a net increase of 828 789 trip ends during the p.m. peak hour for this site and 20,092 11,902 daily trip ends per day. It is important to note this trip generation estimate includes the entire maximum development potential of the site. Actual development intensity at the site is expected to be much less.

#### *Trip Distribution*

In order to estimate the p.m. peak hour trip distributions to and from the site, trip distribution for the site was based upon existing p.m. peak hour turning movement counts and the prevailing existing daily traffic on the streets adjacent to the Truman Waterfront area. Consideration was also given to the traffic circulation patterns recommended in the City of Key West Bahama Village Plan Update. However, since the recommendations in Bahama Village Plan Update have not been formally implemented, the recommendations in the plan were not relied upon exclusively.

The distribution and assignment of trips for the Truman Waterfront reflects an additional 10 percent of the total trips generated applied as a contingency factor. This contingency factor is carried through to the Level of Service analysis and is intended to create a conservative impact analysis and allow for minor future modifications to the Maximum Development Scenario without the requiring the need for additional transportation analysis.

**Figure IV.A.1a and Figure IV.A.1b, Truman Waterfront PM Peak Hour Trip Distribution**, illustrates the location of the site, as well as the anticipated trip distribution of trip ends beginning or ending at the site. The following summarizes the projected p.m. peak hour trip distribution:

- 40% of all trips entering the site will enter from the southern portion of the site on Petronia Street;
- 56% of all trips entering the site will enter from the northern portion of the site on Southard Street;

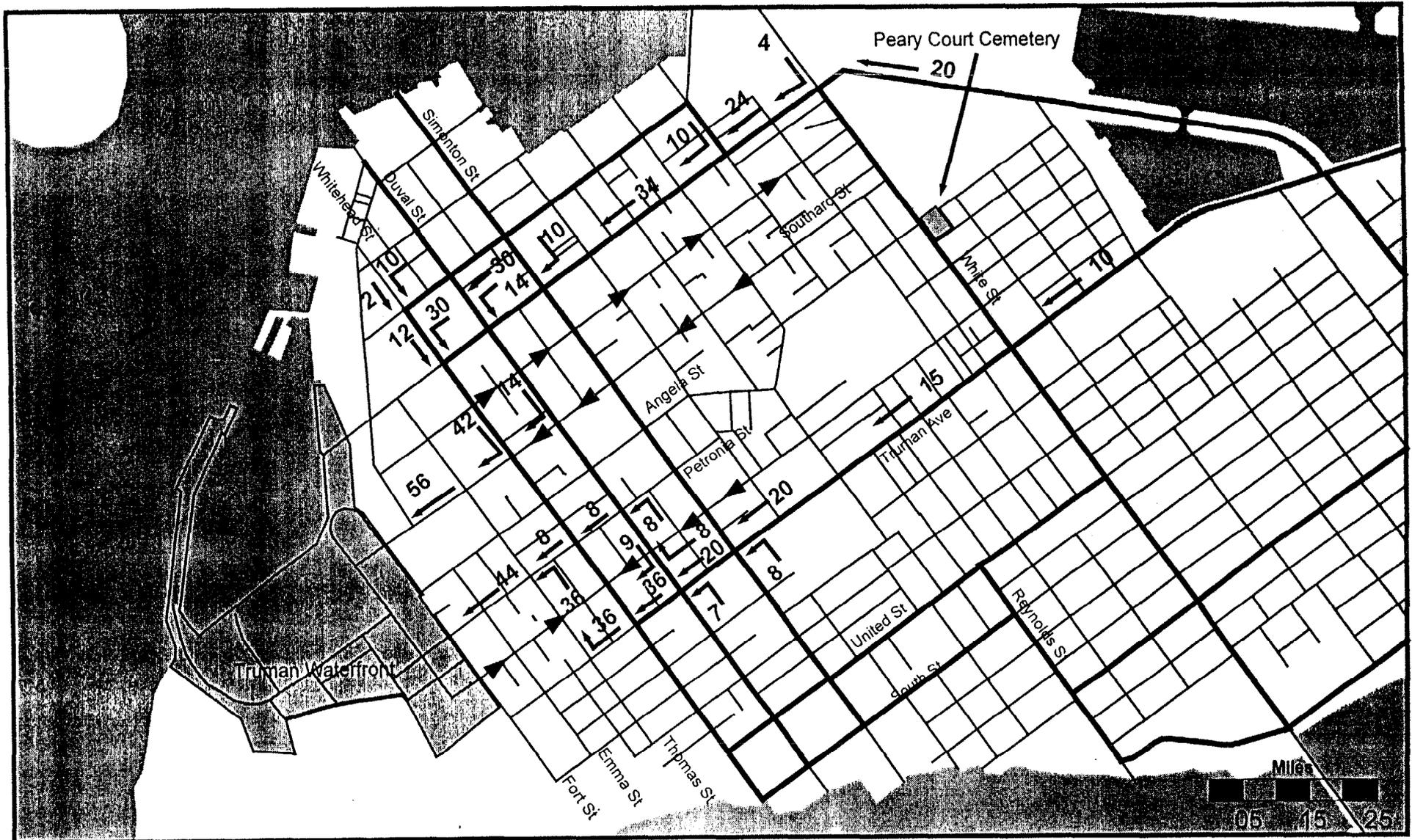
- 34% of all trips entering the site will travel from the east and north via Eaton Street;
- 15% of all trips entering the site will travel from the east via Truman Avenue;
- 15% of all trips entering the site will come from the south of Truman Avenue;
- Approximately 65% of all trips entering the site will originate from the old town area of the island;
- 69% of all trips leaving the site will leave from the northern portion of the site via ~~Angela Street~~ Southard Street accessing Whitehead Street;
- 31% of all trips leaving the site will leave from the southern portion of the site;
- 17% of all trips leaving the site will exit the old town area via Truman Avenue;
- 20% of all trips leaving the site will have destinations south of Truman Avenue;
- 10% of all trips leaving the site will exit the old town area via Palm Avenue; and,
- Approximately 53% of all trips leaving the site will remain in the old town area.

Land Use	ITE Code	ITE Land Use	Quantity	Daily Avg. Trip Rate	PM Peak Trip Rate	PM Peak %		Gross Daily Trips	Gross PM Peak Trips			Percent Pedestrian	Net PM Peak Trips			
						Entering	Exiting		Total Trips	Entering Trips	Exiting Trips		Total Trips	Entering Trips	Exiting Trips	
NOAA/Env. Ed. Center	730	Government Office	25,000 sq. ft.	68.93	6.27	17%	83%	1,723	157	27	130	40%	94	16	78	
Sea Port - 2 Buildings	Vacant	Vacant	1,679 sq. ft.	0	0	0	0	0	0	0	0	0	0	0	0	
Warehouse - 10 Buildings	Vacant	Vacant	74,867 sq. ft.	0	0	0	0	0	0	0	0	0	0	0	0	
Dining Facilities	Vacant	Vacant	N/A	0	0	0	0	0	0	0	0	0	0	0	0	
Fire Station	Vacant	Vacant	N/A	0	0	0	0	0	0	0	0	0	0	0	0	
Naval Exchange Branch	Vacant	Vacant	N/A	0	0	0	0	0	0	0	0	0	0	0	0	
4 Buildings	Vacant	Vacant	N/A	0	0	0	0	0	0	0	0	0	0	0	0	
Cruise Ship Berths	010	Waterport/Marine Terminal	1 berths	171.52	15.61	90%	10%	172	16	14	2	40%	10	9	1	
Ferry Terminal Operations	730	Government Office	20,000 sq. ft.	68.93	6.27	17%	83%	1,379	125	21	104	40%	75	13	62	
								Totals:	3,274	298	62	236		179	38	141

Land Use	ITE Code	ITE Land Use	Quantity	Daily Avg. Trip Rate	PM Peak Trip Rate	PM Peak %		Gross Daily Trips	Gross PM Peak Trips			Percent Pedestrian	Net PM Peak Trips			
						Entering	Exiting		Total Trips	Entering Trips	Exiting Trips		Total Trips	Entering Trips	Exiting Trips	
HNC-2	Dwelling Units	220	Apartments	24 D.U.s	6.63	0.62	67%	33%	278	32	21	11	16%	27	18	9
	Office	710	General Office	29,079 sq. ft.	11.01	1.49	17%	83%	514	112	19	93	16%	94	16	78
	Retail	814	Specialty Retail	58,158 sq. ft.	40.67	2.59	43%	57%	2,365	151	65	86	40%	91	39	52
	Social Services/Economic Dev.	730	Government Office	25,000 sq. ft.	68.93	6.27	17%	83%	1,723	157	27	130	40%	94	16	78
HCL	Dwelling Units	220	Apartments	13 D.U.s	6.63	0.62	67%	33%	212	26	17	9	16%	22	15	7
	Retail	814	Specialty Retail	20,950 sq. ft.	40.67	2.59	43%	57%	852	54	23	31	40%	32	14	18
	Office	710	General Office	15,712 sq. ft.	11.01	1.49	17%	83%	320	97	16	81	16%	81	14	67
HMDR-2	Dwelling Units	220	Apartments	32 D.U.s	6.63	0.62	67%	33%	326	36	24	12	16%	30	20	10
	Park	412	County Park	24.8 acres	2.28	0.06	41%	59%	57	2	1	1	40%	1	0	1
HPS	NOAA/Env. Ed. Center	730	Government Office	25,000 sq. ft.	68.93	6.27	17%	83%	1,723	157	27	130	40%	94	16	78
	National Park Service	418	National Monument	5.7 acres	5.37	0.42	41%	59%	30	2	1	1	40%	1	0	1
	Marina	420	Marina	150 slips	2.96	0.19	60%	40%	694	29	17	12	16%	24	14	10
HRCC-4	Industrial / Office	110	General Light Industrial	66,382 sq. ft.	6.97	0.96	12%	88%	394	65	8	57	16%	55	7	48
	Office	710	General Office	66,382 sq. ft.	11.01	1.49	17%	83%	969	154	26	128	16%	129	22	107
	Retail	814	Specialty Retail	66,382 sq. ft.	40.67	2.59	43%	57%	2,700	172	74	98	40%	103	44	59
	Ferry Terminal Operations	730	Government Office	20,000 sq. ft.	68.93	6.27	17%	83%	1,379	125	21	104	40%	75	13	62
	Cruise Ship Berths	010	Waterport/Marine Terminal	1 berths	171.52	15.61	90%	10%	172	16	14	2	40%	10	9	1
Professional Marina	420	Marina	30 slips	2.96	0.19	60%	40%	468	6	4	2	16%	5	3	2	
								Totals:	15,176	1393	405	988		968	280	688

JUNE 1999; SOURCE: TINDALE-OLIVER AND ASSOCIATES, INC.

Truman Waterfront Net New PM Peak Hour Entering Trips: 242  
 Truman Waterfront Net New PM Peak Hour Exiting Trips: 547  
 Truman Waterfront Net New PM Peak Hour Total Trips: 789



Legend

- ← XX Percent Distribution To Site
- ◀ One Way Streets

Figure IV. A. 1a

Truman Waterfront  
PM Peak Hour Trip Distribution

**TINDALE**  
**OLIVER** and Associates, Inc.  
Planning and Engineering



### *Trip Assignment*

The assignment of p.m. peak hour trips to and from the Truman Waterfront site was developed by multiplying the traffic entering the site, **see Figure IV.A.1a**, by the traffic distribution percentage to the site and, similarly, by multiplying the traffic exiting from the site by the traffic distribution percentages from the site, **see Figure IV.A.1b**. The resulting total p.m. peak hour site traffic is illustrated in **Figure IV.A.2, Truman Waterfront PM Peak Hour Trip Assignment**.

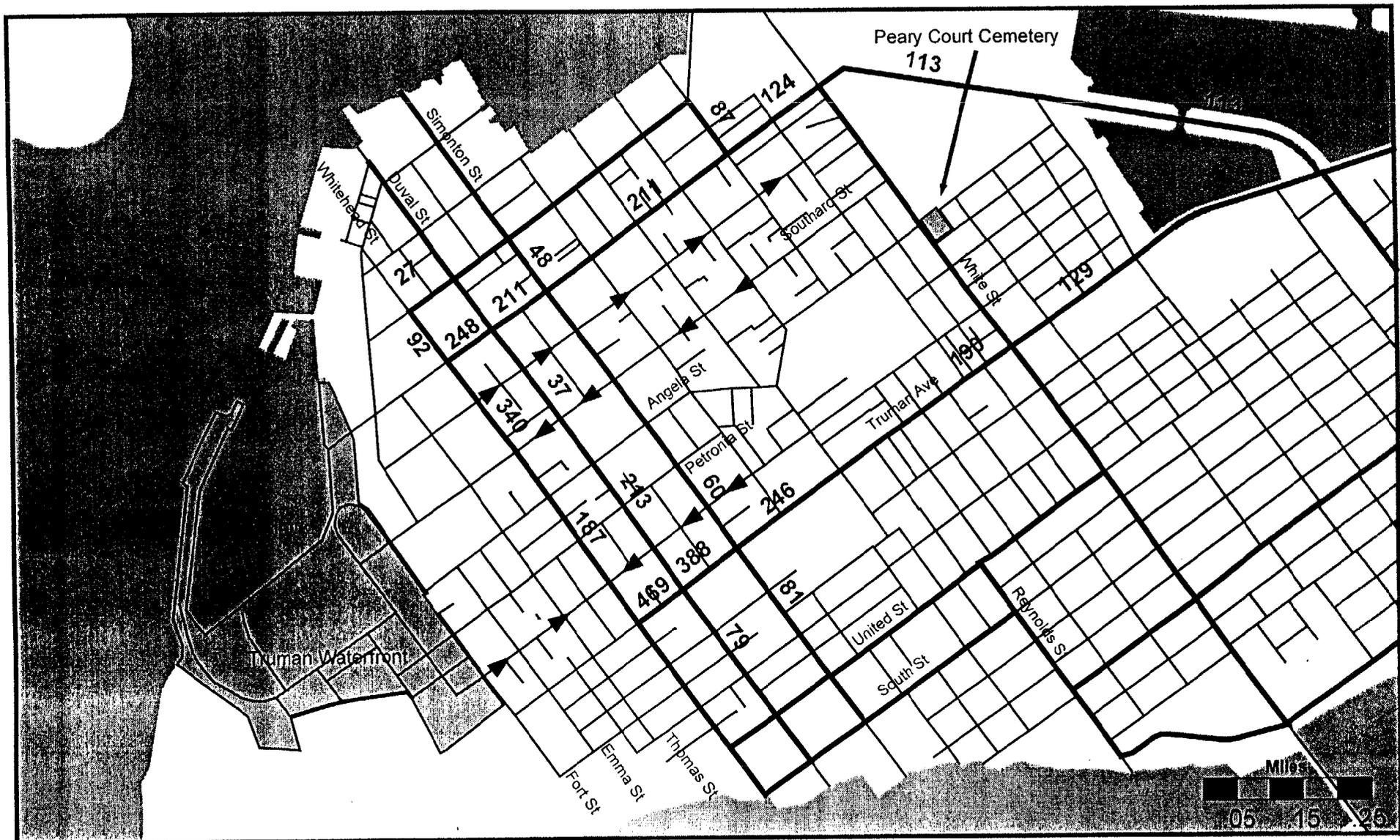
### *Level of Service*

The implementation of the proposed **Base Reuse Plan** is estimated to result in a net increase of ~~390~~ 242 entering and ~~820~~ 547 exiting p.m. peak hour trips. **Figure IV.A.3, Truman Waterfront PM Peak Hour Capacity Consumed**, illustrates the site will consume greater than five percent of the available roadway service capacity for the following roadways that are a part of the city's functionally classified road network:

- Eaton Street, ~~Duval~~ Whitehead Street to White Street;
- Palm Avenue, White Street to North Roosevelt Boulevard;
- Truman Avenue, Whitehead Street to Eisenhower Drive;
- Whitehead Street, Truman Avenue to Caroline Street;
- Duval Street, United Street to ~~Eaton~~ Angela Street; and;
- Grinnell Street, Eaton Street to Caroline Street;
- ~~Simonton Street, United Street to Truman Avenue and Caroline Southard to Eaton Street.~~

It is important to note the percentage of capacity consumed is based on total **Base Reuse Plan** land uses plus an extra ten percent (10%) of the Truman Waterfront trips and not just the net additional trips. Therefore, the actual capacity consumed would be less.

For the purposes of this level of service analysis, Highway Capacity Manual procedures and the capacities and procedures identified in the Florida Department of Transportation's Level of Service Guidelines were utilized. Level of Service calculations for interrupted flow arterials were accomplished using procedures consistent with the methodology employed by the Florida Department of Transportation's ART-PLAN 2.0 Level of Service Spreadsheet. A detailed inventory of level of service data and calculations is found in **Appendix IV.A.**, for the 2003 level of service. This analysis includes the traffic impacts from all three sites. The resulting level of service is illustrated in **Figure IV.A.4, Truman Waterfront 2003 PM Peak Hour Level of Service With Project Trips**.



Legend

XX PM PEAK HOUR Trips

◀ One Way Streets

Figure IV. A. 2

Truman Waterfront  
PM Peak Hour Trip Assignment

**TINDALE**  
**OLIVER** and Associates, Inc.  
Planning and Engineering

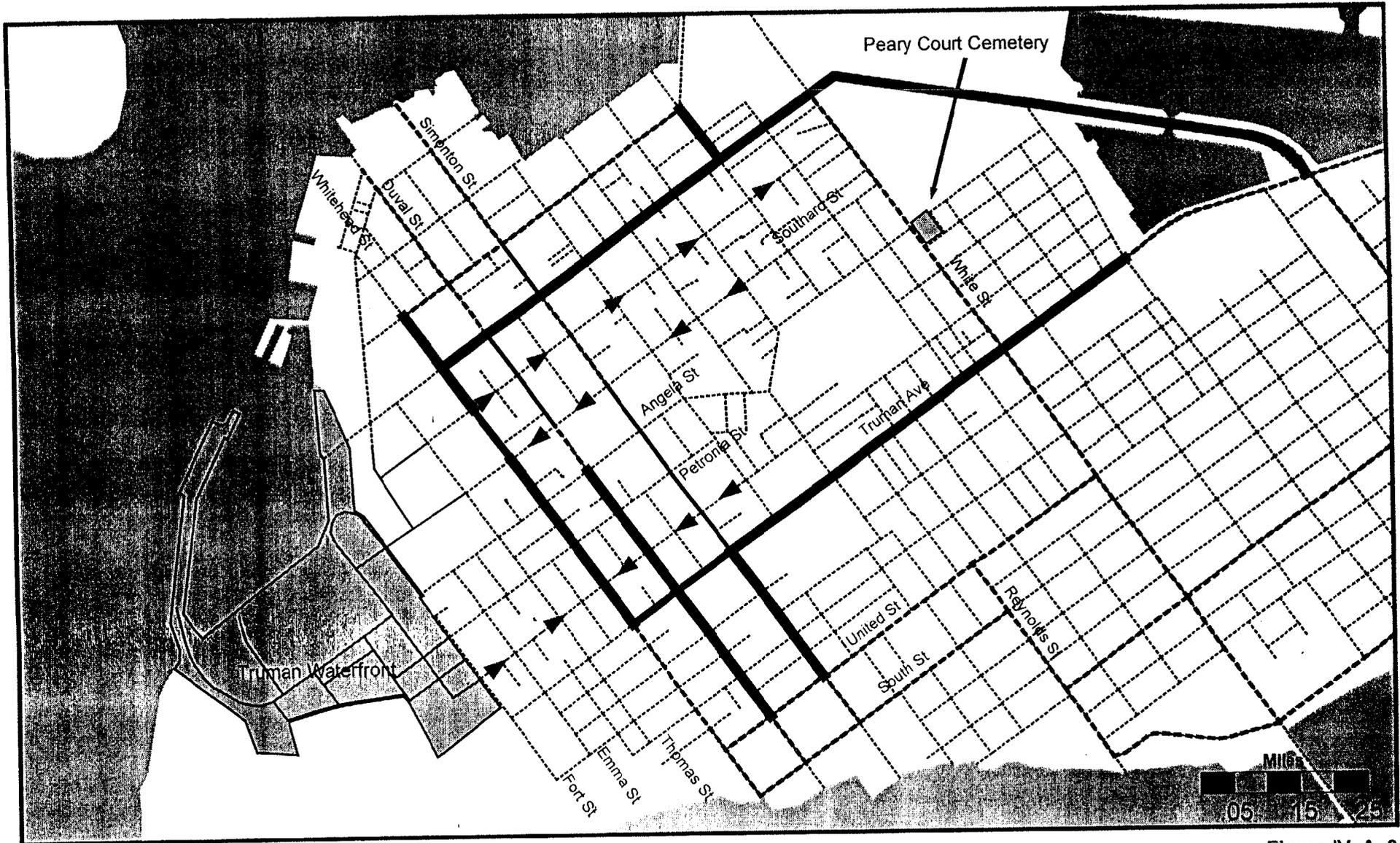


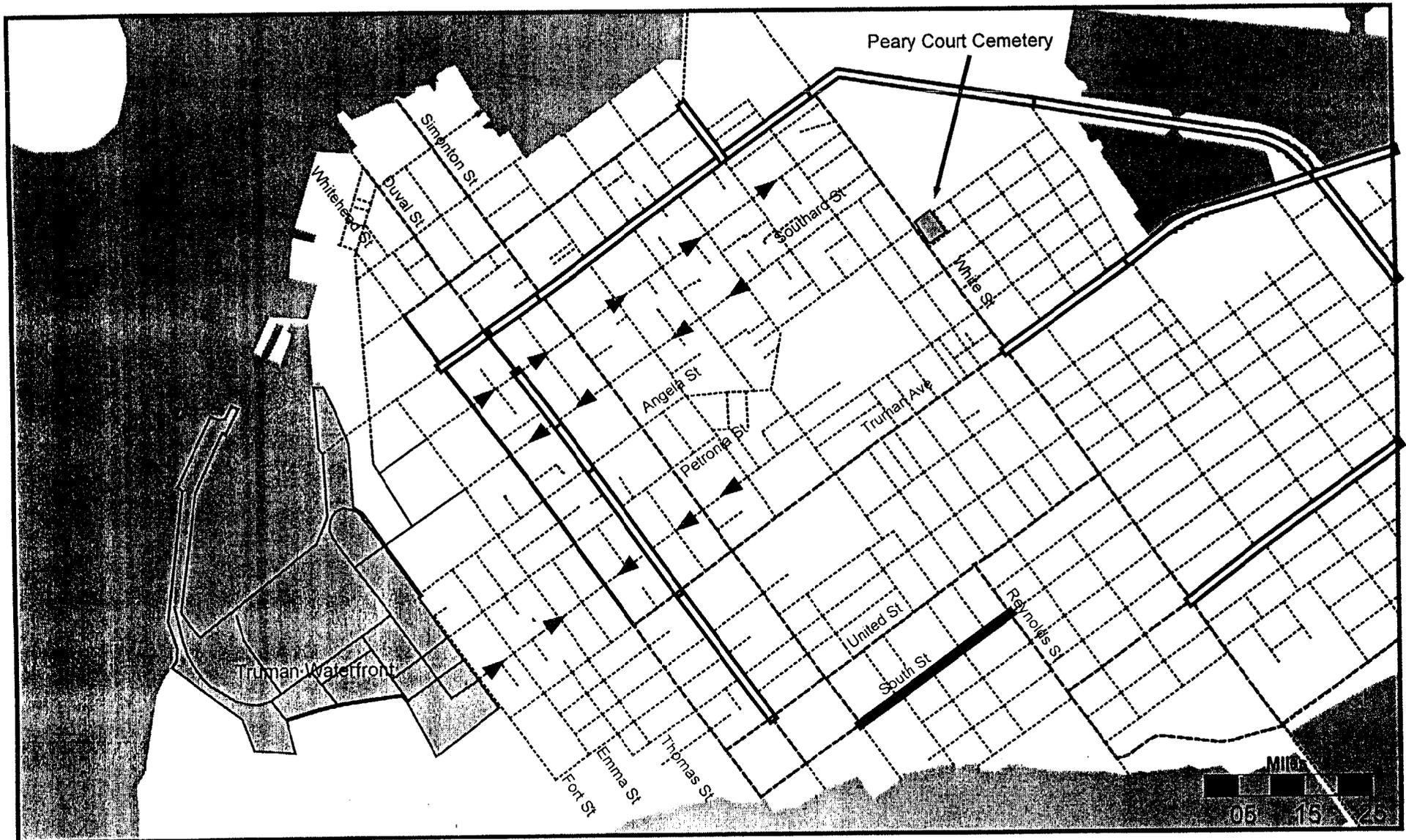
Figure IV. A. 3

Truman Waterfront  
PM PEAK HOUR Capacity Consumed

**Legend**

- < 3% Service Capacity Consumed
- 3 - 5% Service Capacity Consumed
- > 5% Service Capacity Consumed

**TINDALE**  
**OLIVER** and Associates, Inc.  
Planning and Engineering



**Legend**

- Level of Service A, B, C
- Level of Service D
- █ Level of Service E

- ▬ Level of Service F
- ⋯ Level of Service Not Determined for Local Roads

**Figure IV. A. 4**  
**Truman Waterfront**  
**2003 PM Peak Hour Level of Service**  
**with Project Trips**

**TINDALE**  
**OLIVER** and Associates, Inc.  
 Planning and Engineering

A review of the level of service analysis for 2003 without project trips as documented in Section III.C. of this plan and the 2003 level of service analysis with project trips was prepared. It indicates the level of service of Duval Street from Fleming Avenue to United Street will decrease from "E" without project trips to "F" with project trips. ~~Also, the segment of Duval Street from Fleming Street to Eaton Street will decrease to a level of service "E" condition.~~ Furthermore, the following roadways currently operate below the adopted level of service standard of "D" and carry trips from the Truman Waterfront, consuming greater than five percent of the adopted service capacity for these roadways:

- Eaton Street, ~~Duval~~ Whitehead Street to White Street - LOS "F";
- Palm Avenue, White Street to North Roosevelt Boulevard - LOS "F";
- Truman Avenue, White Street to Eisenhower Drive - LOS "F"; and
- Duval Street, ~~Truman Avenue~~ United Street to Fleming Avenue - LOS "F";
- Whitehead Street, Truman Avenue to Caroline Street - LOS "D";
- Grinnell Street, Eaton Street to Caroline Street - LOS "F".

Many of the above roadway segments currently operate below the adopted standard as also indicated in the 1998 level of service analysis documented in **Section III.C.** of this report. **Section IV.B.** of this report identifies potential mitigation strategies for the afore referenced level of service deficiencies.

#### *Summary*

In summary, the **Base Reuse Plan** proposed land uses at the Truman Waterfront site will increase travel demands upon several local roadways currently operating below their adopted performance standard. Potential mitigation strategies are documented in Section III.C. of this report. The site will provide additional port capacity with the reactivation of Mole Pier. The site also has adequate access to bicycle facilities and public transportation consistent with the existing **Comprehensive Plan.**

### **Peary Court Cemetery - Transportation Impacts**

This section details the anticipated traffic impacts of the **Base Reuse Plan** on the Peary Court Cemetery. The site is located at the southeastern quadrant of the intersection of White Street and Angela Street. The existing land use designations at this site include HMDR and HPS. The portion designated as HMDR will change to Historic Public and Semi-Public Services. HPS-2 does not allow residential development. Therefore, the change from HMDR to HPS-2 eliminates the potential development of 8 dwelling. Additional location and specific development objectives of this site are described in greater detail elsewhere in this report. The following subsections describe the trip generation, trip distribution, trip assignment, and level of service impacts of the Peary Court Cemetery site in detail.

#### *Trip Generation*

The proposed implementation of the **Base Reuse Plan** at the Peary Court Cemetery site will result in the existing one acre of cemetery and open space remaining unchanged. Thus, no increase or decrease in net trips is expected to result. Trip Generation for the site was accomplished using the reference ITE Trip Generation, 6<sup>th</sup> Edition. **Table IV.A.3, Peary Court Cemetery: Existing Land Use Trip Generation**, tabulates the existing trip generation characteristics at the site while **Table IV.A.4, Peary Court Cemetery: Proposed Land Use Trip Generation**, tabulates the proposed trip generation characteristics of the site following implementation of the **Base Reuse Plan**.

Since no changes will occur at the Peary Court Cemetery with implementation of the plan, both the existing and proposed land uses have the same trip generation characteristics. The site is estimated to generate a total of 5 daily trip ends per day and 1 trip end during the p.m. peak hour.

#### *Trip Distribution*

In order to estimate the p.m. peak hour trip distributions to and from the site, trip distribution for the site was based upon existing p.m. peak hour turning movement counts and the prevailing existing daily traffic on the streets surrounding the Peary Court Cemetery. **Figure IV.A.5, Peary Court Cemetery PM Peak Hour Trip Distribution**, illustrates the location of the site, as well as the anticipated trip distribution of trip ends beginning or ending at the site. It is assumed that both distribution to and from the site will be split with 50 percent of all trips traveling north on White Street and 50 percent of all trips traveling south on White Street.

*Trip Assignment*

The assignment of p.m. peak hour trips to and from the Peary Court Cemetery was developed by multiplying the traffic entering the site by the traffic distribution percentage to the site and, similarly, by multiplying the traffic exiting from the site by the traffic distribution percentages from the site. The resulting total p.m. peak hour site traffic is illustrated in **Figure IV.A.6, Peary Court Cemetery PM Peak Hour Trip Assignment.**

**TABLE IV.A.3**

**PEARY COURT CEMETERY: EXISTING LAND USE TRIP GENERATION**

Land Use	ITE Code	ITE Land Use	Quantity	Daily Avg. Trip Rate	PM Peak Trip Rate	PM Peak %		Gross Daily Trips	Gross PM Peak Trips			Percent Pedestrian	Net PM Peak Trips		
						Entering	Exiting		Total Trips	Entering Trips	Exiting Trips		Total Trips	Entering Trips	Exiting Trips
HM Cemetery	566	Cemetery	1 acre	4.73	0.84	33%	67%	5	1	0	1	0%	1	0	1
<b>Totals:</b>								5	1	0	1		1	0	1

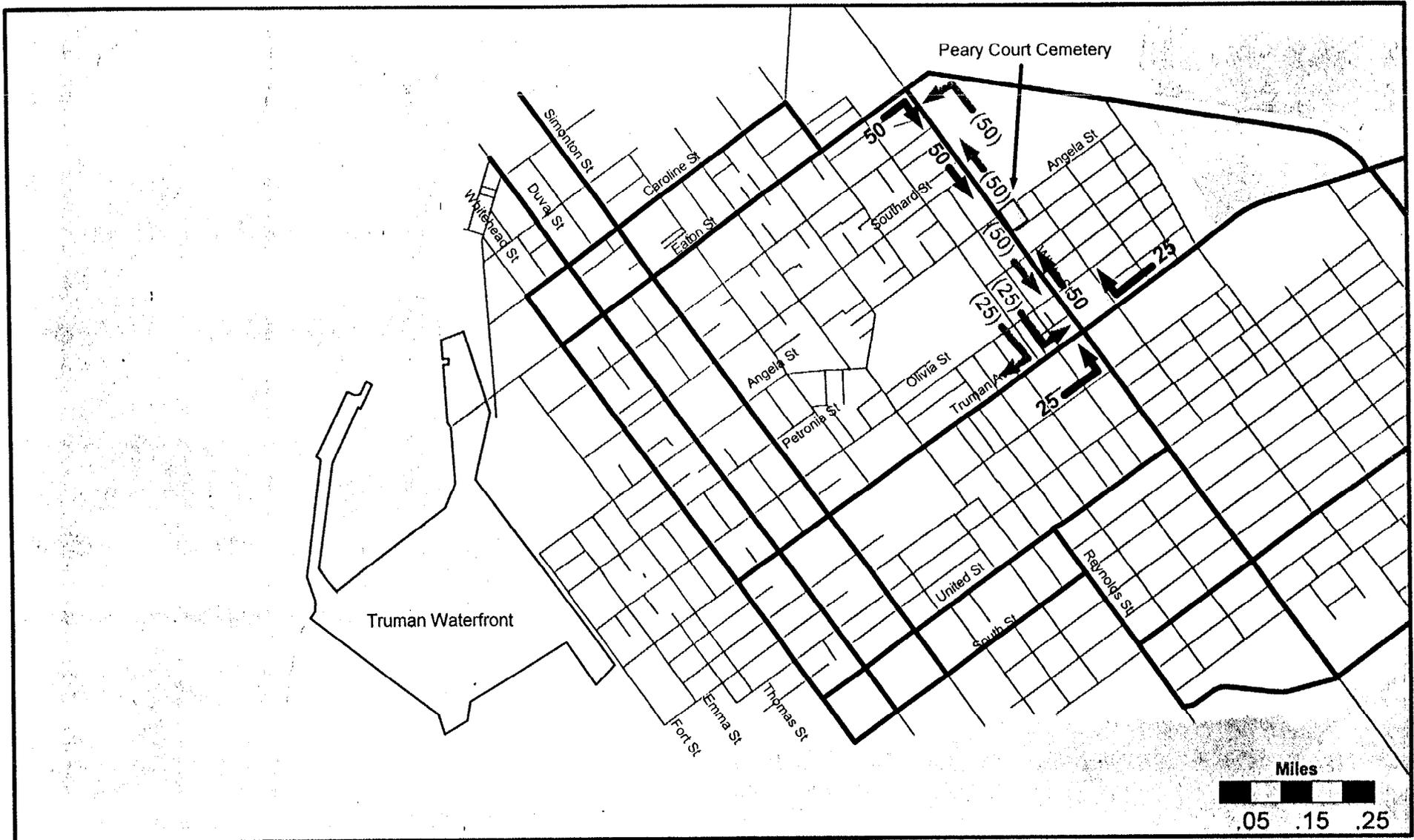
Source: Tindale Oliver and Associates, Inc., November 1998

**TABLE IV.A.4**

**PEARY COURT CEMETERY: PROPOSED LAND USE TRIP GENERATION**

Land Use	ITE Code	ITE Land Use	Quantity	Daily Avg. Trip Rate	PM Peak Trip Rate	PM Peak %		Gross Daily Trips	Gross PM Peak Trips			Percent Pedestrian	Net PM Peak Trips		
						Entering	Exiting		Total Trips	Entering Trips	Exiting Trips		Total Trips	Entering Trips	Exiting Trips
HM Cemetery	566	Cemetery	1 acre	4.73	0.84	33%	67%	5	1	0	1	0%	1	0	1
<b>Totals:</b>								5	1	0	1		1	0	1

Source: Tindale Oliver and Associates, Inc., November 1998

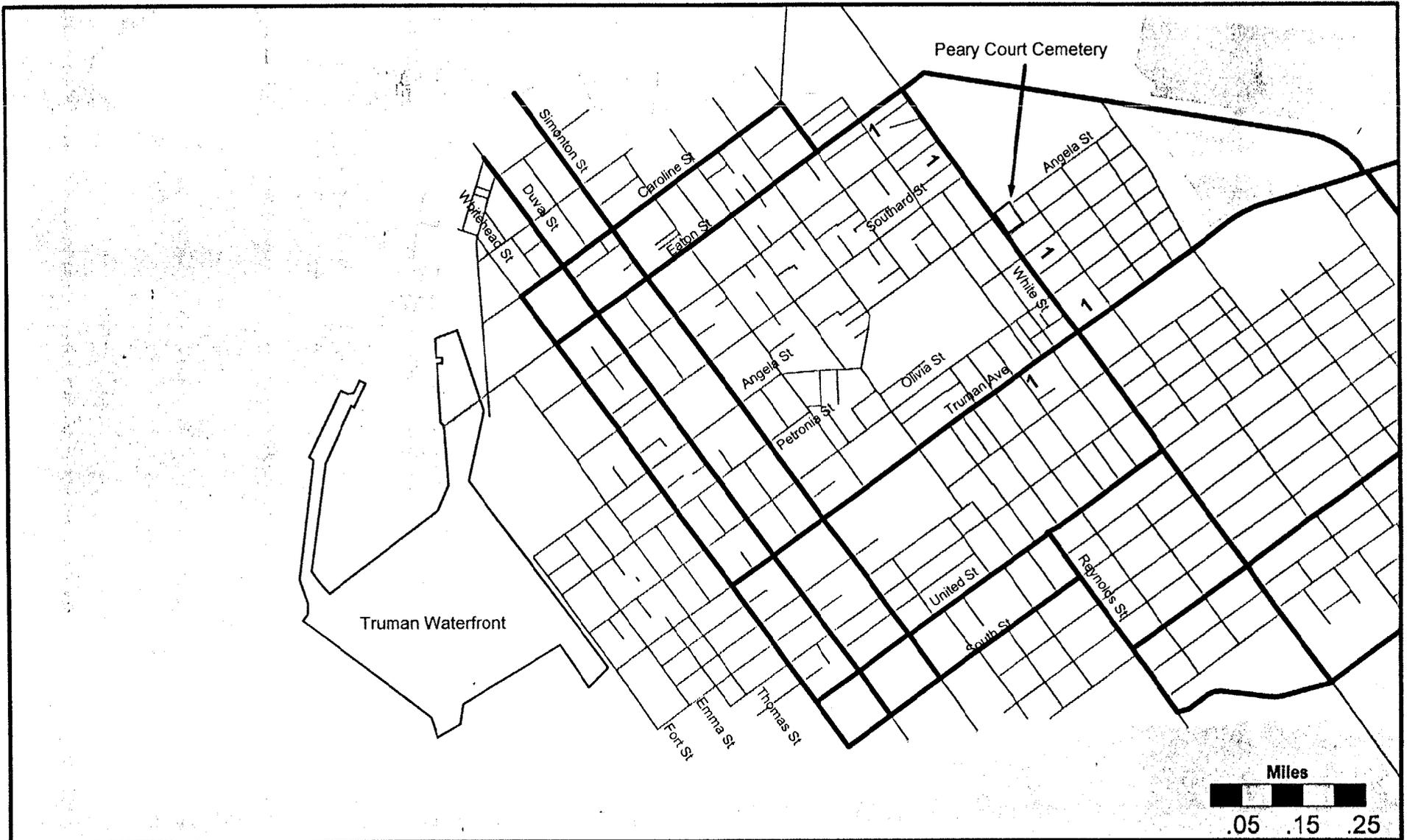


**Legend**

- ← XX Percent Distribution To Site
- ← (XX) Percent Distribution From Site

**Figure IV. A. 5**  
**Peary Court Cemetery**  
**PM Peak Hour Trip Distribution**

**TINDALE**  
 and Associates, Inc.  
**OLIVER** Planning and Engineering



Legend

**XX PM PEAK HOUR Trips**

**Figure IV. A. 6**

**Peary Court Cemetery  
PM PEAK HOUR Trip Assignment**

**TINDALE**  
and Associates, Inc.  
**OLIVER** Planning and Engineering

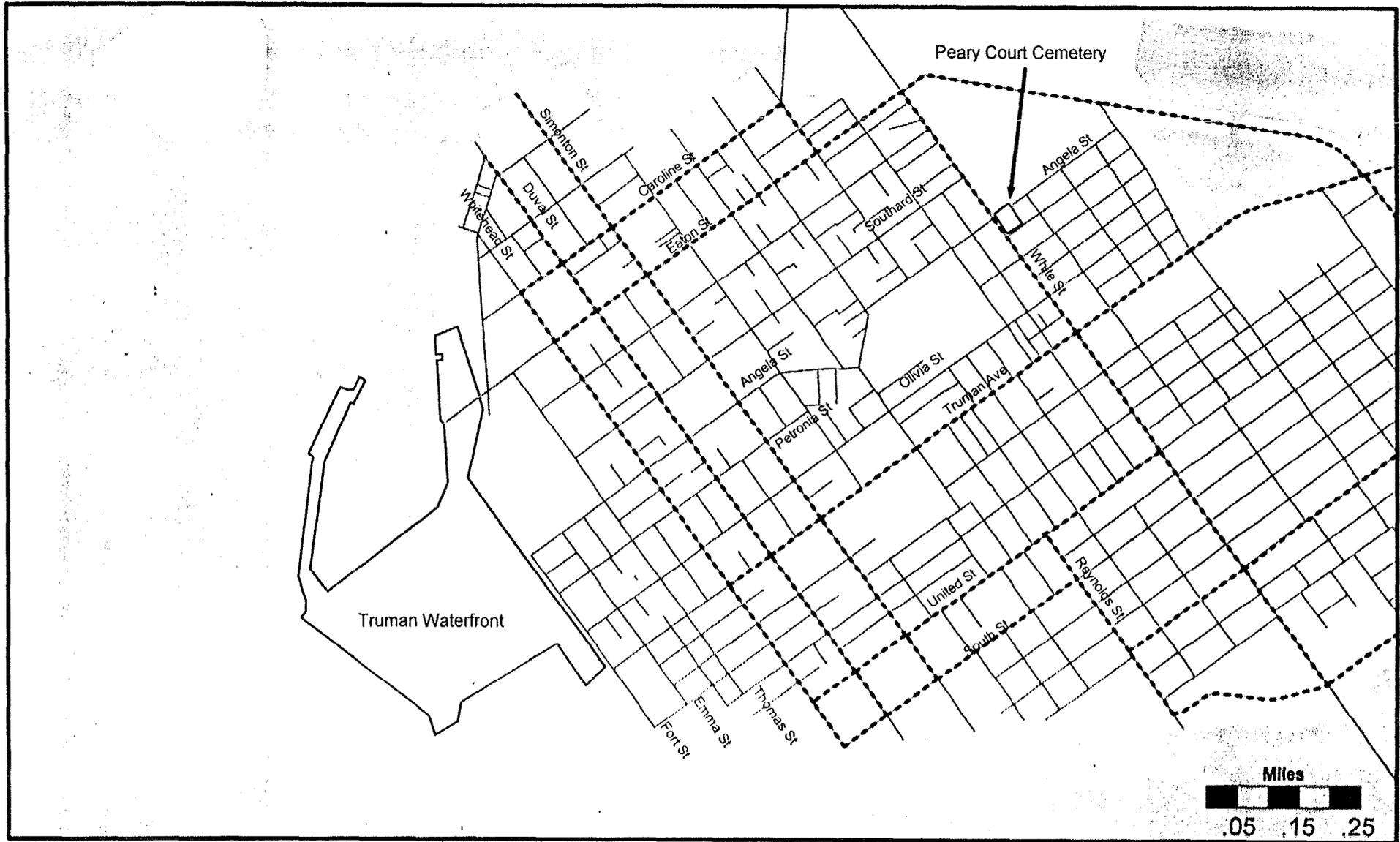
#### *Level of Service*

Since the implementation of the proposed **Base Reuse Plan** does not result in any changes to the site's trip generation characteristics, no changes in level of service are expected to occur as a result of the plan implementation. **Figure IV.A.7, Peary Court Cemetery PM Peak Hour Capacity Consumed**, illustrates the site will consume no greater than three percent of the available roadway service capacity on any of the roadways that are a part of the city's functionally classified road network.

For the purposes of this level of service analysis, Highway Capacity Manual procedures and the capacities and procedures identified in the Florida Department of Transportation's Level of Service Guidelines were utilized. Level of service calculations for interrupted flow arterials were accomplished using procedures constant with the methodology employed by the Florida Department of Transportation's ART-PLAN 2.0 Level of Service Spreadsheet. A detailed inventory of level of service data and calculations is found in **Appendix IV.A.**, for the 2003 level of service with the implementation of the **Base Reuse Plan**. This analysis includes the traffic impacts from all three sites. The resulting level of service is illustrated in **Figure IV.A.8, Peary Court Cemetery 2003 PM Peak Hour Level of Service With Project Trips**. As indicated previously, the level of service did not change as the result of this site and the adjacent sections of White Street to the north and south of the site will continue to operate at a level of service "B" condition.

#### *Summary*

In summary, the **Base Reuse Plan** proposed activities at the Peary Court Cemetery will not result in changes to the existing land use at the site, and therefore will not increase or decrease demands on the transportation facilities and systems in the City of Key West.



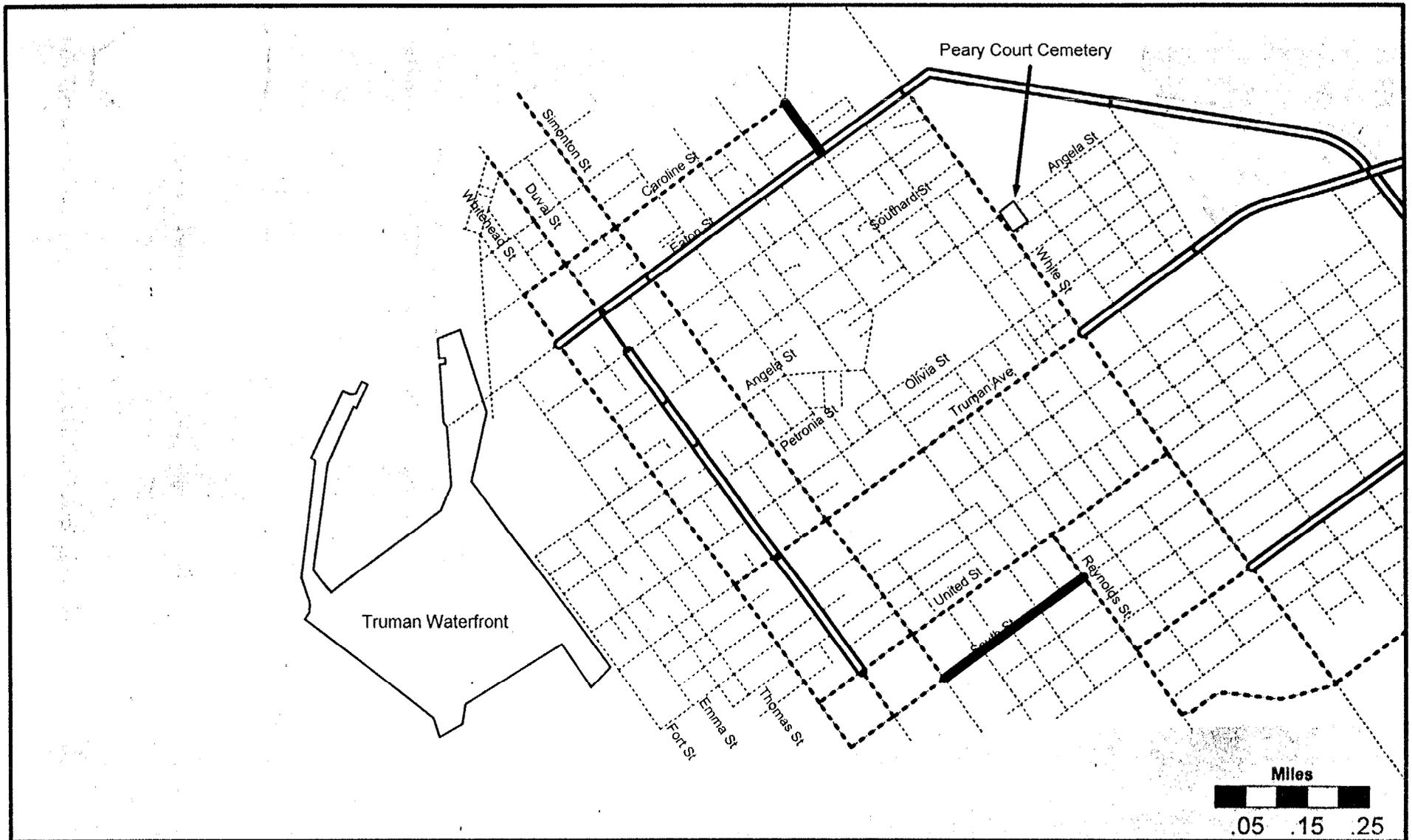
**Legend**

- < 3% Service Capacity Consumed
- - 3 - 5% Service Capacity Consumed
- > 5% Service Capacity Consumed

**Figure IV. A. 7**

**Peary Court Cemetery  
PM PEAK HOUR Capacity Consumed**

**TINDALE**  
**OLIVER** and Associates, Inc.  
Planning and Engineering



**Legend**

- Level of Service A, B, C
- Level of Service D
- ▬ Level of Service E
- ▭ Level of Service F
- Level of Service Not Determined for Local Road:

**Figure IV. A. 8**  
**Peary Court Cemetery**  
**2003 PM PEAK HOUR Level of Service**  
**With Project Trips**

**TINDALE**  
**OLIVER** and Associates, Inc.  
 Planning and Engineering

### ***Poinciana Housing - Transportation Impacts***

This section details the anticipated traffic impacts of the **Base Reuse Plan** on the Poinciana Housing parcel. This site is located north of Duck Avenue in the northeastern portion of the island and is roughly six city blocks in size. Changes to the site include a slight increase in apartment dwelling units and the inclusion of social services at the site to include a recreational facility, church, and child day care center. Additional location and specific development objectives of this site are described in greater detail elsewhere in this report. The following subsections describe the trip generation, trip distribution, trip assignment, and level of service impacts of the proposed redevelopment uses at the Poinciana Housing site in detail.

#### *Trip Generation*

The proposed implementation of the **Base Reuse Plan** at the Poinciana Housing site will result in relatively minor changes to the site's existing land uses. Up to 16 additional multifamily dwelling units are expected to be added, as well as provisions for social service activities. Trip Generation for the site was accomplished using the reference ITE Trip Generation, 6<sup>th</sup> Edition. No adjustments for internal capture were utilized within the Truman Waterfront area, although some internal capture of trips could be expected to occur. Adjustments were made, however, to reflect the increased use of walking as a mode of transportation in Key West. As indicated in other plans and surveys conducted in Key West, approximately 45 percent of tourist trips and 23 percent of non-tourist trips are non-vehicular, primarily walking or biking. Trip generation for components of the site was reduced by 40 percent for tourist based trips and 16 percent for non-tourist based trips.

**Table IV.A.5, Poinciana Housing: Existing Land Use Trip Generation**, tabulates the existing trip generation characteristics at the site while **Table IV.A.6, Poinciana Housing: Proposed Land Use Trip Generation**, tabulates the proposed trip generation characteristics of the site following implementation of the **Base Reuse Plan**.

The trip generation estimates indicate the existing land uses at the site generate 1,750 daily trip ends per day and 138 net trip ends during the p.m. peak hour. The projected trip generation estimates reflecting the improvements found in the **Base Reuse Plan** will result in a total of 2,722 daily trip ends per day and 225 net trip ends during the p.m. peak hour. Thus, the proposed **Base Reuse Plan** will result in a net increase of 88 trip ends during the p.m. peak hour for this site and 972 daily trip ends per day.

*Trip Distribution*

In order to estimate the p.m. peak hour trip distributions to and from the site, trip distribution for the site was based upon existing p.m. peak hour turning movement counts and the prevailing existing daily traffic on the streets surrounding the Poinciana Housing site. **Figure IV.A.9, Poinciana Housing PM Peak Hour Trip Distribution**, illustrates the location of the site, as well as the anticipated trip distribution of trip ends beginning or ending at the site. The following summarizes the projected p.m. peak hour trip distribution:

TABLE IV.A.5

PEARY COURT CEMETERY: EXISTING LAND USE TRIP GENERATION

Land Use	ITE Code	ITE Land Use	Quantity	Daily Avg. Trip Rate	PM Peak Trip Rate	PM Peak %		Gross Daily Trips	Gross PM Peak Trips			Percent Pedestrian	Net PM Peak Trips		
						Entering	Exiting		Total Trips	Entering Trips	Exiting Trips		Total Trips	Entering Trips	Exiting Trips
Apartments	220	Apartments	212 D.U.s	6.63	0.62	67%	33%	1,405	133	89	44	16%	112	75	37
Police Substation	730	Government Office	5,000 sq. ft.	68.93	6.27	17%	83%	345	31	5	26	16%	26	4	22
<b>Totals:</b>								<b>1,760</b>	<b>164</b>	<b>94</b>	<b>70</b>		<b>138</b>	<b>79</b>	<b>69</b>

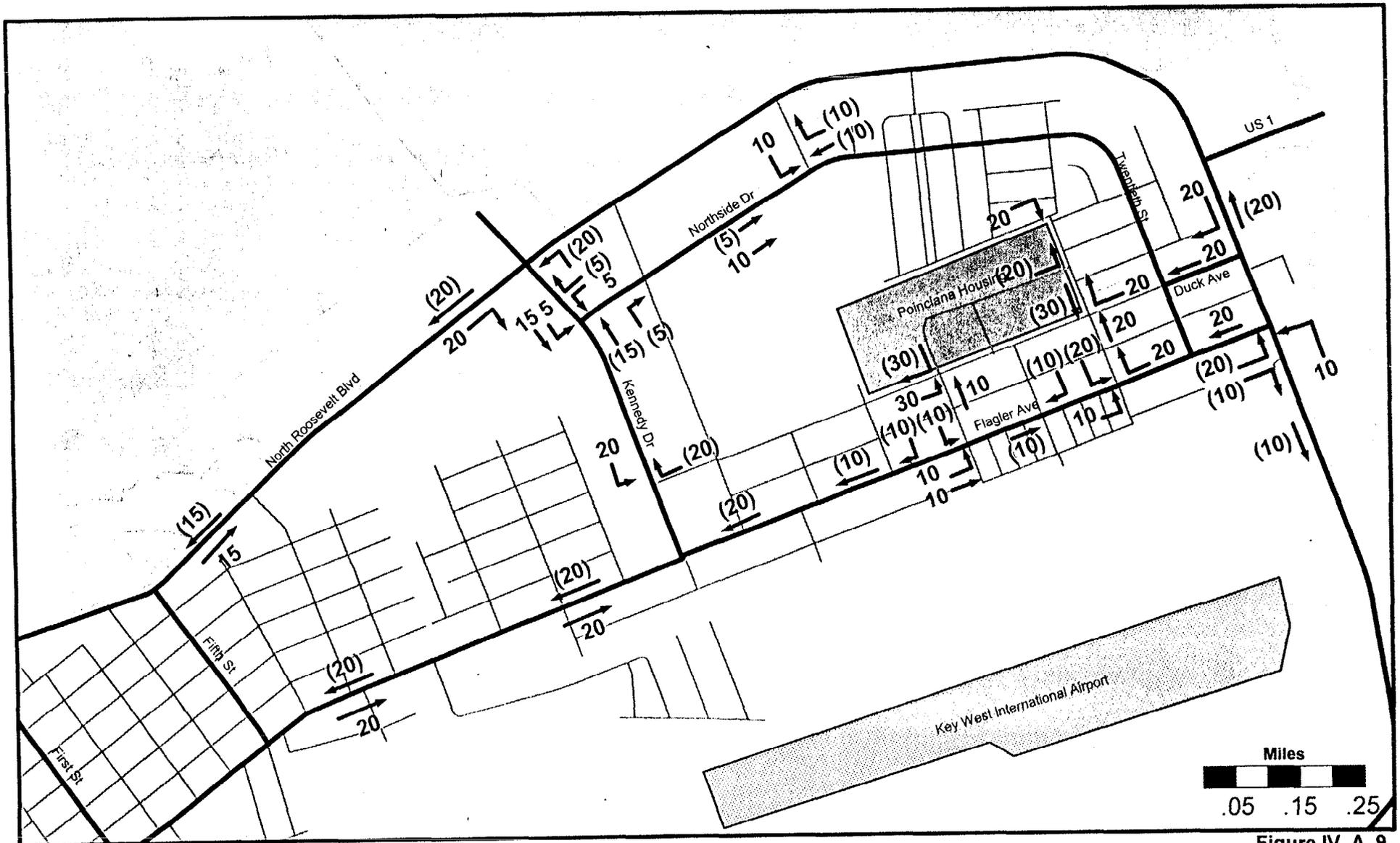
Source: Tindale Oliver and Associates, Inc., November 1998

TABLE IV.A.6

PEARY COURT CEMETERY: PROPOSED LAND USE TRIP GENERATION

Land Use	ITE Code	ITE Land Use	Quantity	Daily Avg. Trip Rate	PM Peak Trip Rate	PM Peak %		Gross Daily Trips	Gross PM Peak Trips			Percent Pedestrian	Net PM Peak Trips		
						Entering	Exiting		Total Trips	Entering Trips	Exiting Trips		Total Trips	Entering Trips	Exiting Trips
Apartments	220	Apartments	228 D.U.s	6.63	0.62	67%	33%	1,501	142	95	47	16%	119	80	39
Recreational Community Center	495	Recreational Community Center	15,000 sq. ft.	22.88	1.75	66%	34%	343	26	9	17	16%	22	7	15
Church	560	Church	15,000 sq. ft.	9.11	0.66	46%	46%	137	10	5	5	16%	8	4	4
Day Care Center	565	Day Care Center	5,000 sq. ft.	79.26	13.2	53%	53%	396	60	28	32	16%	50	24	27
Police Substation	730	Government Office	5,000 sq. ft.	68.93	6.27	17%	83%	345	31	5	26	16%	26	4	22
<b>Totals:</b>								<b>2,722</b>	<b>269</b>	<b>142</b>	<b>127</b>		<b>225</b>	<b>119</b>	<b>107</b>

Source: Tindale Oliver and Associates, Inc., November 1998



Legend

- ← XX Percent Distribution To Site
- ← (XX) Percent Distributions From Site One Way Streets

Figure IV. A. 9  
Poinciana Housing  
PM PEAK HOUR Trip Distribution

**TINDALE**  
**OLIVER** and Associates, Inc.  
Planning and Engineering

- 50% of all trips entering and exiting the site will travel to or from the east of the site;
- 50% of all trips entering and exiting the site will travel to or from the west of the site;
- 20% of all trips entering and exiting the site will travel to or from the west via North Roosevelt Boulevard;
- 20% of all trips entering and exiting the site will travel to or from the west via Flagler Avenue;
- 10% of all trips entering and exiting the site will travel to or from the south via South Roosevelt Boulevard; and,
- 20% of all trips entering and exiting the site will travel to or from the north via South Roosevelt Boulevard.

#### *Trip Assignment*

The assignment of p.m. peak hour trips to and from the Poinciana Housing site was developed by multiplying the traffic entering the site by the traffic distribution percentage to the site and, similarly, by multiplying the traffic exiting from the site by the traffic distribution percentages from the site. The resulting total p.m. peak hour site traffic is illustrated in **Figure IV.A.10, Poinciana Housing PM Peak Hour Trip Assignment.**

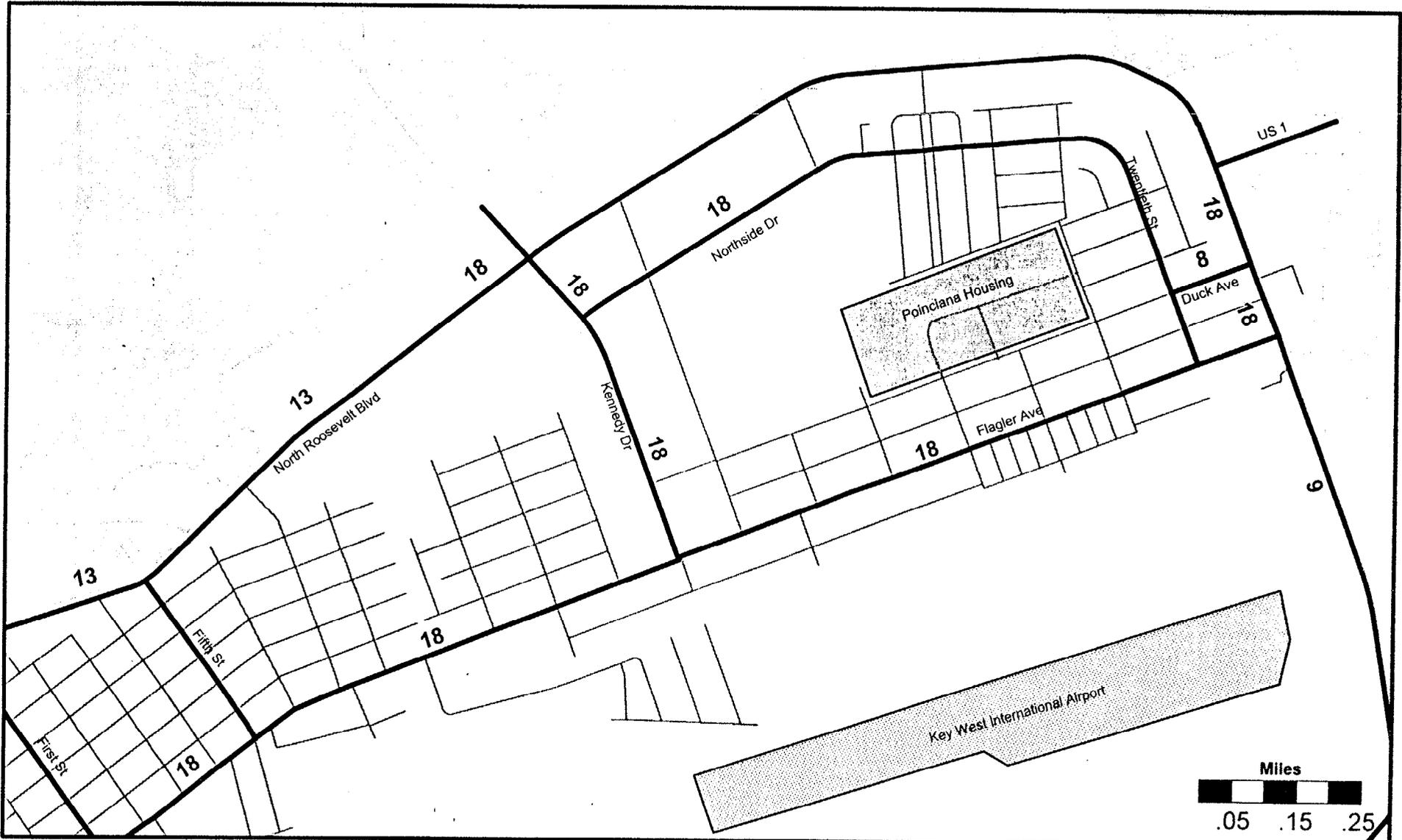
#### *Level of Service*

The implementation of the proposed **Base Reuse Plan** is estimated to result in a net increase of 40 entering and 48 exiting p.m. peak hour trips. **Figure IV.A.11, Poinciana Housing PM Peak Hour Capacity Consumed,** illustrates the site will consume no greater than three percent of the available roadway service capacity on any of the roadways that are a part of the city's functionally classified road network. It is important to note that the percentage of capacity consumed is based on total **Base Reuse Plan** land uses and not just the net additional trips. Therefore none of the roadways in the city's functionally classified road network would be on a traditional study network of 5 percent of service capacity consumed.

For the purposes of this level of service analysis, Highway Capacity Manual procedures and the capacities and procedures identified in the Florida Department of Transportation's Level of Service Guidelines were utilized. Level of service calculations for interrupted flow arterials were accomplished using procedures consistent with the methodology employed by the Florida Department of Transportation's ART-PLAN 2.0 Level of Service Spreadsheet. A detailed inventory of level of service data and calculations is found in **Appendix IV.A.,** for the 2003 level of service. This analysis includes the traffic impacts from all three sites. The resulting level of service is illustrated in **Figure IV.A.12, Poinciana Housing 2003 PM Peak Hour Level of Service With Project Trips.**

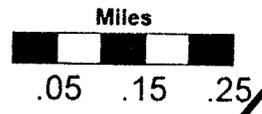
*Summary*

In summary, the **Base Reuse Plan** proposed activities at the Poinciana Housing site will not significantly increase demands on the transportation facilities and systems in the City of Key West or cause any additional roadways to operate below their adopted performance standard. The site also has adequate access to bicycle facilities and public transportation consistent with the exiting **Comprehensive Plan**.



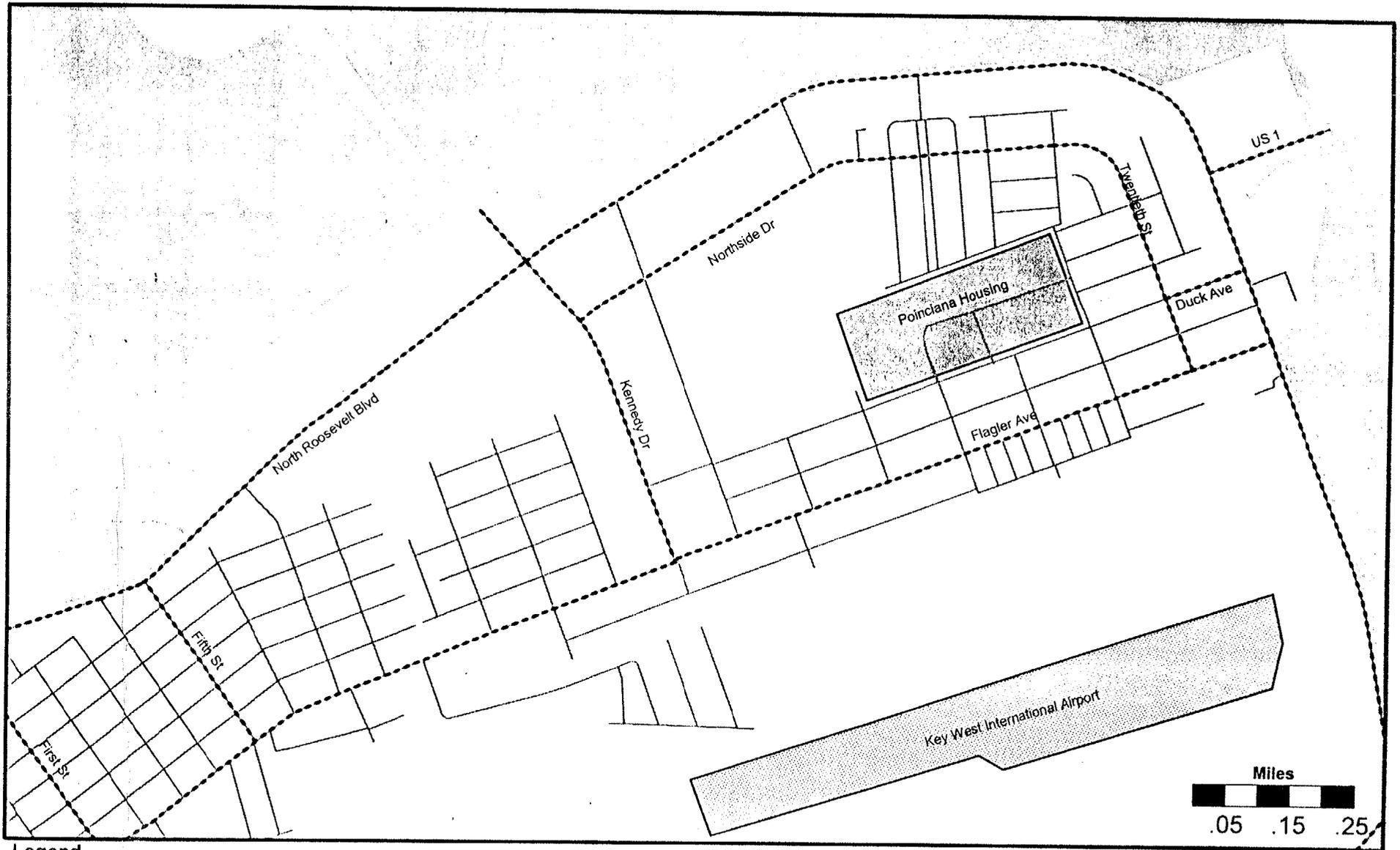
Legend

**XX PM PEAK HOUR Trips**



**Figure IV. A. 10**  
**Poinciana Housing**  
**PM PEAK HOUR Trip Assignment**

**TINDALE**  
**OLIVER** and Associates, Inc.  
 Planning and Engineering



**Legend**

- < 3% Service Capacity Consumed
- - - 3 - 5% Service Capacity Consumed
- > 5% Service Capacity Consumed

Figure IV. A. 11

**Poinciana Housing  
PM PEAK HOUR Percent Capacity Consumed**

**TINDALE**  
**OLIVER** and Associates, Inc.  
Planning and Engineering



**Methods for Addressing Potential Impacts to Transportation Resources and Facilities**

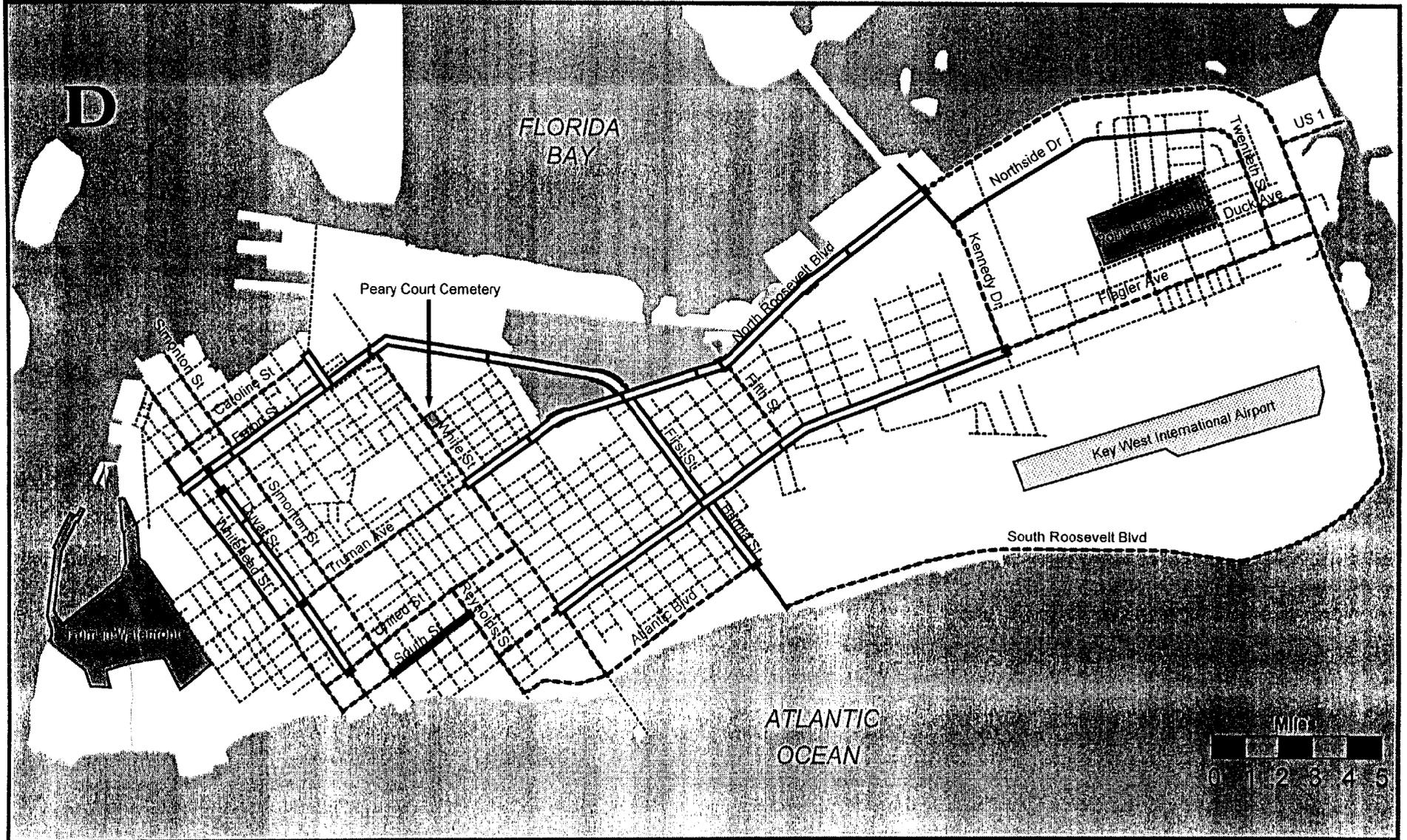
The cumulative impacts of the three Base Reuse sites result in a total of ~~26,543~~ 17,903 daily vehicle trip ends. However, 5,029 of these trips are existing trips resulting in a net increase of ~~21,515~~ 12,874 of the daily vehicle trip ends. In a similar fashion, the three sites result in a total of ~~4,645~~ 1,194 p.m. peak hour vehicle trip ends while the existing p.m. peak hour trips from the sites is 318. Thus the proposed reuse plan results in ~~4,297~~ 876 net new p.m. peak hour trips which are concentrated at the Truman Waterfront and Poinciana Housing sites. **Figure IV. B.1, 2002 PM Peak Hour Level of Service With Project Traffic**, illustrates the 2003 level of service with the full implementation of the base reuse plan. No significant new adverse transportation impacts are expected to occur as the direct result of the proposed Base Reuse development beyond those which already exist. Additionally, the land use quantities analyzed for the Truman Waterfront site is greater than what is expected to occur at the site.

As discussed previously in this report, the transportation related deficiencies found in the City of Key West are either existing discrepancies or primarily the result of background traffic growth within the city. The proposed **Base Reuse Plan** land use option does not adversely impact any transportation facilities except for roadways already operating below their adopted performance standard or will operate below their adopted performance standard with the use of the two percent per year annual growth rate in background traffic, with the exception of a short link of Duval Street south of Eaton Street.

Previous traffic studies have identified numerous mitigation strategies for improving traffic flow within the City of Key West. However, none of these previous studies fully considered the traffic impacts of the Key West Base Reuse and the Bahama Village Redevelopment. Specific improvements to mitigate existing and near term transportation deficiencies should be identified. Furthermore, the City of Key West should update its Transportation Concurrency Management System to evaluate the cumulative impacts of development, including the base reuse as specific improvement projects begin to be implemented. Consistent with these needs the following policies are recommended for adoption.

- (1) Within the next two years the City of Key West will conduct a comprehensive traffic circulation study considering current traffic volumes, recent and planned development projects, street circulation, parking, public transportation, ports, aviation facilities, level of service and potential needed improvements and changes in traffic circulation. This study should result in a comprehensive listing of needed transportation improvements and an identification of short term and long term implementation and financing strategies.

(2) Within the next two years the City of Key West will conduct a study to evaluate concurrency management options that may include reducing level of service standards, ~~concurrency exception areas~~, establishment of Transportation Concurrency Management Area(s) or Transportation Concurrency Exception Area(s), and other options as appropriate. The recommendations of this study will be used to update the City of Key West's concurrency management system.



**Legend**

- Level of Service A, B, C
- Level of Service D
- Level of Service E
- ▭ Level of Service F
- ⋯ Level of Service Not Determined for Local Roads

**Figure IV. B. 1**

**2003 PM Peak Hour Level of Service With Project Traffic**

**TINDALE OLIVER** and Associates, Inc.  
 Planning and Engineering

The proposed **Base Reuse Plan** is not expected to cause any new significant adverse impacts to the City of Key West's existing transportation facilities and systems. Policies similar to those referenced above should be integrated into the **City of Key West's Comprehensive Plan** to accommodate proposed developments in the City of Key West including the implementation of improvements to the former military base locations, as identified in this **Base Reuse Plan**.

### **Wastewater**

The city's wastewater system is undergoing a series of improvements meant to reduce environmental impacts and reduce infiltration of ground water into the system. Due to the infiltration problem, the average daily generation permitted for treatment at the plant needs to be increased. This is an existing condition; the city has applied for a state permit and that application has been determined to be complete. Assuming the permitted increase is allowed, there does not appear to be a capacity shortfall in the wastewater treatment or transmission facilities. Therefore, adequate facilities appear to be available.

### **Potable Water**

The Florida Keys Aquaduct Authority has adequate water treatment and transmission facilities to address existing needs and also has excess capacity for future development. The excess capacity is adequate to address the proposed maximum development scenario for the base reuse sites.

### **Solid Waste**

The city has excess solid waste treatment capacity and is expected to be able to accommodate the impacts associated with the base reuse sites.

### **Drainage**

The city's existing drainage system is antiquated and is undergoing significant retrofitting and replacement. New drainage facilities may be required for redevelopment on the sites. Each facility will be designed for specific development plans and will assess whether the existing conveyance system is adequate for storm water discharge. Typically, storm water is addressed as a site specific engineering solution, and there is no indication development plans will be unable to meet or exceed stormwater requirements.

### **Recreation and Open Space**

The proposed development of the reuse sites could result in the addition of 1,011 residents, assuming all units were available in the Building Permit Allocation System to develop all residential units. Further, this figure is a conservative estimate and does not reflect what has been a relatively constant occupation of units at the Poinciana Housing site since it was constructed. Nevertheless, a comparison of additional population to the level of service, see **Table III.H.5 Maximum Population**, reveals that adequate existing recreational facilities will accommodate development of the sites, see **Table III.H.6 Recreational Facility Needs**. Further, both the Truman Waterfront and Poinciana Housing sites include significant recreational resources (Truman Waterfront contains 24.44 acres of proposed park land and Poinciana has one existing playground).

### **Economic Development**

The Truman Waterfront is also directly adjacent on its eastern boundary to the historic Bahama Village neighborhood. Development of the Truman Waterfront provides an opportunity to connect these two communities by providing a smooth transition of land uses, continue the existing grid roadway system, and incorporating design and building standards which reflect the historic character of the area. The most exciting opportunity, however, is the opportunity to connect Bahama Village, where economic development and job creation have always been high priorities, to the economic framework of the community. Historically, the Truman Waterfront site has been literally fenced off from the surrounding community. Future development at the site proposes to open the site to retail enterprises, office space, and light industrial businesses. This connects Bahama Village to a whole range of economic opportunities, literally located across the street.

### **Affordable Housing**

This plan proposes housing unit development for the Poinciana Housing parcel and the Truman Waterfront site. At the Poinciana Housing Parcel, the plan proposes distributing 16 additional dwelling units throughout the existing 212 units. It also proposes adapting 50 of the existing buildings surrounding the proposed new human service building into transitional housing for special needs populations. The remaining 162 units will be used to provide affordable rental and affordable home ownership units. The existing buildings were built in the early 1960's and are in good condition; however, minor repairs and renovations may be needed.

The Truman Waterfront site incorporates a proposed area of medium-density housing units along the eastern edge of the Truman Waterfront property. Units in this area could be developed to meet Key West's affordability thresholds, and are recommended to be built in a type and style similar to that found in historic Key West.

The Rate of Growth Ordinance (ROGO) which apportions housing in the city currently has no dwelling units available for permitting at the Truman Waterfront site; any future allocation of units will be on a city-wide basis. However, proposed new in Policy 1.2.1.1 in Section V. of this plan designates the Truman Waterfront as one of only two

### ***Emergency Preparedness***

All construction will be in accordance with FEMA requirements. The proposed community center on the Poinciana Housing parcel could be designed to serve as a refuge-of-last-resort in the event of hurricane.

### **Natural Resources of Regional Significance**

The proposed land uses are not expected to have any net negative impact on natural resources. This finding is based on the overall paucity of natural resources on the three sites, the proposed development plan and associated land uses, and the extensive local, state and federal regulations which govern the impact of development on natural systems. Each site is addressed individually below.

#### ***Truman Waterfront Parcel***

The Truman Waterfront Parcel was created entirely out of material deposited on tidal wetlands for the purposes of supporting military activities, most recently a submarine basin. As a result, most of the site is environmentally barren: paved surfaces, structures, and hardened shorelines dominate the landscape. Natural resources are concentrated along the shoreline, and consist of ecological communities which have adapted to the hardened surfaces and secondary impacts of a deep water port and military base. Therefore, in measuring the potential impact of the proposed land uses on natural resources, and understanding of how the proposed uses will change the existing impact scenario is helpful. The following outlines identified resources and outlines how proposed uses will impact the resources.

**Sandy Beach and Turtle Nesting Area:** This area will be incorporated into the HPS land use classification. Fort Zachery Taylor State Park has already initiated conveyance activities to ensure that this area and associated resources are maintained as part of the park facility. In addition, the resources are protected by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, as well as the Florida Department of Environmental Protection, Division of Beaches and Shores.

**Bird Nesting Areas:** Existing bird nesting areas for Least Terns are located within the HPS-1 land use classification, on the roofs of existing WWII structures. The concept plan for this area shows demolition of the structures for a park facility. Disruption of the birds during nesting season is regulated by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, the Florida Fresh Water Fish and Game Commission and the U.S. Fish and Wildlife Service. These nesting areas would be protected regardless of the proposed classification of the site.

An osprey nest has been identified within the area proposed for classification as HNC-2. This nest is located on an existing water tower. Proposed development in this area, including the potential removal of the water tower, will need to be coordinated with the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, the Florida Fresh Water Fish and Game Commission and the U.S. Fish and Wildlife Service.

**Coral Colonized Structures:** The existing coral colonies on the harbor bulkhead are all included within the proposed HRCC-4 (port) area. These colonies have adapted to the hardened shoreline and port uses, and would become quickly re-established in areas where disruptions due to bulkhead repair or replacement are planned. Impacts to coral communities are heavily regulated by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers.

**Seagrass Beds:** Seagrass beds of varying densities are located along the edge of the parcel, with the most heavily vegetated areas adjacent to the proposed HPS designation scheduled for incorporation into Fort Zachery Taylor. Remaining seagrass patches are offshore of the area designated as HRCC-4. The City Commission's decision to limit cruise ship berth expansion should adequately protect existing resources. Furthermore, impacts to seagrasses are heavily regulated by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers. It is anticipated that any unavoidable resource impacts will be minimized and mitigated through the permitting process. Policies which specifically address port-related impacts are recommended for adoption with this plan.

**Water Quality:** Two potential marinas are shown adjacent to the proposed HRCC-4 and HPS areas. These areas are already bulkheaded, and have been used for port and small boat berthing in the past. A floating marina is now located in one of the proposed marina areas. Construction and operation of marina facilities can have primary and secondary impacts on water quality and nearby submerged resources.

Although the concept plan shows these marinas as an option which may be permitted adjacent to the proposed classification, they will be extensively studied through the regulatory process set forth by the **City of Key West Comprehensive Plan** and implementing **Land Development Regulations**, Florida Department of Environmental Protection and the United States Army Corps of Engineers.

#### ***Poinciana Housing Parcel***

The Poinciana Housing Parcel was developed in 1969 on top of filled wetlands. The only remaining natural resource on the site is a narrow, mangrove vegetated lake located along the north edge of the site. The entire mangrove area is designed for conservation. Therefore, no impacts to natural resources are expected from the proposed use.

#### ***Peary Court Cemetery***

There are no natural resources on the Peary Court Cemetery site.

#### ***Soils and Topography***

The proposed land uses will not negatively impact the soils or topography of the underlying land. Specifically, all three sites are located on urban soils, where prior activities have significantly altered the natural soils and topography.

#### ***Historic Resources***

Proposed land uses are not expected to have any negative affect on historic or prehistoric uses. Extensive historic and archaeologic research conducted by the United States Army Corps of Engineers and their consultants, and reviewed and confirmed by the Florida Department of State Division of Historical Resources State Historic Preservation Officer on August 7, 1998, have identified potentially historic sites and recommended management plans for each. The proposed land uses accommodate these management plans. Further, existing **Comprehensive Plan** policies provided for additional protection at the local level. Details relevant to each site are provided below.

#### ***Truman Waterfront***

Two historic sites have been identified within the Truman Waterfront. A description of recommended maintenance for the two sites is provided below.

The Seminole Battery/Structure 283 is to be restored and receive open space improvements. Information regarding the site restoration will be provided to the State Historic Preservation Officer (SHPO) at the time plans are available. The proposed use is not expected to adversely effect this site.

The Fort Zachary Taylor Coverface/Site 8MO206 is largely part of a parcel intended to be converted to the Florida State Department of Environmental Protection, Division of Parks and Recreation. It will be maintained as a historic site and has been added to Site 8MO206, Fort Zachary Taylor, on the National Register of Historic Places. A small portion at the northwest tip of the site is intended as a transportation facility. This area is located furthest from excavations which produced artifacts. Information about the site will be provided to the SHPO, and any land moving activities for this site will be coordinated with the SHPO as recommended by the Florida Department of State and the National Parks Service. The proposed use is not expected to adversely impact the site.

#### ***Poinciana Housing***

No historically sensitive artifacts or structures have been found or are believed to be present at the Poinciana Housing site; therefore, no historic maintenance will be necessary.

#### ***Peary Court Cemetery***

Peary Court Cemetery is currently protected under a 1990 Memorandum of Agreement (MOA) between the SHPO and the U.S. Navy stipulating that the cemetery be preserved in place and maintained by the U.S. Navy. The SHPO and the Department of the Interior may be involved in reviewing and approving plans for re-interment of additional bodies.

#### ***Principles for Guiding Development***

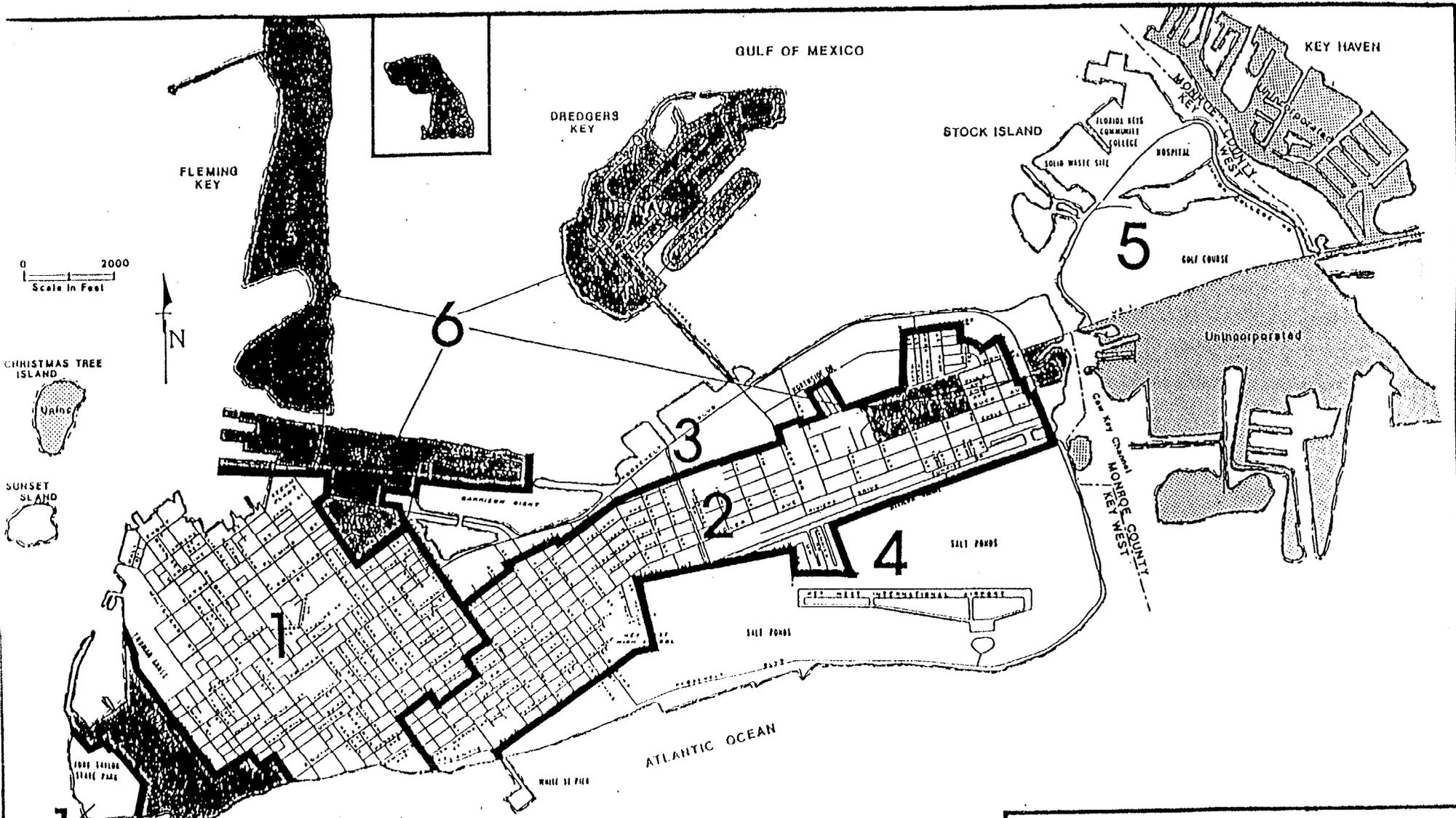
The Principles for Guiding Development (Rule 27F-15.03, FAC) define specific objectives to be achieved within the City of Key West Area of Critical State Concern. The Principles provide for strengthening local governments ability to manage historic and natural resources, minimize impact of providing adequate infrastructure, and protecting the unique character and economy of the Key West community.

Policies 1-1.6.1 and 1-6.1.2 contained in proposed new objective 1-1.6 in Section V. of this plan incorporate procedures to insure that the design objectives and design guidelines of

the community consensus-based concept plans for the individual sites implemented during the development review process.

Proposed new policies 1A-1.1.12 and 1A-1.18 under Objective 1A-1.1 in Section V. of this plan provide that the Historic Planner identified any historic resources which may exist, and take measures to ensure that they are considered and protected during the development review process.

**Appendix A**  
**Existing Land Use Map Series**



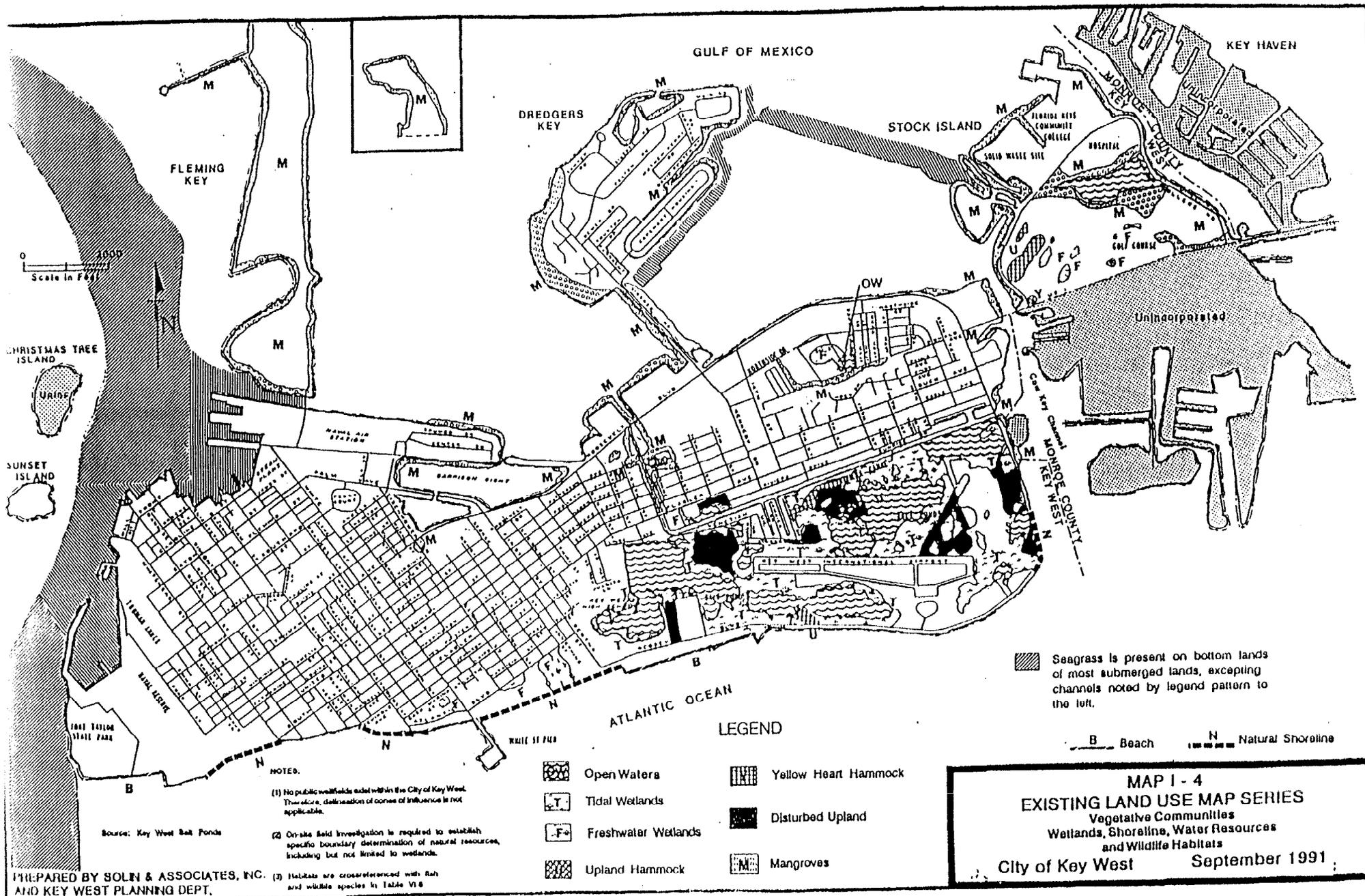
Legend

- |                       |                       |                      |
|-----------------------|-----------------------|----------------------|
| 1 Old Town            | 3 Northern Commercial | 5 North Stock Island |
| 2 Central Residential | 4 Salt Ponds          | 6 Military           |

MAP I-1  
 EXISTING LAND USE MAP SERIES  
 Planning Areas  
 City of Key West  
 July, 1989

PREPARED BY SOLIN & ASSOCIATES, INC.  
 AND KEY WEST PLANNING DEPT.





0 1000  
Scale in Feet

CHRISTMAS TREE ISLAND  
SUNSET ISLAND

FLEMING KEY

DREDGERS KEY

STOCK ISLAND

KEY HAVEN

Unincorporated

ATLANTIC OCEAN

Seagrass is present on bottom lands of most submerged lands, excepting channels noted by legend pattern to the left.

B Beach N Natural Shoreline

LEGEND

- Open Waters
- Tidal Wetlands
- Freshwater Wetlands
- Upland Hammock
- Yellow Heart Hammock
- Disturbed Upland
- Mangroves

NOTES:  
 (1) No public waterfronts exist within the City of Key West. Therefore, determination of cones of influence is not applicable.  
 (2) On-site field investigation is required to establish specific boundary determination of natural resources, including but not limited to wetlands.  
 (3) Habitats are cross-referenced with fish and wildlife species in Table VI.6

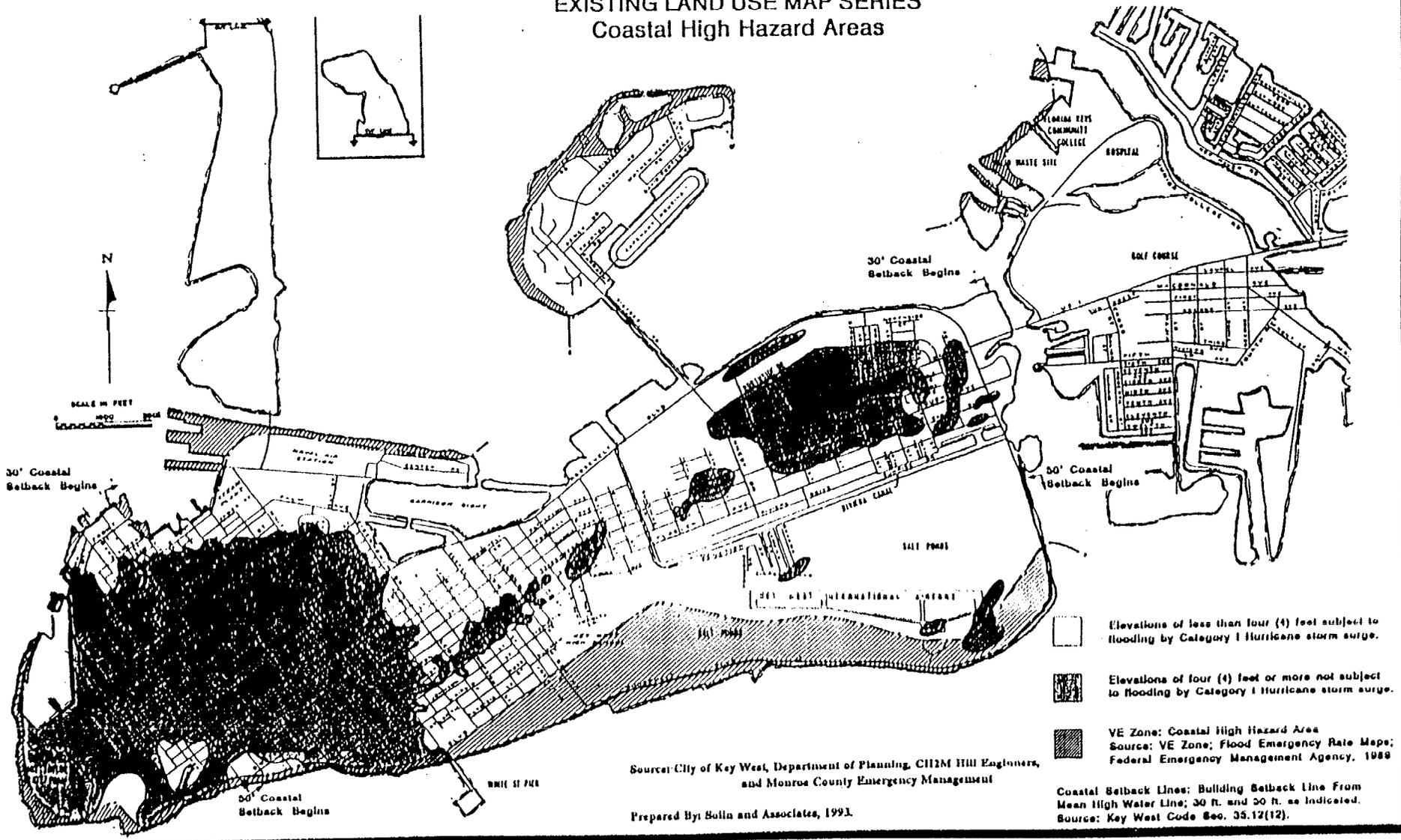
Source: Key West Bath Ponds

PREPARED BY SOLIN & ASSOCIATES, INC. AND KEY WEST PLANNING DEPT.

MAP I - 4  
 EXISTING LAND USE MAP SERIES  
 Vegetative Communities  
 Wetlands, Shoreline, Water Resources  
 and Wildlife Habitats  
 City of Key West September 1991



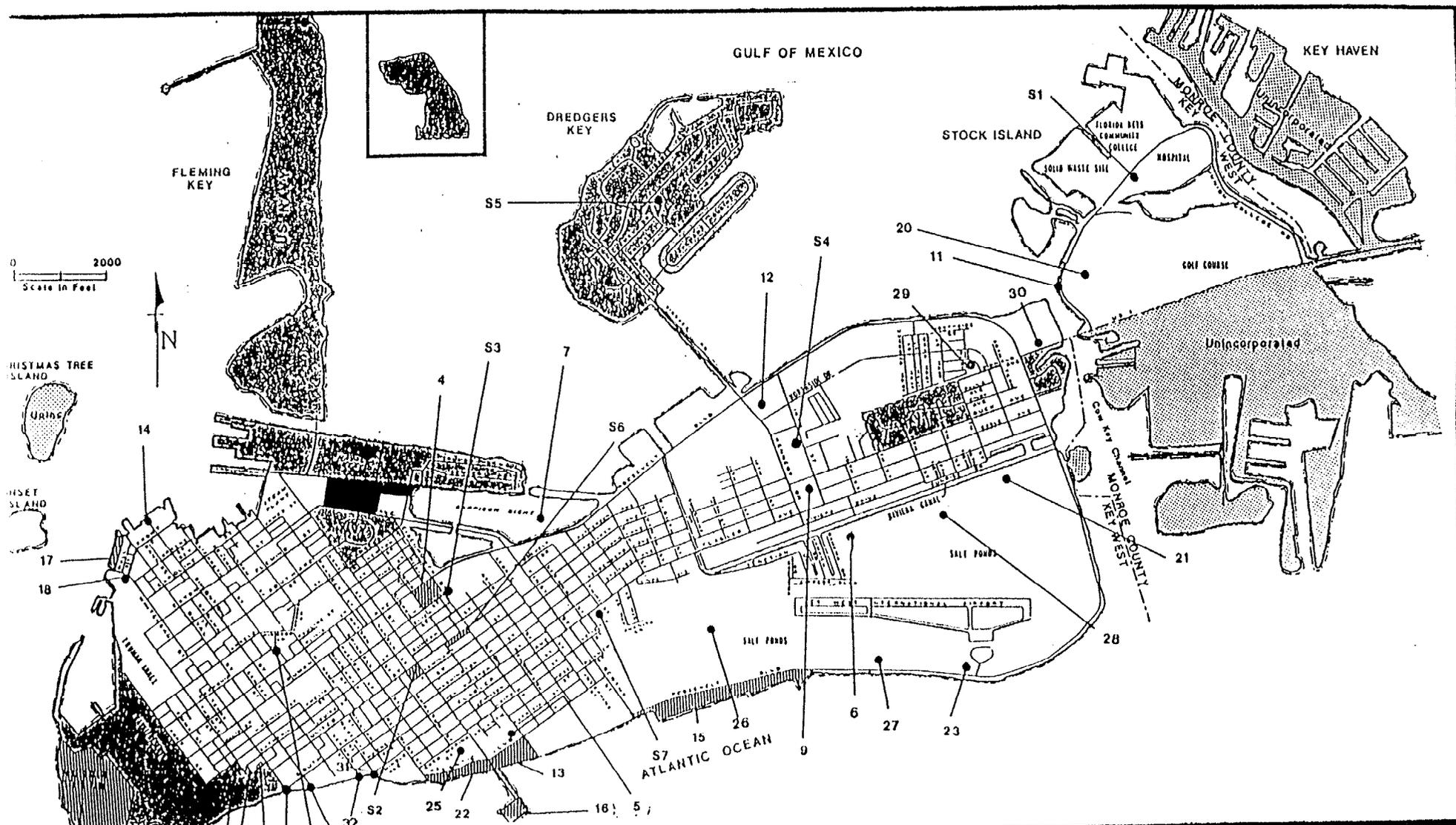
MAP I - 6  
 EXISTING LAND USE MAP SERIES  
 Coastal High Hazard Areas



-  Elevations of less than four (4) feet subject to flooding by Category I Hurricane storm surge.
-  Elevations of four (4) feet or more not subject to flooding by Category I Hurricane storm surge.
-  VE Zone: Coastal High Hazard Area  
 Source: VE Zone; Flood Emergency Rate Maps; Federal Emergency Management Agency, 1989

Source: City of Key West, Department of Planning, CH2M Hill Engineers, and Monroe County Emergency Management  
 Prepared By: Bolln and Associates, 1993.

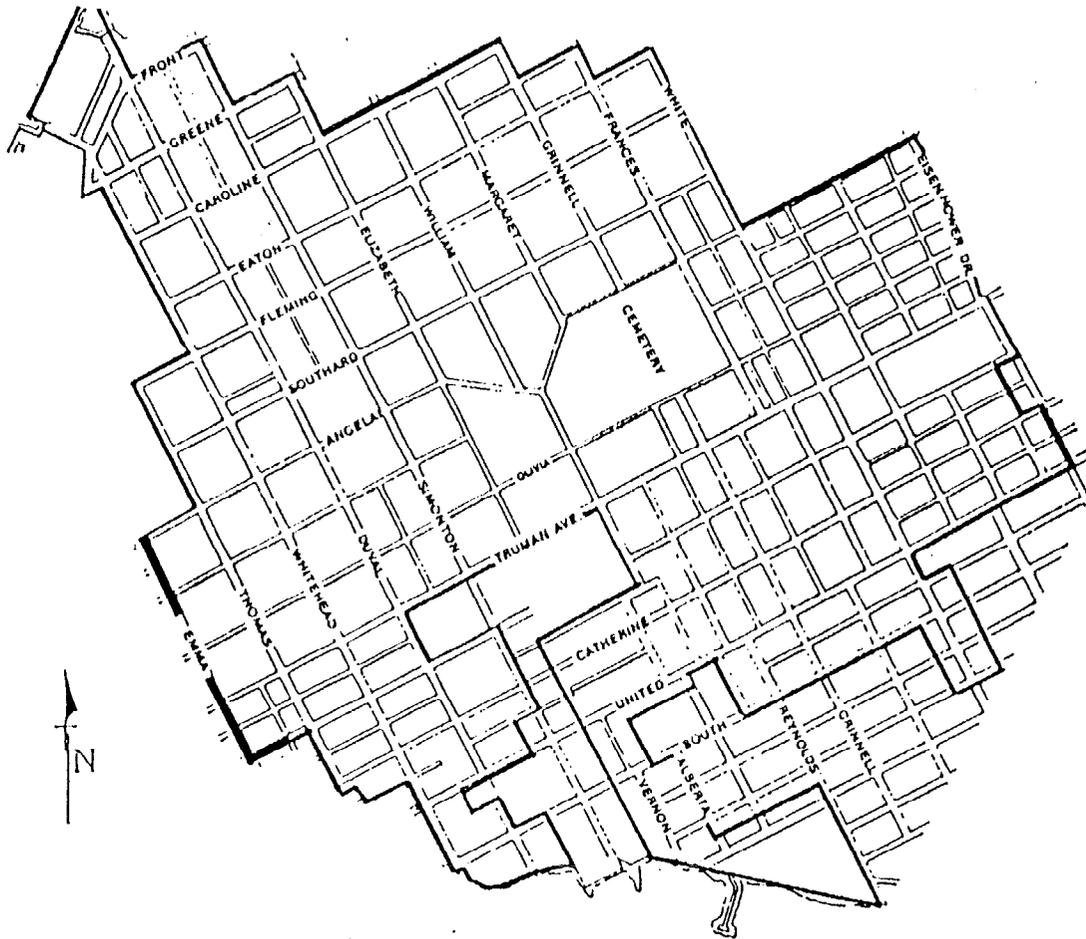
Coastal Setback Lines: Building Setback Line From Mean High Water Line; 30 ft. and 50 ft. as indicated.  
 Source: Key West Code Sec. 35.12(12).



- |                              |                                       |                                   |                                   |
|------------------------------|---------------------------------------|-----------------------------------|-----------------------------------|
| (1) Bill Butler Park         | (11) Key West Power Boat Squadron     | (21) Salt Pond Site               | (31) Bennehole Street Beach       |
| (2) Louisa Street Park       | (12) Dopp, Agalar, and McCurdy fields | (22) Tugge Beach                  | (32) Vernon Street Beach          |
| (3) Nelson English Field     | (13) Real Beach                       | (23) Teen Center                  | (33) South Beach                  |
| (4) Bayview Park             | (14) Simonson Beach                   | (24) Fort Zachary Taylor          | (S1) Gerald Adams Elementary      |
| (5) Indigenous Park          | (15) Smathers Beach                   | (25) Monroe Co. Bird Sanctuary    | (S2) Olynn Archer Elementary      |
| (6) Little Hammack Park      | (16) White Street Pier                | (26) Bill Westrey Bird Sanctuary  | (S3) Horace O'Brien Middle School |
| (7) Garrison Blight          | (17) Mallory Square                   | (27) Riggs Wildlife Refuge        | (S4) Poinciana Elementary         |
| (8) Reserved                 | (18) Clinton Square                   | (28) Little Hammack Park Addition | (S5) Sigbee Elementary            |
| (9) Wickes Field             | (19) Southernmost Point               | (29) Coronel Park                 | (S6) May Senise School            |
| (10) Key West Community Pool | (20) Key West Botanical Garden        | (30) Presidential Park            | (S7) Key West High School         |

**MAP I - 7**  
**EXISTING LAND USE MAP SERIES**  
**Recreation Areas**  
 City of Key West      September 1991

PREPARED BY SOLIN & ASSOCIATES, INC.  
 AND KEY WEST PLANNING DEPT.

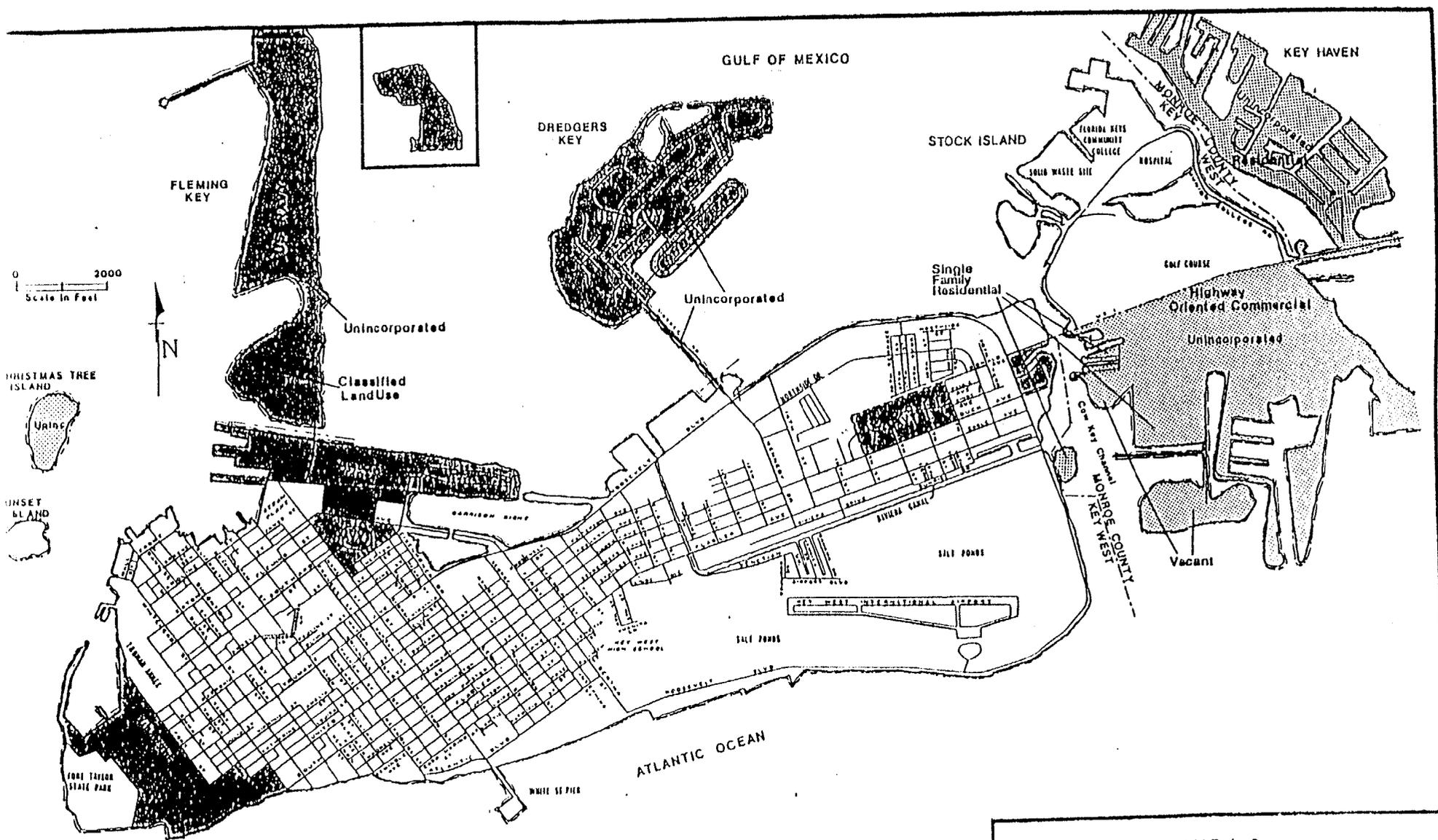


Map Prepared By: Historic Florida Keys Preservation Board

MAP 1-8  
 EXISTING LAND USE MAP SERIES  
 Historic Resources

City of Key West

October 1989



MAP I-9  
 EXISTING LAND USE MAP SERIES  
 Land Uses Adjacent to Key West  
 City of Key West July 1989

PREPARED BY SOLN & ASSOCIATES, INC.  
 AND KEY WEST PLANNING DEPT.



**Appendix B**  
**Public Workshop Reports and Proceedings**

KEY WEST  
CHAPTER 288 PROCESS  
INITIAL PUBLIC WORKSHOP

May 18, 1998

Workshop facilitated and report prepared by  
The Florida Conflict Resolution Consortium

## INTRODUCTION

### BACKGROUND

On May 18, 1998, the Initial Public Workshop was held in Key West Florida for the Chapter 288 process addressing excessed naval-base land in Key West. The purpose of the Chapter 288 process is to identify and implement changes, in local and state regulatory documents or actions, needed to implement the previously drafted Base Reuse Plan for the City of Key West. The purpose of the workshop was to introduce the Chapter 288 process, identify the principal issues which will need to be addressed in the course of the process, and solicit initial participant suggestions for how those issues might be addressed.

### Agenda

The agenda as modified in the course of the workshop was as follows.

- 6:00 Welcome and introductions
- 6:15 Overview of the content and context of the Chapter 288 process.
- 6:30 Overviews
  - Overall reuse process
  - Federal level plan
  - Chapter 288 process
  - Results-to-date
- 6:40 Truman Annex - key implementation issues discussion
- 7:45 Poinciana key implementation issues discussion
- 8:20 Next steps
- 8:30 Adjourn

### PROCESS

Discussion at the workshop was facilitated by the Florida Conflict Resolution Consortium. Records of the discussion were made on newsprint, and transcripts of those records form the basis of this report.

## KEY IMPLEMENTATION ISSUES

The following outline of expected key implementation issues was reviewed at the beginning of the meeting.

### TRUMAN WATERFRONT

- Housing Units(ROGO)
  - Citywide Receiving Area
  - Factoring Units (Equivalency Household Units)
  
- Marina
  - Constructability, Compatibility with other port traffic
  - Solution: Design Decision Making Tool
  
- Second berth
  - Sustainability/Quality of Life
  - Environmental
  - Cost Benefit
  - Possible Solution: Site Plan Review Design Decision making tool
  
- Affordable housing
  - Ensure use as affordable

### POINCIANA

- Affordable Housing
  
- ROGO
  
- Design objectives
  
- Affordability
  
- Compatibility

# TRUMAN WATERFRONT - KEY ISSUES DISCUSSION

## PROCESS

After initial review of expected implementation issues, participants were asked to suggest:

- 1) regulatory mechanisms which might help implement the previously drafted Base Reuse Plan or address the key implementation issues;
- 2) considerations or concerns to keep in mind while drafting implementation mechanisms.

The discussion in response to these questions is presented below.

## RESULTS

### Housing Units (ROGO)

- Concern about property rights relative to transfer of units to receiving area.
- Consider reverse of what was considered by agreement between City and County - transfer ROGO allocations from lower keys.
- Receiver area is important then look for source of units.
- Remember change (chaos) - look for alternative to highway in event of hurricane. The harbor might provide this.
- Economic diversification is a key issue - consider hydroponic gardening.
- Get out to public how final plan will be developed.
- How do we guarantee that this will happen?
- Buildings in recreational/open space could lend themselves to economic diversification - sound-stages, T.V. station, growth activities etc.
- Stick to marine uses since it's a port.
- Focus economic diversification on jobs with upgraded skills.
- Work with groups within the community who are working towards same goals.
- Note: Reuse drives level of decontamination.

## TRUMAN ANNEX

### Affordability

- Don't repeat failures of the past no area should be identifiable as low cost. Use scattered site approach instead.
- Who will monitor continued affordability?
- Look at what is currently affordable in Key West - that is multi-family where owner lives on property.
- Look at City affordable housing ordinance
- Financing comes with affordability criteria.
- In perpetuity legally means fifty years or the life of building. This is better than the thirty years which has been the norm to date.
- Financing options such as soft second mortgages help ensure affordability.
- Establish community land trust which will actually own units and keep them affordable.
- Bahama Village Land Trust will not only keep units affordable but keep community together.
- Program would allow people to develop and own their own houses - Land Trust would own the land.
- Definition of affordable? Is a Federal mechanism available?
- Get land for housing by conveyance rather than purchase.

### Second Berth?

- Don't have information to make decision on this. We need analysis of costs and benefits of all aspects of the question as part of this process.
- Careful about multi-modal - cars have continued coming after previous transit improvements. Account for this in calculating benefits of multi-modal.
- Traffic analysis impact area should consider that people transfer to other modes of travel( cars).
- Require an economic impact study that considers whether costs of providing access outweigh benefits.
- We need first to consider what kind of place we want to be. Do we want to be a destination for day-trippers? Dust off model prepared late 1980s.

## TRUMAN ANNEX

- Infrastructure almost at critical point cannot accommodate more. Need to look at overall picture, not fragments. Showing in patterns of stress and mental health. "We are already at maximum capacity."
- Access to entire water front is by just one street - could not handle the another ship.
- Look for alternative use for both berths – ships will go to Cuba after it opens.
- Need fact finding.
- What difference will it make to (what are the implications for) the LDRs and plan whether there are ultimately 1 or 2 berths.
- What is the need for a 2nd pier? We should recommend that it not be considered at this time.
- Physical constraints that existed earlier and kept travel to Key West at a moderate level have disappeared. Can't let this happen without examination, because physical constraints will no longer protect us.
- Remove the word "potential" before places where the plan calls for bicycle and pedestrian access.

# POINCIANA HOUSING - KEY IMPLEMENTATION ISSUES

## PROCESS

After initial review of expected implementation issues, participants were asked to suggest:

- 1) regulatory mechanisms which might help implement the previously drafted Base Reuse Plan or address the key implementation issues;
- 2) considerations or concerns to keep in mind while drafting implementation mechanisms.

The discussion in response to these questions is presented below.

## RESULTS

- Ability for people to purchase is needed.
- Need exists for ownership to enhance tax rolls.
- Continuity with neighborhood should be sought.
- An ownership component would help in accessing funding sources.
- At what point does this cross line from "fleshing-out" plan to enhance or quicken implementation to tinkering which delays implementations?
- At what point in Chapter 288 process can this begin?
- At what level is there flexibility to tinker with things like where sidewalks and streets go? Address degree of flexibility.
- Interim agreement being negotiated with Navy for quick occupancy of units which are in good shape.
- Overlay district – "within a period of a year to a year-and-a-half.
- Fear that streets and parking lots will make it look like public housing. Want it to look more like neighborhood.
- What does the pre-development loan program commit us to?
- Too many activities and buildings for this site.
- Consider doing this as a P.U.D.

KEY WEST  
CHAPTER 288 PROCESS  
SECOND PUBLIC WORKSHOP

July 20, 1998

Workshop facilitated and report prepared by  
The Florida Conflict Resolution Consortium

## INTRODUCTION

### BACKGROUND

On July 20, 1998, the Second Public Workshop was held in Key West Florida for the Chapter 288 process addressing excessed naval-base land in Key West. The purpose of the Chapter 288 process is to identify and implement changes, in local and state regulatory documents or actions, needed to implement the previously drafted Base Reuse Plan for the City of Key West. The purpose of the workshop was to review the Chapter 288 process, and to present, evaluate, and refine the conceptual approaches developed by the planning team to address the key issues discussed at the earlier, initial public meeting in the Chapter 288 process.

### Agenda

The agenda as modified in the course of the workshop was as follows.

- 6:00 Welcome and introductions
- 6:15 Overview of the content and context of the Chapter 288 process.
- 6:30 Discussion, evaluation, and refinement of conceptual approaches.
- 7:50 Break
- 8:00 Discussion, evaluation, and refinement – continued.
- 8:45 Next steps
- 9:00 Adjourn

### PROCESS

Discussion at the workshop was facilitated by the Florida Conflict Resolution Consortium. Records of the discussion were made on newsprint, and transcripts of those records form the basis of this report. A more detailed description of the process used for each discussion is presented in the corresponding section of this report.

# DISCUSSION, EVALUATION, AND REFINEMENT OF CONCEPTUAL APPROACHES

## PROCESS

Each discussion begin with a presentation from the planning team to explain the nature of the issue or challenge and to briefly outline the approach the planning team proposes to follow to address it.

After the explanation from the planning team, participants asked questions to clarify what was being proposed, and engaged the planning team in a discussion of the approach. Based on this clarification, participants then indicated their level of support (at the conceptual level and contingent on the acceptable development of the approach) for the approach using the following scale.

- 5 - Whole hearted Support
- 4 - Support
- 3 - Can Live with it.
- 2 - do not support, but might.
- 1 - No. (Over my dead body.)

After the ranking of support, participants suggested refinements to improve the approach or to move it in the direction of more general acceptability.

## RESULTS

How Do We Inhabit Truman Waterfront (i.e. Need For ROGO Units.)

### *Conceptual Approach*

- Make Truman Waterfront a receiving area for ROGO units from the rest of the city.

### *Clarification*

- What happens before units built? Vacant? (Some land but not all.)

## DISCUSSION

- How many ROGO units would need to be acquired? (100+ )
- Can social services building be developed? (Yes.)
- Some Navy housing has recently been demolished – those units would be available. *does the Navy have the units?*
- Can Navy ask for dock back? (The public use conveyance proposes a joint use agreement for both Navy and civilian use.)
- Will this go on ROGO waiting list? *need to check* (Those on the waiting list are waiting for units – they are not receiving areas. This area will be able to receive units from those on the list, as they are given units.)

### Consensus Test

Ranking	5	4	3	2	1
No. of Participants	3	5	2	0	0

### Suggestions for Refinement or Concerns

- Develop a system of accounting for units.
- Explain where ROGO units will come from. (Some donor sites have been identified throughout the city. Hurricanes and fires are, unfortunately, another possible source of donor units. So are areas with non-conforming densities.)

## Port Expansion – The Potential for a Second Berth

### Conceptual Approach

- Use existing mechanisms to measure impacts:
  - Environmental Protection LDRs
  - Site Plan Review Process
- Add to Site Plan Review Process
  1. Cost Benefit criteria for improvements
    - Capital plan which requires balance of cost of construction and improvements to community with income generated from new facility.
  2. Transportation Study
    - Emphasis on multi-modal transportation solutions

## DISCUSSION

- Carrying capacity study?

### *Clarification*

- Should it even be considered?
- Commission may need to make proprietary and regulatory decisions, both in the sunshine. They may spend lots of money on consultants only to find out public doesn't want this. Hold hearings at proprietary stage-before spending money for technical surveys-etc.
- Carrying capacity study will be important.
- The part of this related to cruise ship passengers can be broken -out.
- May be possible to have early hearings through the dredging permit application which would have to be filed.
- Impact on attractions (and community?) may be self-regulating. As more people come and increase waiting times etc., fewer are willing to wait that long and therefore fewer come.
- How would the process proposed by the planning team be triggered? (Planning process would trigger.)
- The Port Master Plan may already have triggered.
- 52 cruise ship berthings a year produce the equivalent of 1/2 mil of property tax.
- There is a fear that precisely because of this equivalence, the revenue may go to the general fund. How do we insure it goes to community quality of life uses?
- Some cruise ship revenue does not go to community, but we need to take capturing of the revenue stream (for the community) a step further then currently.
- We need to look at impact which adding attractions will have on the carrying capacity of the community as a whole.
- Look at the impact on tranquility of those who live here.
- Funding through port authority.

*Initial Consensus-Test*

Ranking	5	4	3	2	1
Number of Participants	1	3	3	3	1

*Suggestions for Refinements*

- Make sure that what passengers spend their money on is answered.
- Present reviews and ongoing studies to the public before any public hearing on a second berth.
- In addition to balancing the two, separately address quality of life and revenue.
- Address the effect on Bahama Village.

*Consensus Ranking if Suggestions for Refinements are Satisfactorily Developed in the Approach*

Ranking	5	4	3	2	1
No. of Participants	6	0	1	1	0

**How Do We Maintain Integrity of Final Base Reuse Plan?**

*Conceptual Approach*

- Adopt policies guiding development (see appendix for proposed policies.)
- If change is proposed, conditional use approval required.

*Clarification*

- State involvement? (Only if land use categories of comprehensive plan change. In that case DCA would review as they would any other land use change.)
- Would there have to be something akin to rezoning? (Only for those changes which involve changes in the land use categories or policies of the comprehensive plan, or the conveyance.)

*Consensus-Test*

Ranking	5	4	3	2	1
No. of Participants	0	5	4	0	1

*Suggestions for Refinement or Concerns*

- Clarify it.
- Nobody goes to planning board- this would not be a meaningful public hearing.
- Add a step.
- More advance notice.
- More publicity.
- Advertisements in paper.
- More easels.
- Avoid scheduling conflicts.
- Two decision points. Initial decision to pursue change would come from commission.
- City has been irresponsible with lands before. Would like to see stop-gap before they can decide.
- Controversy will be in economic development and housing – not conveyance

*Consensus-Test on if Above Suggestions Can Be Satisfactorily Developed in the Approach*

Ranking	5	4	3	2	1
No. of Participants	1	6	3	0	0

*Further Suggestions for Refinement*

- Do something in the early part of the process – another meeting alone will not help.
- More specific less ambiguous ads.
- Make sure public is part of the process of developing the plan which proposes the change.
- Cynicism, and mistrust of government are widespread. You must do something to encourage and assure people that their participation will have an effect.
- Make it easy (in development review) to do what is in the plan, instead of just making it difficult to change the plan. - "The following is allowed 'as - of - right'...."
- Make development review easy for items which enjoyed clear consensus in the original process – not for the ones which were still being debated.

**Keeping New Housing Affordable**

*Conceptual Approach*

- Specify affordable housing areas
- Use city's affordable housing criteria

*Discussion*

- Zoning to protect housing.
- Distinctions between Poinciana and Truman include the following.

Conveyance – Poinciana is subject to affordability provisions of Ch.380, and has vested units for ROGO purposes.

Public input on affordability at Poinciana was greater.

- The criteria in the Housing Authority's affordability policy go further than those you have here.
- Funding source may affect eligibility criteria. For example, if federal funding is used, it will not be possible to use length of residence as a criterion.

*Poinciana is subject to EUS. New - ROGO*

## DISCUSSION

- What would be the federal, state, resident share of keeping cost affordable? (This will vary by area or project.)
- Leave more flexibility (in criterion 2) to accommodate moderate income and or to make project financially feasible. The Housing Authority, for example, allows up to 40% of residents to earn 120% median income.
- Coordinate with Housing Authority.
- Mechanism for pre-approval - establish pool of eligible applicants.
- Pre-approval would help avoid displacement during renovation of Housing Authority units.
- Information on need by income class.
- Is sequence from individual rehabilitation → income → renting → ownership reflected here?
- Chapter 380 and lease agreements will define affordability.
- This should be mixed income integrated into community.
- Bahama Village Land trust role-can they monitor affordability.
- Create mechanism for funding affordable housing trust.
- Comprehensive plan provisions should leave flexibility on mechanisms.
- <sup>Reduce the</sup> The down as much as possible, but leave flexibility.  
<sub>Payment</sub>
- Project-by-project funding source.

### Consensus-Test

- Participants and the planning team agreed that in light of the issues raised during discussion, this approach needed further refinement before and consensus-testing.

## Other Issues

After the challenges identified by the planning team had been discussed, participants were asked to review the report of the earlier meeting and suggest any additional issues related to the regulatory implementation of the adopted Base Reuse Plan which still needed to be discussed.

### *Discussion of Proposed Poinciana Policies (See Appendix for Policies.)*

- Fear of "guardrails and chain link fences" as probable design elements. You should address site plan design review.
- Approval of LRA for renovations –Housing Authority only managing –after conveyance.
- (Lease agreement governs in the interim.)
- Maintenance during interim?
- Add sustainability
- Add life cycle costs. Affordability should encompass the full cost of inhabiting the units.
- Interim entrances?
- Show mass transit connection.

### *Other*

- Zoning at Truman? (Public Services and Recreation)
- Torpedo Buildings –keep?
- Access to Truman? Truman and Petronia – or Southard?
- There may be a user conflict on the mole between marine commercial and pedestrians. Include a policy to resolve these issues at the site plan level.

## APPENDIX MEETING WORKSHEETS

### TRUMAN WATERFRONT

#### Challenge #1:

"How to inhabit the site"  
(i.e. Need for ROGO units)

#### Solution:

Make Truman Waterfront a receiving area for ROGO units in the rest of the city

#### Challenge #2:

Port Expansion – The Second Berth

#### Solution:

A. Use existing mechanisms to measure impacts:

- Environmental Protection LDRs
- Site Plan Review Process

B. Add to Site Plan Review Process

1. cost Benefit criteria for improvements
  - Capital plan which requires balance of cost of construction and improvements to community with income generated from new facility.
2. Transportation Study
  - Emphasis on multi-modal transportation solutions

C. Carrying capacity study?

#### Challenge #3:

How do we maintain integrity of Final Base Reuse Plan?

#### Solution:

- A. Adopt polices guiding development
- B. If change is proposed, conditional use approval required

#### Challenge #4

Keeping new housing affordable

## APPENDIX

Solution:

- A. Specify affordable housing areas
- B. Use city's affordable housing criteria

### Truman Waterfront – Proposed Comprehensive Plan Policies

- a. Recreation and open space linked through landscaped multi-modal green ways and view corridors with multiple access points connecting the large park and recreational area on the northwestern portion of the site with the public marina waterfront area, the Bahama Village marketplace and the Seminole Battery.
- b. Uninterrupted public access to the waterfront through a wide promenade along the full length of the harbor.
- c. Landscaped and hardscaped areas which are well-lit and designed to provide a safe area for use by a diverse mix of recreational users including pedestrians, bicyclists and in-line skaters.
- d. Affordable housing neighborhood retail and social service uses which function as an extension of the neighborhood fabric of Bahama Village.
- e. Educational and historical activity nodes.
- f. Expanded use of the portions of the Truman Waterfront property for port activities.
- g. Multiple ingress/egress points into the Truman Waterfront property.

### POINCIANA HOUSING

Challenge #1:

Keeping Housing Affordable

Solution:

- A. Specify affordable housing only
- B. Use city's affordable housing criteria

Challenge #2

How so we maintain integrity of Final Base Reuse Plan?

## APPENDIX

4. Eligibility is based on proof of legal residence in the City of Key West for at least one consecutive year.
5. Priority shall be given to families of four or more members for larger sized affordable housing units.
6. The applicant shall execute a sworn affidavit stating the applicant's intention to occupy the dwelling unit.

# Chapter 288

Public Workshop

November 2, 1998

## Comments

- Build back areas
- Concurrency limits
- Transportation planning
- Conch Trains
- Neg. w/Navy for use of United Street gate?
- Look at transportation in a comprehensive way
- Count conch trains and trolleys out of Southard as part of transportation procedure
- Dispense cruise ship traffic in all directions
- Make harborwalk broader than bight
- Look comprehensively at making Old Town walkable, livable
- Right now trolleys and trains are only ways. This was not the picture outlined in plan.
- Put South Mole harbor walk on seaward not basin side - conflicts with harbor uses.

## Use

- Water taxis
- More of a demand for affordable housing because of George - makes this even more of a priority.
- Most come by car and you invite them
- Take advantage of BVCLT method for keeping housing affordable
- Will also make these streets & areas more "real".
- Need affordable rentals, not \$120k houses
- May not be able to keep housing affordable in perpetuity unless an entity owns it - private developers won't.
- Land trusts are doing this by owning the land - take land cost out

- S. St. 2<sup>nd</sup> Mortgages
- Commercial developments increasingly willing to build apartments upstairs - should be almost a requirement.
- Is there anyway to work with military to establish housing unit allocation before transfer?
- Can at least look at military's effect on evacuation.
- All housing Trust Fund funded by new commercial dev. over threshold.
- Get leg to allow increase in doc stamp tax to fund this.
- Business community aware of need and willing to meet it but unable to meet it.
- Policies in the plan to explore these possibilities.
- How much affordable housing needed to accommodate increased jobs.
- Profiles of number and wage breakdown of projected jobs.
- Make sure no transient use occurs.

**Appendix III.C.1**  
**1998 Levels of Service**

## Appendix III.C.1- Level of Service Inventory Report ( 2-Way Peak Hour Direction )

Key West Base Reuse Plan  
1998 Level of Service

	Filenames	Filedates	Date:
Mrn:	G:\KEYWEST\BASERUSEJUNE99~1\KWMRN.DBF	June 18, 1999	21-Jun-99
Analysis:	G:\KEYWEST\BASERUSEJUNE99~1\KW1998.DBF	June 21, 1999	Time: 10:47:32

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method						
										Art Class	%No Sat	Pass Ctrl	Pk Hr Type	VHT Len	Los1 G:C	Ratio	Agg Spd	Wd PK Dir	Pred RT	Agg Los SvcCap PCAP	V:S CAPV:P CAP
										PHF	Arr Type	Sr Cyc	Len	Sr G:C	Time	Wd AADT	Pred Area				
1010010	Caroline St Whitehead St Duval St	0.08 D 1.00	2 U 1	25 0 0	KW 90002.0 0.0	TOA 111 111	2616 230 131	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0 30 3	0.000 0.700 0.000	A 0.00 0.00	0 0 0	0 0 0	1903 0.121	2095 0.110			
1010020	Caroline St Duval St Simonton St	0.10 D 1.00	2 U 1	25 0 0	KW 90001.0 0.0	TOA 111 111	1746 330 187	5 0.088 0.568	H 0	0 1700 0.910	0 3 1	0 60 1	0.000 0.130 0.000	B 0.00 0.00	0 0 0	0 0 0	881 0.171	988 0.334			
1010030	Caroline St Simonton St Grinnell St	0.14 D 1.00	2 U 1	25 0 0	KW 90005.0 0.0	TOA 138 231	4810 406 231	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0 60 3	0.000 0.130 0.000	B 0.00 0.00	0 0 0	0 0 0	881 0.460	988 0.411			
1020010	Eaton St Whitehead St Duval St	0.08 D 1.00	2 U 1	30 0 0	CR 90008.0 0.0	TOA 17 264	5276 464 264	2 0.088 0.568	H 1	3 1750 0.900	0 3 3	2.261 30 NoSig	C 0.700 17.53	6.07 16.36 17.53	0 0 0	0 0 0	181.2 0.256	215.7 0.215			
1020020	Eaton St Duval St Simonton St	0.10 D 1.00	2 U 1	30 0 0	CR 90011.0 0.0	TOA 100	11351 999 567	2 0.088 0.568	H 1	3 1750 0.900	0 3 3	23.283 60 0.350	F 4.29 83.91	6.07 4.29 83.91	0 0 0	0 0 0	736 1.357	1078 0.927			
1020030	Eaton St Simonton St Grinnell St	0.34 D 1.00	2 U 1	30 0 0	CR 90012.0 90041.0	TOA 327	10928 961 546	2 0.088 0.568	H 1	3 1750 0.870	0 3 3	14.547 60 0.533	B 22.48 54.47	6.07 22.48 54.47	0 0 0	0 0 0	1586 0.606	1642 0.586			
1020040	Eaton St Grinnell St White St	0.17 D 1.00	2 U 2	30 0 0	CR 90042.0 0.0	TOA 404	27024 2378 1351	2 0.088 0.568	H 1	3 1750 0.950	0 3 3	167.462 63 0.635	F 2.41 253.50	6.07 2.41 253.50	0 0 0	0 0 0	1887 1.260	1956 1.216			
1030010	Palm Ave N Roosevelt Blv Eisenhower Dr	0.45 D 1.00	2 U 2	30 0 0	CR 90043.0 0.0	TOA 1027	25936 2282 1296	2 0.088 0.568	H 2	3 1750 0.860	0 3 3	305.550 60 EST	F 3.36 EST	4.05 3.36 481.95	0 0 0	0 0 0	1849 1.234	1849 1.234			

**Notes:**

Method: "H" = "HCS", "T" = Tables

CAFT: 1=Freeway, 2=Int. Flow Arterial, 3=Urban Multi, 4=Two-lane Unint. Flow, 5=Non-state, Minor Street  
6=Not Used, 7= Rural Multi, 8=Two-lane Unint. Flow

Arty: 1=Very Poor, 2=Unfavorable, 3=Random, 4=Favorable, 5=Highly Favorable, 6=Exceptional

Ctrl Typ: 1=Actuated, 2=Semi-Actuated, 3=Fixed-Time

Area: 1=CBD, 2=Suburban, 3=Transitional, 4=Rural Developed, 5=Rural

PK Hr VHT is based on peak direction of travel only. When the "daily" or "two way" reporting option is chosen, the peak hour VHT that is reported, is the peak hour peak direction VHT divided by D.<sub>fac</sub>

HCS Method Tables Method

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method			
										Art Class	%No Pass	Pk Hr VHT	Los1	Agg Spd	Wtd Wtd	PK Dir	Pred RT	Agg Los
										Sat Flow	Ctrl Type	Cyc Len	G:C Ratio	Spd1	Wtd Wtd	PK Dir	Pred RT	Agg Los
										PHF	Arr Type	Sr Cyc	Sr G:C	Time	Wtd AADT	Pred Area	V:S CAPV:P CAP	
1030020	Palm Ave	0.34	2	30	CR	TOA	25936	2	H	3	0	140.008	F	4.05	0	0		F
	Eisenhower Dr	D	U	1	90043.0		2282	0.088	2	1750	3	63	0.635	5.54	0	0	1956	1956
	White St	1.00	2	0	0.0	776	1296	0.568		0.950	3				220.84	0	0	1.167
1040010	Truman Ave	0.08	2	30	SR	TOA	1685	2	H	3	0	1.074	D	14.53	0	0		C
	Whitehead St	C	U	1	90022.0		148	0.088	3	1750	3	54	0.400	11.17	0	0	1	1232
	Duval St	1.00	1	0	0.0	12	84	0.568		0.870	3				26.08	0	0	2.010
1040020	Truman Ave	0.10	2	30	SR	TOA	5559	2	H	3	0	4.132	D	14.53	0	0		C
	Duval St	C	U	1	90027.0		489	0.088	3	1750	3	70	0.460	11.86	0	0	1	1417
	Simonton St	1.00	1	0	0.0	49	278	0.568		0.910	3				30.41	0	0	2.010
1040030	Truman Ave	0.19	2	30	SR	TOA	6385	2	H	3	0	6.091	C	14.53	0	0		C
	Simonton St	C	U	1	90029.0		562	0.088	3	1750	3	72	0.486	17.57	0	0	1179	1497
	Windsor Ln	1.00	1	0	90090.0	107	319	0.568		0.900	3				39.03	0	0	0.477
1040040	Truman Ave	0.12	2	30	SR	TOA	6385	2	H	3	0	11.776	C	14.53	0	0		C
	Windsor Ln	C	U	2	90029.0		562	0.088	3	1750	3	100	0.550	15.20	0	0	1026	1695
	White St	1.00	2	0	90090.0	180	319	0.568		0.830	3				75.45	0	0	0.548
1040050	Truman Ave	0.23	2	30	SR	FDOT	17144	2	H	3	0	195.446	F	3.49	0	0		F
	White St	C	U	1	95000.0		1509	0.088	4	1750	2	74	0.398	1.78	0	0	935	1226
	Eisenhower Dr	1.00	2	0	0.0	347	857	0.568		0.860	3				466.37	0	0	1.614
1040060	Truman Ave	0.31	4	30	SR	FDOT	17144	2	H	3	0	38.141	D	3.49	0	0		F
	Eisenhower Dr	C	U	1	95000.0		1509	0.088	4	1750	2	152	0.336	12.27	0	0	1328	2070
	Palm Ave	1.00	2	0	0.0	468	857	0.568		0.860	3				91.01	0	0	1.136
1050010	North Roosevelt Blvd	0.23	4	40	SR	FDOT	34206	2	H	2	0	41.853	D	6.57	0	0		F
	First St	C	D	1	95010.0		3010	0.088	5	1750	2	89	0.562	16.53	0	0	2795	3463
	Fourth St	1.00	2	0	0.0	692	1710	0.568		0.960	3				50.05	0	0	1.077
1050020	North Roosevelt Blvd	0.08	4	45	SR	FDOT	34206	2	H	1	0	31.794	F	6.57	0	0		F
	Fourth St	C	D	1	95010.0		3010	0.088	5	1750	2	89	0.562	7.58	0	0	2	3463
	Fifth St	1.00	2	0	0.0	241	1710	0.568		0.910	3				38.02	0	0	2.010
1050030	North Roosevelt Blvd	0.50	4	45	SR	FDOT	40942	2	H	1	0	306.866	F	6.57	0	0		F
	Fifth St	C	D	1	95020.0		3603	0.088	5	1750	2	96	0.468	5.87	0	0	2659	2884
	Overseas Mkt	1.00	2	0	0.0	1801	2047	0.568		0.960	3				306.62	0	0	1.355
1050040	North Roosevelt Blvd	0.27	4	45	SR	FDOT	34061	2	H	1	0	163.850	F	6.57	0	0		F
	Overseas Mkt	C	D	1	95030.0		2997	0.088	5	1750	2	100	0.426	4.94	0	0	127	2625
	Kennedy Dr	1.00	2	0	0.0	809	1702	0.568		0.950	3				196.79	0	0	2.010
1050050	North Roosevelt Blvd	1.23	4	45	SR	FDOT	32007	2	H	1	0	84.313	A	41.09	0	0		A
	Kennedy Dr	C	D	1	95040.0		2817	0.088	0	1750	2	94	0.691	41.09	0	0	4258	4258
	US1	1.00	2	0	95080.0	3464	1600	0.568		0.950	3				107.76	0	0	0.661
1060010	United St	0.09	2	25	KW	TOA	4767	5	H	0	0	0.000	A	0.00	0	0		A
	Whitehead St	D	U	1	90035.0		419	0.088	0	1700	3	30	0.700	0.00	0	0	1547	2095
	Duval St	1.00	1	0	0.0	38	238	0.568		0.740	3	NoSig			0.00	0	0	0.271
1060020	United St	0.10	2	25	KW	TOA	4767	5	H	0	0	0.000	B	0.00	0	0		B
	Duval St	D	U	0	90035.0		419	0.088	0	1700	3	60	0.500	0.00	0	0	1180	1498
	Simonton St	1.00	1	0	0.0	42	238	0.568		0.790	3				0.00	0	0	0.356

Notes:

Method: "H" = "HCS", "T" = Tables

CAFT: 1=Freeway, 2=Int. Flow Arterial, 3=Urban Multi, 4=Two-lane Unint. Flow, 5=Non-state, Minor Street

6=Not Used, 7= Rural Multi, 8=Two-lane Unint. Flow

Antyp: 1=Very Poor, 2=Unfavorable, 3=Random, 4=Favorable, 5=Highly Favorable, 6=Exceptional

Ctrl Typ: 1=Actuated, 2=Semi-Actuated, 3=Fixed-Time

Area: 1=CBD, 2=Suburban, 3=Transitioning, 4=Rural Developed, 5=Rural

Pk Hr VHT is based on peak direction of travel only. When the "daily" or "two-way" reporting option is chosen

, the peak hour VHT that is reported, is the peak hour peak direction VHT divided by D\_fac



HCS Method

Tables Method

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Turns	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method				
										Art Class	%No Pass	Pk Hr	VHT Los1	Agg Spd	Wld Pk	Dir	Pred RT	Agg Los	
										Sat Flow	Clrl Type	Cyc Len	G:C Ratio	Spd1	Wld AADT	Pred Area	SvcCap	PCap	
										PHF	Arr Type	Sr	Cyc Len	Sr G:C	Time	V:S	CAPV	P CAP	
1100020	South Roosevelt Blvd Airport Flagler Ave	1.24	4	45	SR	FDOT	10775	2	H	1	0	30.562	A	41.01	0	0		A	
		C	U	1	95100.0			948	0.088	11	1750	2	78	0.399	38.48	0	0	2459	2459
		1.00	2	0	0.0		1176	538	0.568		0.930	3			116.03	0	0	0.386	0.386
1100040	South Roosevelt Blvd Flagler Ave US1	0.28	4	45	SR	FDOT	18433	2	H	1	0	12.749	A	41.01	0	0		A	
		C	D	1	95090.0			1622	0.088	11	1750	2	94	1.000	35.61	0	0	5855	6162
		1.00	2	0	0.0		454	921	0.568		0.950	3			28.30	0	0	0.277	0.263
1110010	Northside Dr Kennedy Dr Twentieth St	0.81	2	25	KW	IOA	9603	5	H	0	0	0.000	C	0.00	0	0		C	
		D	U	2	90078.0			845	0.088	0	1700	3	78	0.386	0.00	0	0	1029	1155
		1.00	2	0	90079.0			685	0.568	0	0.910	3			0.00	0	0	0.821	0.732
1120010	US1 Roosevelt Blvd Cow Key Channel	0.20	4	45	SR	LS1	41771	2	H	1	0	22.607	B	32.51	0	0		B	
		C	D	1	95190.0			3676	0.088	0	1750	2	94	1.000	32.51	0	0	5738	6162
		1.00	2	0	0.0		735	2088	0.568	0	0.950	3		IOA	22.14	0	0	0.641	0.597
1130010	Duck Ave Twentieth St S Roosevelt Blv	0.13	2	25	KW	TOA	4706	5	H	0	0	0.000	A	0.00	0	0		A	
		D	U	1	90087.0			414	0.088	0	1700	3	30	0.700	0.00	0	0	1903	2095
		1.00	2	0	0.0		54	235	0.568	0	0.910	3	NoSig		0.00	0	0	0.218	0.198
2010010	Whitehead St South St United St	0.09	2	30	KW	TOA	3469	4	H	3	0	0.916	B	30.00	0	0		A	
		D	U	0	90032.0			305	0.088	13	1700	0	0	0.000	29.48	0	0	1261	1883
		1.00	1	0	0.0		27	173	0.568		0.740	0			10.80	0	0	0.242	0.162
2010020	Whitehead St United St Truman Ave	0.23	2	30	KW	TOA	5024	4	H	3	0	3.390	B	30.00	0	0		A	
		D	U	0	90024.0			442	0.088	13	1700	0	0	0.000	30.09	0	0	1261	1883
		1.00	1	0	90031.0			102	0.568		0.740	0			27.60	0	0	0.351	0.235
2010030	Whitehead St Truman Ave Southard St	0.31	2	30	SR	TOA	8149	2	H	3	0	10.559	B	15.33	0	0		C	
		C	U	1	90017.0			717	0.088	14	1750	3	50	0.400	21.02	0	0	1114	1232
		1.00	1	0	90021.0			222	0.568		0.910	3			53.01	0	0	0.644	0.582
2010040	Whitehead St Southard St Fleming St	0.09	2	30	SR	TOA	6903	2	H	3	0	5.700	D	15.33	0	0		C	
		C	U	1	90014.0			607	0.088	14	1750	3	73	0.411	9.65	0	0	1	1266
		1.00	1	0	0.0		55	345	0.568		0.910	3			33.78	0	0	2.010	0.480
2010050	Whitehead St Fleming St Eaton St	0.08	2	30	SR	TOA	8504	2	H	3	0	6.735	E	15.33	0	0		C	
		C	U	1	90009.0			748	0.088	14	1750	3	77	0.455	8.91	0	0	1	1402
		1.00	1	0	0.0		60	425	0.568		0.910	3			32.40	0	0	2.010	0.534
2010060	Whitehead St Eaton St Caroline St	0.10	2	30	KW	IOA	8504	4	H	3	0	3.534	C	15.33	0	0		C	
		D	U	0	90009.0			748	0.088	14	1700	0	0	0.000	21.22	0	0	1551	2315
		1.00	1	0	0.0		75	425	0.568		0.910	0			17.00	0	0	0.482	0.323
2020010	Duval St South St United St	0.09	2	30	KW	IOA	4750	4	H	3	0	2.274	B	16.71	0	0		B	
		D	U	0	90034.0			418	0.088	0	1700	0	0	0.000	16.71	0	0	1347	2010
		1.00	1	0	0.0		38	237	0.568	0	0.790	0			19.58	0	0	0.310	0.208
2020020	Duval St United St Truman Ave	0.23	2	25	KW	TOA	10331	5	H	0	0	0.000	D	0.00	0	0		D	
		D	U	1	90026.0			909	0.088	0	1700	3	54	0.370	0.00	0	0	962	1107
		1.00	1	0	90033.0			209	0.568	0	0.870	3			0.00	0	0	0.945	0.821
2020030	Duval St Truman Ave Angela St	0.23	2	25	CR	TOA	11323	5	H	0	0	0.000	E	0.00	0	0		E	
		D	U	1	90020.0			996	0.088	0	1700	3	54	0.370	0.00	0	0	962	1107
		1.00	1	0	90025.0			229	0.568	0	0.870	3			0.00	0	0	1.036	0.900

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Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method								
										Art Class	%No Sat	Pass Ctrl	Pk Hr Type	VHT Len	Los1 G:C	Ratio	Agg Spd Spd1 Time	Wld Pk Wld AADT	Dir Dir	Pred Pred	RT RT	Agg Los SvcCap V:S	PCap P CAP
										PHF	Arr	Type	Sr	Cyc Len	Sr	G:C				Pred Area	P CAP		
2020040	Duval St Angela St Southard St	0.08 D 1.00	2 U 1	25 1 0	CR 90018.0 0.0	TOA 94	13323 1172 666	5 0.088 0.568	H 0	0 1700 0.870	0 3 3	0.000 60 0.433	E 0.00 0.00	0 0 0	0 0 0	0 0 0	1125 1.042	1296 0.905	F F				
2020050	Duval St Southard St Fleming St	0.10 D 1.00	2 U 1	25 1 0	CR 90015.0 0.0	TOA 105	11933 1050 596	5 0.088 0.568	H 0	0 1700 0.720	0 3 3	0.000 60 0.440	F 0.00 0.00	0 0 0	0 0 0	946 1.110	1317 0.797	F F					
2020060	Duval St Fleming St Eaton St	0.08 D 1.00	2 U 1	25 1 0	CR 90010.0 0.0	TOA 75	10588 932 529	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 50 0.420	C 0.00 0.00	0 0 0	0 0 0	1129 0.875	1257 0.741	C C					
2020070	Duval St Eaton St Caroline St	0.10 D 1.00	2 U 1	25 1 0	KW 90007.0 0.0	TOA 84	9551 840 477	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.550	B 0.00 0.00	0 0 0	0 0 0	1495 0.562	1646 0.511	B B					
2020080	Duval St Caroline St Green St	0.09 D 1.00	2 U 1	25 1 0	KW 90001.0 0.0	TOA 45	5706 502 285	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.500	B 0.00 0.00	0 0 0	0 0 0	1359 0.369	1496 0.338	B B					
2020090	Duval St Green St Front St	0.09 D 1.00	2 U 1	30 1 0	KW 90001.0 0.0	TOA 45	5706 502 285	5 0.088 0.568	H 0	3 1700 0.910	0 3 3	0.000 60 Def	B 0.00 0.00	0 0 0	0 0 0	1087 0.462	1197 0.419	B B					
2020100	Duval St Green St Wall St	0.04 D 1.00	2 U 1	25 1 0	KW 90001.0 0.0	TOA 20	5706 502 285	5 0.088 0.568	H 0	0 1700 0.950	0 3 3	0.000 60 0.500	B 0.00 0.00	0 0 0	0 0 0	1419 0.354	1496 0.338	B B					
2030010	Simonton St South St United St	0.09 D 1.00	2 U 1	25 1 0	KW 90038.0 0.0	TOA 40	5020 442 251	5 0.088 0.568	H 0	0 1700 0.930	0 3 3	0.000 61 0.500	B 0.00 0.00	0 0 0	0 0 0	1389 0.318	1496 0.295	B B					
2030020	Simonton St United St Truman Ave	0.23 D 1.00	2 U 1	25 1 0	KW 90030.0 90036.0	TOA 136	6721 591 336	5 0.088 0.568	H 0	0 1700 0.790	0 3 3	0.000 60 0.417	B 0.00 0.00	0 0 0	0 0 0	984 0.601	1248 0.474	B B					
2030030	Simonton St Truman Ave Southard St	0.31 D 1.00	2 U 1	25 1 0	KW 90019.0 90028.0	TOA 205	7531 663 377	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 70 0.463	B 0.00 0.00	0 0 0	0 0 0	1259 0.526	1386 0.478	B B					
2030040	Simonton St Southard St Fleming St	0.10 D 1.00	2 U 1	25 1 0	KW 90013.0 90019.0	TOA 70	6011 705 400	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 60 0.500	B 0.00 0.00	0 0 0	0 0 0	1344 0.525	1496 0.471	B B					
2030050	Simonton St Fleming St Eaton St	0.08 D 1.00	2 U 1	25 1 0	KW 90013.0 0.0	TOA 55	7745 682 387	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 60 0.500	B 0.00 0.00	0 0 0	0 0 0	1344 0.507	1496 0.456	B B					
2030060	Simonton St Eaton St Caroline St	0.10 D 1.00	2 U 1	25 1 0	KW 90006.0 0.0	TOA 74	8415 741 421	5 0.088 0.568	H 0	0 1700 0.870	0 3 3	0.000 66 0.440	B 0.00 0.00	0 0 0	0 0 0	1143 0.648	1317 0.582	B B					
2030070	Simonton St Caroline St Water	0.27 D 1.00	2 U 1	25 1 0	KW 90004.0 0.0	TOA 186	7823 688 391	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.440	B 0.00 0.00	0 0 0	0 0 0	1196 0.576	1317 0.523	B B					

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Tindalo-Ollvor and Associates, Inc.

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Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Turns	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hrdir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method						Tables Method			
										Art Class	%No Pass	Pass Pk Hr	VHT Los1	Agg Spd	Wld PK Dir	Pred RT	Agg Los		
										Sat Flow	Ctrl Type	Cyc Len	G:C Ratio	Spd1	Wld Pk Vol	Pred Juris	SvcCap	PCap	
	PHF	Arr Type	Sr Cyc Len	Sr G:C	Time	Wld AADT	Pred Area	V:S	CAPV	P CAP									
2040010	Reynolds St	0.13	2	30	KW	TOA	4457	4	H	3	0	2.379	B	21.44	0	0			B
	Atlantic Blvd	D	U	0	90056.0		392	0.088		1700	0	0	0.000	21.44	0	0	1483	2213	
	Flagler Ave	1.00	2	0	0.0	51	223	0.568	0	0.870	0			21.84	0	0	0.264	0.177	
2040020	Reynolds St	0.14	2	30	KW	TOA	5838	4	H	3	0	3.476	B	20.71	0	0			B
	Flagler Ave	D	U	0	90055.0		514	0.088		1700	0	0	0.000	20.71	0	0	1483	2213	
	South St	1.00	2	0	0.0	72	292	0.568	0	0.870	0			24.36	0	0	0.346	0.232	
2040030	Reynolds St	0.09	2	25	KW	TOA	2582	5	H	0	0	0.000	A	0.00	0	0			A
	South St	D	U	1	90052.0		227	0.088		1700	3	30	0.700	0.00	0	0	1777	2095	
	United St	1.00	2	0	0.0	20	129	0.568	0	0.850	3			0.00	0	0	0.128	0.108	
2050010	Grinnell St	0.10	2	25	KW	TOA	9095	5	H	0	0	0.000	D	0.00	0	0			D
	Eaton St	D	U	1	90118.0		800	0.088		1700	3	60	0.333	0.00	0	0	881	997	
	Caroline St	1.00	1	0	0.0	80	454	0.568	0	0.900	3			0.00	0	0	0.908	0.803	
2060010	White St	0.23	2	25	KW	TOA	5116	5	H	0	0	0.000	A	0.00	0	0			A
	Atlantic Blvd	D	U	1	90064.0		450	0.088		1700	3	15	0.700	0.00	0	0	1966	2095	
	Flagler Ave	1.00	2	0	0.0	104	256	0.568	0	0.940	3	NoSig		0.00	0	0	0.229	0.215	
2060020	White St	0.23	2	25	KW	TOA	8973	5	H	0	0	0.000	B	0.00	0	0			B
	Flagler Ave	D	U	1	90060.0		790	0.088		1700	3	64	0.469	0.00	0	0	1191	1404	
	United St	1.00	2	0	90061.0	182	449	0.568	0	0.850	3			0.00	0	0	0.663	0.562	
2060030	White St	0.23	2	25	KW	TOA	10637	5	H	0	0	0.000	B	0.00	0	0			B
	United St	D	U	1	90049.0		936	0.088		1700	3	108	0.550	0.00	0	0	1358	1646	
	Truman Ave	1.00	2	0	90058.0	215	532	0.568	0	0.830	3			0.00	0	0	0.689	0.569	
2060040	White St	0.31	2	25	KW	TOA	9690	5	H	0	0	0.000	B	0.00	0	0			B
	Truman Ave	D	U	1	90088.0		853	0.088		1700	3	108	0.550	0.00	0	0	1358	1646	
	Southard St	1.00	2	0	0.0	264	485	0.568	0	0.830	3			0.00	0	0	0.628	0.518	
2060050	White St	0.17	2	25	KW	TOA	6941	5	H	0	0	0.000	B	0.00	0	0			B
	Southard St	D	U	1	90044.0		611	0.088		1700	3	60	0.400	0.00	0	0	1135	1197	
	Eaton St	1.00	2	0	0.0	104	347	0.568	0	0.950	3	fst	fst	0.00	0	0	0.538	0.510	
2070010	First St	0.39	2	40	CR	BOTH	8585	2	H	2	0	60.248	F	4.90	0	0			F
	Flagler Ave	D	U	1	95150.0		755	0.088		1750	3	93	0.222	4.90	0	0	555	684	
	North Roosevelt	1.00	2	0	90067.0	295	429	0.568	0	0.880	3			287.09	0	0	1.361	1.105	
2080010	Bertha St	0.16	2	40	CR	TOA	11900	4	H	2	0	5.650	D	29.73	0	0			D
	S Roosevelt Blv	D	U	0	90073.0		1047	0.088		1750	0	0	0.000	29.73	0	0	1509	2252	
	Atlantic Blvd	1.00	2	0	0.0	168	595	0.568	0	0.860	0			19.42	0	0	0.694	0.465	
2080020	Bertha St	0.24	2	40	CR	TOA	7697	2	H	2	0	31.344	F	5.17	0	0			F
	Atlantic Blvd	D	U	1	90070.0		675	0.088		1750	3	93	0.222	5.17	0	0	351	684	
	Flagler Ave	1.00	2	0	90072.0	162	304	0.568	0	0.880	3			167.24	0	0	1.922	0.888	
2090010	Fifth St	0.30	2	25	KW	BOTH	4210	5	H	0	0	0.000	B	0.00	0	0			B
	Flagler Ave	D	U	1	95160.0		371	0.088		1700	3	64	0.317	0.00	0	0	841	949	
	N Roosevelt Blv	1.00	2	0	90075.0	111	211	0.568	0	0.910	3			0.00	0	0	0.441	0.381	
2100010	Kennedy Dr	0.41	4	25	KW	TOA	8767	5	H	0	0	0.000	B	0.00	0	0			B
	Flagler Ave	D	U	1	90077.0		771	0.088		1700	3	78	0.513	0.00	0	0	2697	3071	
	Northside Dr	1.00	2	0	90082.0	316	438	0.568	0	0.880	3			0.00	0	0	0.286	0.251	

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HCS Method

Tables Method

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_slg %Turns	Juris CS1 CS2	Source Fyvolm Vint	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method				
										Art Class	%No Pass	Pk Hr VHT	Los1	Agg Spd	Wtd Pk Vol	Dir Pred	RT Juris	Agg Los	SvcCap
										Sat Flow	Ctrl Type	Cyc Len	G:C Ratio	Spd1	Wtd AADT	Pred Area	V:S	CAPV	PCAP
2100020	Kennedy Dr	0.12	4	25	KW	FDOI	9038	5	H	0	0	0.000	D	0.00	0	0		D	
	Northside Dr	D	U	1	95170.0		795	0.088		1700	2	100	0.250	0.00	0	0	1324	1496	
	N Roosevelt Blv	1.00	2	0	0.0	95	452	0.568	0	0.950	3			0.00	0	0	0.601	0.532	
2100030	Sigsbee Rd	0.11	2	25	KW	EST	6522	5	H	0	0	0.000	D	0.00	0	0		D	
	N Roosevelt Blv	D	U	1	95180.0		574	0.088		1700	2	100	0.293	0.00	0	0	753	877	
	Island	1.00	2	0	0.0	63	326	0.568	0	0.950	3			0.00	0	0	0.762	0.654	
2110010	Twentieth St	0.12	2	25	KW	TOA	870	5	H	0	0	0.000	B	0.00	0	0		B	
	Flagler Ave	D	U	1	90086.0		77	0.088		1700	3	30	0.300	0.00	0	0	815	898	
	Duck Ave	1.00	2	0	0.0	9	44	0.568	0	0.910	3	NoSig		0.00	0	0	0.094	0.085	
2110020	Twentieth St	0.33	2	30	KW	TOA	870	4	H	3	0	0.886	B	28.22	0	0		B	
	Duck Ave	D	U	0	90086.0		77	0.088		1700	0	0	0.000	28.22	0	0	1551	2315	
	Northside Dr	1.00	2	0	0.0	25	44	0.568	0	0.910	0			41.65	0	0	0.049	0.033	

Notes:

Method: "H" = "HCS", "T" = Tables

CAFT: 1=Freeway, 2=Int. Flow Arterial, 3=Urban Multi, 4=Two-lane Unint. Flow, 5=Non-state, Minor Street

6=Not Used, 7= Rural Multi, 8=Two-lane Unint. Flow

Arityp: 1=Very Poor, 2=Unfavorable, 3=Random, 4=Favorable, 5=Highly Favorable, 6=Exceptional

Ctrl Typ: 1=Actuated, 2=Semi-Actuated, 3=Fixed-Time

Area: 1=CBD, 2=Suburban, 3=Transitioning, 4=Rural Developed, 5=Rural

PK Hr VHT is based on peak direction of travel only. When the "daily" or "two-way" reporting option is chosen

, the peak hour VHT that is reported, is the peak hour peak direction VHT divided by D\_fac

**Appendix III.C.2**  
**2003 Levels of Service without Base Reuse Sites**

## Appendix III.C.2 Level of Service Inventory Report ( 2-Way Peak Hour Direction )

Key West Base Reuse Plan  
2003 Level of Service without Base Reuse Sites

	Filenames	Filedates		Date:
Mrn:	G:\KEYWEST\BASERUSE\JUNE99~1\KWMRN.DBF	June 18, 1999		21-Jun-99
Analysis:	G:\KEYWEST\BASERUSE\JUNE99~1\WOP2003.DBF	June 18, 1999		Time: 10:50:22

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Turns	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method							
										Art Class	%No Sat	Pass Ctl	Pk Hr Type	VHT Cyc Len	Los1 G:C Ratio	Agg Spd Spd1 Time	Wtd Pk Wtd AADT	Dir Dir	Pred Pred Area	RT Juris	Agg Los SvcCap PCap V:S CAPV.P CAP	
										PHF	Arr	Type	Sr	Cyc Len	Sr G:C	Time	Wtd	Dir	Pred	Juris	V:S	PCAP
1010010	Caroline St Whitehead St Duval St	0.08 D 1.00	2 U 1	25 1 0	KW 90002.0 0.0	TOA 2888 20	5 254 144	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 30 0.700	A 0.00 0.00	0 0 0	0 0 0	0 0 0	1903 0.134	2095 0.121	A			
1010020	Caroline St Duval St Simonton St	0.10 D 1.00	2 U 1	25 1 0	KW 90003.0 0.0	TOA 4136 36	5 364 207	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.330	B 0.00 0.00	0 0 0	0 0 0	883 0.412	988 0.368	B				
1010030	Caroline St Simonton St Grinnell St	0.34 D 1.00	2 U 1	25 1 0	KW 90005.0 0.0	TOA 5100 153	5 449 255	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.330	B 0.00 0.00	0 0 0	0 0 0	883 0.508	988 0.454	B				
1020010	Eaton St Whitehead St Duval St	0.08 D 1.00	2 U 1	30 1 0	CR 90008.0 0.0	TOA 5025 41	2 513 291	2 0.088 0.568	H 1	3 1750 0.900	0 3 3	2.503 30 NoSig	C 3.93 16.38	0 0 0	0 0 0	1812 0.283	2157 0.258	F				
1020020	Eaton St Duval St Simonton St	0.10 D 1.00	2 U 1	30 1 0	CR 90011.0 0.0	TOA 12532 110	2 1103 627	2 0.088 0.568	H 1	3 1750 0.900	0 3 3	43.088 60 0.350	F 3.93 2.55	0 0 0	0 0 0	736 1.498	1078 1.023	F				
1020030	Eaton St Simonton St Grinnell St	0.34 D 1.00	2 U 1	30 1 0	CR 90012.0 0.0	TOA 12063 361	2 1062 603	2 0.088 0.568	H 1	3 1750 0.870	0 3 3	16.596 60 0.533	B 3.93 21.75	0 0 0	0 0 0	1586 0.669	1642 0.646	F				
1020040	Eaton St Grinnell St White St	0.17 D 1.00	2 U 2	30 1 0	CR 90042.0 0.0	TOA 29837 446	2 2626 1492	2 0.088 0.568	H 1	3 1750 0.950	0 3 3	304.432 63 0.635	F 3.93 1.47	0 0 0	0 0 0	1887 1.391	1956 1.342	F				
1030010	Palm Ave N Roosevelt Blv Eisenhower Dr	0.45 D 1.00	2 U 2	30 1 0	CR 90043.0 0.0	TOA 28635 1134	2 2520 1431	2 0.088 0.568	H 2	3 1750 0.860	0 3 3	517.520 60 EST	F 2.59 2.19	0 0 0	0 0 0	1849 1.363	1849 1.363	F				

**Notes:**  
Method: "H" = "HCS", "T" = Tables  
CAFT: 1=Freeway, 2=Int. Flow Arterial, 3=Urban Multi, 4=Two-lane Unint. Flow, 5=Non-state, Minor Street  
6=Not Used, 7= Rural Multi, 8=Two-lane Unint. Flow

Artryp: 1=Very Poor, 2=Unfavorable, 3=Random, 4=Favorable, 5=Highly Favorable, 6=Exceptional  
Crtl Typ: 1=Actuated, 2=Semi-Actuated, 3=Fixed-Time  
Area: 1=CBD, 2=Suburban, 3=Transltoning, 4=Rural Developed, 5=Rural  
Pk Hr VHT is based on peak direction of travel only. When the "daily" or "two-way" reporting option is chosen  
the peak hour VHT that is reported, is the peak hour peak direction VHT divided by D\_fac



HCS Method

Tables Method

Id	On Street From To	Length Perf Std Psmult	Lanes Type Area	Spd Limit No_slg %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method			
										Art Class Sat PHF	%No Flow Arr	Pass Ctr Type Sr	Pk Hr Cyl Len	VHT Los1 G:C Ratio Sr G:C	Agg Spd Spd1 Time	Wld PK Dir	Prd RT	Agg Los SvcCap PCap
1060030	United St	0.28	2	30	KW	TOA	8986	4	H	3	0	7.996	C	27.64	0	0		C
	Simonton St	D	U	0	90037.0		791	0.088		1700	0	0	0.000	27.64	0	0	1449	2162
	Reynolds St	1.00	2	0	90050.0	221	449	0.568	0	0.850	0	NoSig		36.40	0	0	0.546	0.366
1060040	United St	0.23	2	25	KW	TOA	9281	5	H	0	0	0.000	C	0.00	0	0		C
	Reynolds St	D	U	1	90051.0		817	0.088		1700	3	64	0.390	0.00	0	0	986	1167
	White St	1.00	2	0	90057.0	188	464	0.568	0	0.850	3			0.00	0	0	0.828	0.700
1070010	South St	0.09	2	25	KW	TOA	7926	5	H	0	0	0.000	A	0.00	0	0		A
	Whitehead St	D	U	1	90039.0		697	0.088		1700	3	15	0.700	0.00	0	0	1652	2095
	Duvat St	1.00	1	0	0.0	63	396	0.568	0	0.790	3	NoSig		0.00	0	0	0.422	0.333
1070020	South St	0.10	2	25	KW	TOA	7926	5	H	0	0	0.000	B	0.00	0	0		B
	Duvat St	D	U	0	90039.0		697	0.088		1700	3	60	0.500	0.00	0	0	1389	1496
	Simonton St	1.00	1	0	0.0	70	396	0.568	0	0.930	3			0.00	0	0	0.502	0.466
1070030	South St	0.28	2	25	KW	TOA	13999	5	H	0	0	0.000	E	0.00	0	0		E
	Simonton St	D	U	1	90040.0		1232	0.088		1700	3	63	0.476	0.00	0	0	1209	1425
	Reynolds St	1.00	2	0	90053.0	345	700	0.568	0	0.850	3			0.00	0	0	1.019	0.865
1080010	Flagler Ave	0.23	2	30	KW	TOA	4736	5	H	3	0	0.000	B	0.00	0	0		B
	Reynolds St	D	U	1	90062.0		417	0.088		1700	3	76	0.461	0.00	0	0	1212	1380
	White St	1.00	2	0	0.0	96	237	0.568	0	0.880	3			0.00	0	0	0.344	0.302
1080020	Flagler Ave	0.54	2	25	KW	TOA	14349	5	H	0	0	0.000	F	0.00	0	0		F
	White St	D	U	1	90063.0		1263	0.088		1700	2	91	0.440	0.00	0	0	1134	1317
	First St	1.00	2	0	90068.0	682	717	0.568	0	0.880	3			0.00	0	0	1.114	0.959
1080030	Flagler Ave	0.29	2	40	CR	TOA	22959	2	H	2	0	514.430	F	2.51	0	0		F
	First St	D	U	1	90069.0		2020	0.088		1750	2	61	0.455	1.14	0	0	1186	1402
	Fifth St	1.00	2	0	90074.0	586	1147	0.568	8	0.860	3			916.63	0	0	1.704	1.441
1080040	Flagler Ave	0.71	4	45	CR	TOA	22862	2	H	1	0	288.555	F	2.51	0	0		F
	Fifth St	D	D	1	90076.0		2012	0.088		1750	2	97	0.258	4.95	0	0	1488	1590
	Kennedy Dr	1.00	2	0	90081.0	1428	1143	0.568	8	0.880	3			516.34	0	0	1.352	1.265
1080050	Flagler Ave	0.85	4	45	CR	BOTH	16781	3	H	1	0	27.894	A	33.83	0	0		A
	Kennedy Dr	D	D	0	95140.0		1477	0.088		1750	0	0	0.000	44.99	0	0	4284	5423
	Twentieth St	1.00	2	0	90084.0	1255	839	0.568	9	0.880	0			68.00	0	0	0.345	0.272
1080060	Flagler Ave	0.13	4	45	CR	TOA	19437	2	H	1	0	17.240	F	33.83	0	0		F
	Twentieth St	D	D	1	90084.0		1710	0.088		1750	2	78	0.397	12.88	0	0	1	2446
	S Roosevelt Blv	1.00	2	0	0.0	222	971	0.568	9	0.930	3			36.29	0	0	2.010	0.689
1090010	Atlantic Blvd	0.26	2	25	KW	TOA	4921	5	H	0	0	0.000	A	0.00	0	0		A
	Reynolds St	D	U	1	90056.0		433	0.088		1700	3	15	0.700	0.00	0	0	1966	2095
	White St	1.00	2	0	0.0	113	246	0.568	0	0.940	3	NoSig		0.00	0	0	0.220	0.207
1090020	Atlantic Blvd	0.54	2	25	KW	TOA	7512	5	H	0	0	0.000	A	0.00	0	0		A
	White St	D	U	1	90065.0		661	0.088		1700	3	30	0.700	0.00	0	0	1798	2095
	Bertha St	1.00	2	0	90071.0	357	375	0.568	0	0.860	3	NoSig		0.00	0	0	0.368	0.316
1100010	South Roosevelt Blvd	1.40	4	45	SR	FDOT	12509	3	H	1	0	34.247	A	40.94	0	0		A
	Bertha St	C	U	0	95110.0		1101	0.088		1750	0	0	0.000	45.00	0	0	2623	3974
	Airport	1.00	2	0	0.0	1541	625	0.568	11	0.860	0			112.00	0	0	0.420	0.277

Notes:

Method: "H" = "HCS", "T" = Tables

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6=Not Used, 7= Rural Multi, 8=Two-lane Unint. Flow

Arrtyp: 1=Very Poor, 2=Unfavorable, 3=Random, 4=Favorable, 5=Highly Favorable, 6=Exceptional

Ctr Typ: 1=Actuated, 2=Semi-Actuated, 3=Fixed-Time

Area: 1=CBD, 2=Suburban, 3=Transitioning, 4=Rural Developed, 5=Rural

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, the peak hour VHT that is reported, is the peak hour peak direction VHT divided by D\_fac

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method						Tables Method			
										Art Class		%No Pass	Pk Hr VHT	Los1	Agg Spd	Wld Pk Dir	Prd RT	Agg Los	
										Sat	Flow	Ctrl Type	Cyc Len	G:C Ratio	Spd1 Time	Wld AADT	Prd Area	V:S CAPV:P CAP	PCap
1100020	South Roosevelt Blvd	1.24	4	45	SR	FDOT	11897	2	H	1	0	33.867	A	40.94	0	0			A
	Airport Flagler Ave	C 1.00	U 2	1 0	95100.0 0.0		1047 1298	0.088 0.568	11	1750 0.930	2 3	78 3	0.399	38.33 116.46	0 0	0 0	2459 0.426	2459 0.426	A
1100040	South Roosevelt Blvd	0.28	4	45	SR	FDOT	20351	2	H	1	0	14.079	A	40.94	0	0			A
	Flagler Ave US1	C 1.00	D 2	1 0	95090.0 0.0		1791 501	0.088 1017	11	1750 0.950	2 3	94 3	1.000	35.58 28.30	0 0	0 0	5855 0.306	6162 0.281	A
1110010	Northside Dr	0.81	2	25	KW	TOA	10602	5	H	0	0	0.000	D	0.00	0	0			D
	Kennedy Dr Twentieth St	D 1.00	U 2	2 0	90078.0 90079.0		933 756	0.088 0.568	0	1700 0.910	3 3	78	0.386	0.00 0.00	0 0	0 0	1029 0.907	1155 0.808	D
1120010	US1	0.20	4	45	SR	EST	46118	2	H	1	0	25.200	B	32.22	0	0			B
	Roosevelt Blvd Cow Key Channel	C 1.00	D 2	1 0	95190.0 0.0		4058 812	0.088 0.568	0	1750 0.950	2 3	94	1.000	32.22 TOA	0 0	0 0	5738 0.707	6162 0.659	B
1130010	Duck Ave	0.13	2	25	KW	TOA	5195	5	H	0	0	0.000	A	0.00	0	0			A
	Twentieth St S Roosevelt Blv	D 1.00	U 2	1 0	90087.0 0.0		457 59	0.088 0.568	0	1700 0.910	3 3	30 NoSig	0.700	0.00 0.00	0 0	0 0	1903 0.240	2095 0.218	A
2010010	Whitehead St	0.09	2	30	KW	TOA	3830	4	H	3	0	1.011	B	30.00	0	0			A
	South St United St	D 1.00	U 1	0 0	90032.0 0.0		337 191	0.088 0.568	13	1700 0.740	0 0	0 0	0.000	29.67 10.80	0 0	0 0	1261 0.267	1883 0.179	A
2010020	Whitehead St	0.23	2	30	KW	TOA	5547	4	H	3	0	3.742	B	30.00	0	0			A
	United St Truman Ave	D 1.00	U 1	0 0	90024.0 90031.0		488 112	0.088 0.568	13	1700 0.740	0 0	0 0	0.000	29.93 27.60	0 0	0 0	1261 0.387	1883 0.259	A
2010030	Whitehead St	0.31	2	30	SR	TOA	8998	2	H	3	0	12.006	B	14.93	0	0			C
	Truman Ave Southard St	C 1.00	U 1	1 0	90017.0 90021.0		792 245	0.088 0.568	14	1750 0.910	3 3	50	0.400	20.41 54.58	0 0	0 0	1114 0.711	1232 0.643	C
2010040	Whitehead St	0.09	2	30	SR	TOA	7621	2	H	3	0	6.455	D	14.93	0	0			C
	Southard St Hemming St	C 1.00	U 1	1 0	90014.0 0.0		671 60	0.088 0.568	14	1750 0.910	3 3	73	0.411	9.30 34.65	0 0	0 0	1 2.010	1266 0.530	C
2010050	Whitehead St	0.08	2	30	SR	TOA	9389	2	H	3	0	7.717	E	14.93	0	0			C
	Hemming St Eaton St	C 1.00	U 1	1 0	90009.0 0.0		876 66	0.088 0.568	14	1750 0.910	3 3	77	0.455	8.55 33.62	0 0	0 0	1 2.010	1402 0.589	C
2010060	Whitehead St	0.10	2	30	KW	TOA	9389	4	H	3	0	3.902	C	14.93	0	0			C
	Eaton St Caroline St	D 1.00	U 1	0 0	90009.0 0.0		826 83	0.088 0.568	14	1700 0.910	0 0	0 0	0.000	21.27 17.00	0 0	0 0	1551 0.533	2315 0.357	C
2020010	Duval St	0.09	2	30	KW	TOA	5245	4	H	3	0	2.511	B	16.73	0	0			B
	South St United St	D 1.00	U 1	0 0	90034.0 0.0		462 42	0.088 0.568	0	1700 0.790	0 0	0 0	0.000	16.73 19.58	0 0	0 0	1347 0.343	2010 0.230	B
2020020	Duval St	0.23	2	25	KW	TOA	11406	5	H	0	0	0.000	E	0.00	0	0			E
	United St Truman Ave	D 1.00	U 1	1 0	90026.0 90033.0		1004 231	0.088 0.568	0	1700 0.870	3 3	54	0.370	0.00 0.00	0 0	0 0	962 1.043	1107 0.907	E
2020030	Duval St	0.23	2	25	CR	TOA	12501	5	H	0	0	0.000	F	0.00	0	0			F
	Truman Ave Angela St	D 1.00	U 1	1 0	90020.0 90025.0		1100 253	0.088 0.568	0	1700 0.870	3 3	54	0.370	0.00 0.00	0 0	0 0	962 1.144	1107 0.994	F

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HCS Method

Tables Method

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Turns	Juris CS1 CS2	Source Fyvolm Vmt	AADT PK Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method				
										Art Class Sat PHF	%No Flow Arr	Pass Ctrl Type	Pk Hr Cyc Len	VHT Sr Cyc Len	Los1 G:C Ratio	Agg Spd Spd1 Time	Wld PK Wld AADT	Dir Vol	Pred Pred Area
2020040	Duval St Angela St Southard St	0.08 D 1.00	2 U 1	25 1 0	CR 90018.0 0.0	TOA 104	14710 1294 735	5 0.088 0.568	H 0	0 1700 0.870	0 3 3	0.000 60 0.433	F 0.00 0.00	0 0 0	0 0 0	0 0 0	1125 1.151	1296 0.999	F
2020050	Duval St Southard St Fleming St	0.10 D 1.00	2 U 1	25 1 0	CR 90015.0 0.0	TOA 116	13175 1159 658	5 0.088 0.568	H 0	0 1700 0.720	0 3 3	0.000 60 0.440	F 0.00 0.00	0 0 0	0 0 0	946 1.226	1317 0.880	F	
2020060	Duval St Fleming St Eaton St	0.08 D 1.00	2 U 1	25 1 0	CR 90010.0 0.0	TOA 82	11690 1029 584	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 50 0.420	C 0.00 0.00	0 0 0	0 0 0	1129 0.911	1257 0.818	C	
2020070	Duval St Eaton St Caroline St	0.10 D 1.00	2 U 1	25 1 0	KW 90007.0 0.0	TOA 93	10545 928 527	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.550	B 0.00 0.00	0 0 0	0 0 0	1495 0.621	1646 0.564	B	
2020080	Duval St Caroline St Green St	0.09 D 1.00	2 U 1	25 1 0	KW 90001.0 0.0	TOA 50	6299 554 315	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.500	B 0.00 0.00	0 0 0	0 0 0	1359 0.408	1496 0.371	B	
2020090	Duval St Green St Front St	0.09 D 1.00	2 U 1	30 1 0	KW 90001.0 0.0	TOA 50	6299 554 315	5 0.088 0.568	H 0	3 1700 0.910	0 3 3	0.000 60 Def	B 0.400 0.00	0 0 0	0 0 0	1087 0.510	1197 0.463	B	
2020100	Duval St Green St Wall St	0.04 D 1.00	2 U 1	25 1 0	KW 90001.0 0.0	TOA 22	6299 554 315	5 0.088 0.568	H 0	0 1700 0.950	0 3 3	0.000 60 0.500	B 0.00 0.00	0 0 0	0 0 0	1419 0.391	1496 0.371	B	
2030010	Simonton St South St United St	0.09 D 1.00	2 U 1	25 1 0	KW 90038.0 0.0	TOA 44	5542 488 277	5 0.088 0.568	H 0	0 1700 0.930	0 3 3	0.000 61 0.500	B 0.00 0.00	0 0 0	0 0 0	1389 0.351	1496 0.326	B	
2030020	Simonton St United St Truman Ave	0.23 D 1.00	2 U 1	25 1 0	KW 90030.0 90036.0	TOA 150	7420 653 371	5 0.088 0.568	H 0	0 1700 0.790	0 3 3	0.000 60 0.417	B 0.00 0.00	0 0 0	0 0 0	984 0.664	1248 0.523	B	
2030030	Simonton St Truman Ave Southard St	0.31 D 1.00	2 U 1	25 1 0	KW 90019.0 90028.0	TOA 227	8315 732 416	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 70 0.463	B 0.00 0.00	0 0 0	0 0 0	1259 0.581	1386 0.528	B	
2030040	Simonton St Southard St Fleming St	0.10 D 1.00	2 U 1	25 1 0	KW 90013.0 90019.0	TOA 78	8845 778 442	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 60 0.500	B 0.00 0.00	0 0 0	0 0 0	1344 0.579	1496 0.520	B	
2030050	Simonton St Fleming St Eaton St	0.08 D 1.00	2 U 1	25 1 0	KW 90011.0 0.0	TOA 60	8551 757 427	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 60 0.500	B 0.00 0.00	0 0 0	0 0 0	1344 0.560	1496 0.503	B	
2030060	Simonton St Eaton St Caroline St	0.10 D 1.00	2 U 1	25 1 0	KW 90006.0 0.0	TOA 82	9291 818 465	5 0.088 0.568	H 0	0 1700 0.870	0 3 3	0.000 66 0.440	B 0.00 0.00	0 0 0	0 0 0	1143 0.715	1317 0.621	B	
2030070	Simonton St Caroline St Water	0.27 D 1.00	2 U 1	25 1 0	KW 90004.0 0.0	TOA 205	8637 760 432	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.440	B 0.00 0.00	0 0 0	0 0 0	1196 0.635	1317 0.577	B	

Notes:

Method: "H" = "HCS", "T" = Tables

CAFT: 1=Freeway, 2=Int. Flow Arterial, 3=Urban Multi, 4=Two-lane Unint. Flow, 5=Non-state, Minor Street  
6=Not Used, 7= Rural Multi, 8=Two-lane Unint. Flow

Tindale-Oliver and Associates, Inc.

Arrtyp: 1=Very Poor, 2=Unfavorable, 3=Random, 4=Favorable, 5=Highly Favorable, 6=Exceptional

Ctrl Typ: 1=Actual, 2=Semi-Actual, 3=Fixed-Time

Area: 1=CBD, 2=Suburban, 3=Transitioning, 4=Rural Developed, 5=Rural

Pk Hr VHT is based on peak direction of travel only. When the "daily" or "two-way" reporting option is chosen, the peak hour VHT that is reported, is the peak hour peak direction VHT divided by D\_fac.

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Turns	Juris CS1 CS2	Source Fyvolm Vmit	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method					
										Art Class	%No Pass	Pk Hr VHT	Los1	Agg Spd	Wmd PK Dir	Pred RT	Agg Los			
										Sat Flow	Ctrl Type	Cyc Len	G:C Ratio	Spd1	Wmd PK Vol	Pred Juris	SvcCap	PCap		
PHF	Arr Type	Sr Cyc	Sr G:C	Time	Wmd AADT	Pred Area	V:S	CAPV:P	CAP											
2040010	Reynolds St Atlantic Blvd Flagler Ave	0.13	2	30	KW	TOA	4921	4	H	3	0	2.627	B	21.32	0	0				
		D	U	0	90056.0			433	0.088	0	1700	0	0	0.000	21.32	0	0	1483	2213	B
2040020	Reynolds St Flagler Ave South St	0.14	2	30	KW	TOA	6445	4	H	3	0	3.838	B	20.58	0	0				
		D	U	0	90055.0			567	0.088	0	1700	0	0	0.000	20.58	0	0	1483	2213	B
2040030	Reynolds St South St United St	0.09	2	25	KW	TOA	2851	5	H	0	0	0.000	A	0.00	0	0				
		D	U	1	90052.0			251	0.088	0	1700	3	30	0.700	0.00	0	0	1777	2095	A
2050010	Grinnell St Eaton St Caroline St	0.10	2	25	KW	TOA	10042	5	H	0	0	0.000	E	0.00	0	0				
		D	U	1	90118.0			884	0.088	0	1700	3	60	0.333	0.00	0	0	881	997	E
2060010	White St Atlantic Blvd Flagler Ave	0.23	2	25	KW	TOA	5648	5	H	0	0	0.000	A	0.00	0	0				
		D	U	1	90064.0			497	0.088	0	1700	3	15	0.700	0.00	0	0	1966	2095	A
2060020	White St Flagler Ave United St	0.23	2	25	KW	TOA	9907	5	H	0	0	0.000	B	0.00	0	0				
		D	U	1	90060.0			872	0.088	0	1700	3	64	0.469	0.00	0	0	1191	1404	B
2060030	White St United St Truman Ave	0.23	2	25	KW	TOA	11744	5	H	0	0	0.000	C	0.00	0	0				
		D	U	1	90049.0			1033	0.088	0	1700	3	108	0.550	0.00	0	0	1358	1646	C
2060040	White St Truman Ave Southard St	0.31	2	25	KW	TOA	10699	5	H	0	0	0.000	B	0.00	0	0				
		D	U	1	90088.0			942	0.088	0	1700	3	108	0.550	0.00	0	0	1358	1646	B
2060050	White St Southard St Eaton St	0.17	2	25	KW	TOA	7663	5	H	0	0	0.000	B	0.00	0	0				
		D	U	1	90044.0			674	0.088	0	1700	3	60	0.400	0.00	0	0	1135	1197	B
2070010	First St Flagler Ave North Roosevelt	0.39	2	40	CR	BOTH	9479	2	H	2	0	101.559	F	3.20	0	0				
		D	U	1	95150.0			834	0.088	0	1750	3	93	0.222	3.20	0	0	555	684	F
2080010	Bertha St S Roosevelt Blv Atlantic Blvd	0.16	2	40	CR	TOA	13139	4	H	2	0	6.239	D	29.65	0	0				
		D	U	0	90073.0			1156	0.088	0	1750	0	0	0.000	29.65	0	0	1509	2252	D
2080020	Bertha St Atlantic Blvd Flagler Ave	0.24	2	40	CR	TOA	8465	2	H	2	0	53.417	F	3.35	0	0				
		D	U	1	90070.0			745	0.088	0	1750	3	93	0.222	3.35	0	0	351	684	F
2090010	Fifth St Flagler Ave N Roosevelt Blv	0.30	2	25	KW	BOTH	4658	5	H	0	0	0.000	B	0.00	0	0				
		D	U	1	95160.0			410	0.088	0	1700	3	63	0.317	0.00	0	0	841	949	B
2100010	Kennedy Dr Flagler Ave Northside Dr	0.41	4	25	KW	TOA	9680	5	H	0	0	0.000	B	0.00	0	0				
		D	U	1	90077.0			852	0.088	0	1700	3	78	0.513	0.00	0	0	2697	3071	B
		1.00	2	0	90082.0		349	484	0.568	0	0.880	3		0.00	0	0	0.316	0.277		

Notes:

Method: "H" = "HCS", "T" = Tables

CAFT: 1=Freeway, 2=Int. Flow Arterial, 3=Urban Multi, 4=Two-lane Unint. Flow, 5=Non-state, Minor Street  
6=Not Used, 7= Rural Multi, 8=Two-lane Unint. Flow

Arttyp: 1=Very Poor, 2=Unfavorable, 3=Random, 4=Favorable, 5=Highly Favorable, 6=Exceptional

Ctrl Typ: 1=Actuated, 2=Semi-Actuated, 3=Fixed-Time

Area: 1=CBD, 2=Suburban, 3=Transitioning, 4=Rural Developed, 5=Rural

Pk Hr VHT is based on peak direction of travel only. When the "daily" or "two-way" reporting option is chosen

, the peak hour VHT that is reported, is the peak hour peak direction VHT divided by D\_fac

HCS Method

Tables Method

Id	On Street From To	Length Perf_Stid Psmult	Lanes Type Area	Spd Limit No_sig %Turns	Juris CS1 CS2	Source Fyvolm Vmit	AADT PK Hr Vol PK Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method			Agg Los			
										Art Class Sat Flow PHF	%No Pass Ctrl Type Arr Type	Pk Hr Cyc Sr	VHT Len Cyc Len	Los1 G:C Ratio Sr G:C	Agg Spd Spd1 Time	Wtd PK Wtd AADT	Dir Pred Pred Area	RT Juris V:S	Cap PCap CAPV	Cap P CAP	
2100020	Kennedy Dr Northside Dr N Roosevelt Blv	0.12	4	25	KW	FDOT	9979	5	H	0	0	0.000	D	0.00	0	0	0	0	0	0	0
		D	U	1	95170.0			878	0.088	0	1700	2	100	0.250	0.00	0	0	0	0	1324	1496
		1.00	2	0	0.0		105	499	0.568	0	0.950	3			0.00	0	0	0	0	0.663	0.587
2100030	Sigsbee Rd N Roosevelt Blv Island	0.11	2	25	KW	EST	7201	5	H	0	0	0.000	D	0.00	0	0	0	0	0	0	0
		D	U	1	95180.0			634	0.088	0	1700	2	100	0.293	0.00	0	0	0	0	753	877
		1.00	2	0	0.0		70	360	0.568	0	0.950	3			0.00	0	0	0	0	0.842	0.723
2110010	Twentieth St Flagler Ave Duck Ave	0.12	2	25	KW	TOA	960	5	H	0	0	0.000	B	0.00	0	0	0	0	0	0	B
		D	U	1	90086.0			84	0.088	0	1700	3	30	0.300	0.00	0	0	0	0	815	898
		1.00	2	0	0.0		10	48	0.568	0	0.910	3	NoSig		0.00	0	0	0	0	0.104	0.094
2110020	Twentieth St Duck Ave Northside Dr	0.33	2	30	KW	TOA	960	4	H	3	0	0.977	B	28.66	0	0	0	0	0	0	B
		D	U	0	90086.0			84	0.088	0	1700	0	0	0.000	28.66	0	0	0	0	1551	2315
		1.00	2	0	0.0		28	48	0.568	0	0.910	0			41.65	0	0	0	0	0.054	0.036

Notes:

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**Appendix IV.A.**  
**2003 Levels of Service with Base Reuse Sites**

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method				
										Art Class	%No Pass	Pk Hr VHT	Los1	Agg Spd	Wtd Pk Dir	Pred RT	Agg Los		
										Sat Flow PHF	Ctrl Type Arr	Cyc Len Sr	G:C Ratio Sr G:C	Spd1 Time	Wtd Pk Vol Wtd AADT	Pred Juris Pred Area	SvcCap V:S	PCap CAPV	PCAP
1030020	Palm Ave Eisenhower Dr White St	0.34 D 1.00	2 U 2	30 1 0	CR 90043.0 0.0	TOA 895	29919 2633 1496	2 0.088 0.568	H 2	3 1750 0.950	0 3 3	322.348 63 3	F 2.78 440.75	2.14 2.78 440.75	0 0 0	0 0 0	1956 1.346	1956 1.346	F
1040010	Truman Ave Whitehead St Duval St	0.08 C 1.00	2 U 1	30 1 0	SR 90022.0 0.0	TOA 51	7191 633 360	2 0.088 0.568	H 3	3 1750 0.870	0 3 3	5.228 54 3	D 9.76 29.74	13.17 9.76 29.74	0 0 0	0 0 0	1 2.010	1232 0.514	C
1040020	Truman Ave Duval St Simonton St	0.10 C 1.00	2 U 1	30 1 0	SR 90027.0 0.0	TOA 93	10546 928 527	2 0.088 0.568	H 3	3 1750 0.910	0 3 3	9.259 70 3	D 10.04 35.92	13.17 10.04 35.92	0 0 0	0 0 0	1 2.010	1417 0.655	C
1040030	Truman Ave Simonton St Windsor Ln	0.19 C 1.00	2 U 1	30 1 0	SR 90029.0 90090.0	TOA 165	9867 868 493	2 0.088 0.568	H 3	3 1750 0.900	0 3 3	10.182 72 3	C 16.21 42.22	13.17 16.21 42.22	0 0 0	0 0 0	1179 0.736	1497 0.580	C
1040040	Truman Ave Windsor Ln White St	0.32 C 1.00	2 U 2	30 2 0	SR 90029.0 90090.0	TOA 260	9231 812 461	2 0.088 0.568	H 3	3 1750 0.830	0 3 3	18.212 108 3	C 14.28 80.71	13.17 14.28 80.71	0 0 0	0 0 0	1026 0.792	1695 0.479	C
1040050	Truman Ave White St Eisenhower Dr	0.23 C 1.00	2 U 2	30 1 0	SR 95000.0 0.0	FDOT 413	20417 1797 1021	2 0.088 0.568	H 4	3 1750 0.860	0 2 3	493.966 74 3	F 0.84 989.75	1.78 0.84 989.75	0 0 0	0 0 0	935 1.922	1226 1.465	F
1040060	Truman Ave Eisenhower Dr Palm Ave	0.31 C 1.00	4 U 2	30 1 0	SR 95000.0 0.0	FDOT 529	19405 1708 970	2 0.088 0.568	H 4	3 1750 0.860	0 2 3	49.674 152 3	D 10.65 104.72	1.78 10.65 104.72	0 0 0	0 0 0	1328 1.286	2070 0.825	F
1050010	North Roosevelt Blvd First St Fourth St	0.23 C 1.00	4 D 2	40 1 0	SR 95010.0 0.0	FDOT 767	37914 3336 1895	2 0.088 0.568	H 5	2 1750 0.960	0 2 3	62.395 89 3	E 12.29 67.32	4.05 12.29 67.32	0 0 0	0 0 0	2795 1.194	3463 0.963	F
1050020	North Roosevelt Blvd Fourth St Fifth St	0.08 C 1.00	4 D 2	45 1 0	SR 95010.0 0.0	FDOT 267	37914 3336 1895	2 0.088 0.568	H 5	1 1750 0.910	0 2 3	65.309 89 3	F 4.09 70.47	4.05 4.09 70.47	0 0 0	0 0 0	2 2.010	3463 0.963	F
1050030	North Roosevelt Blvd Fifth St Overseas Mkt	0.50 C 1.00	4 D 2	45 1 0	SR 95020.0 0.0	FDOT 1995	45351 3991 2267	2 0.088 0.568	H 5	1 1750 0.960	0 2 3	542.417 96 3	F 3.68 489.29	4.05 3.68 489.29	0 0 0	0 0 0	2659 1.501	2884 1.384	F
1050040	North Roosevelt Blvd Overseas Mkt Kennedy Dr	0.27 C 1.00	4 D 2	45 1 0	SR 95030.0 0.0	FDOT 898	37810 3327 1890	2 0.088 0.568	H 5	1 1750 0.950	0 2 3	306.718 100 3	F 2.93 331.86	4.05 2.93 331.86	0 0 0	0 0 0	127 2.010	2625 1.268	F
1050050	North Roosevelt Blvd Kennedy Dr US1	1.23 C 1.00	4 D 2	45 1 0	SR 95040.0 95080.0	FDOT 3825	35338 3110 1766	2 0.088 0.568	H 0	1 1750 0.950	0 2 3	94.404 94 3	A 40.52 109.29	40.52 40.52 109.29	0 0 0	0 0 0	4258 0.730	4258 0.730	A
1060010	United St Whitehead St Duval St	0.09 D 1.00	2 U 1	25 1 0	KW 90035.0 0.0	TOA 42	5263 463 263	5 0.088 0.568	H 0	0 1700 0.740	0 3 3	0.000 30 NoSig	A 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	1547 0.299	2095 0.221	A
1060020	United St Duval St Simonton St	0.10 D 1.00	2 U 1	25 0 0	KW 90035.0 0.0	TOA 46	5263 463 263	5 0.088 0.568	H 0	0 1700 0.790	0 3 3	0.000 60 3	B 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	1180 0.392	1496 0.310	B

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Pk Hr VHT is based on peak direction of travel only. When the "daily" or "two-way" reporting option is chosen

the peak hour VHT that is reported, is the peak hour peak direction VHT divided by D\_fac. Appendix IV A - 2

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	HCS Method					Tables Method							
									Analysis method Sec No.	Art Class Sat Flow PHF	%No Pass Ctrl Type Arr	Pk Hr Cyc Len Sr	VHT G:C Sr	Loss Ratio G:C	Agg Spd Spd1 Time	Wtd Pk Wtd AADT	Dir Dir	Pred Pred	RT RT	Agg Los	
																				Wtd	Pk
1060030	United St Simonton St Reynolds St	0.28 D 1.00	2 U 2	30 0 0	KW 90037.0 90050.0	TOA 791 221	8986 449 449	4 0.088 0.568	H 0	3 1700 0.850	0 0 0	7.996 0 Nosig	C 0.000 36.40	27.64 27.64 36.40	0 0 0	0 0 0	0 0 0	0 0 0	C 1449 0.546	2162 2162 0.366	
1060040	United St Reynolds St White St	0.23 D 1.00	2 U 2	25 1 0	KW 90051.0 90057.0	TOA 817 464	9281 0.088 0.568	5 0.088 0.568	H 0	0 1700 0.850	0 3 3	0.000 64 0.390	C 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	0 0 0	C 986 0.828	1167 1167 0.700	
1070010	South St Whitehead St Duval St	0.09 D 1.00	2 U 1	25 1 0	KW 90039.0 0.0	TOA 697 63	7926 0.088 0.568	5 0.088 0.568	H 0	0 1700 0.790	0 3 3	0.000 15 NoSig	A 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	0 0 0	A 1652 0.422	2095 2095 0.333	
1070020	South St Duval St Simonton St	0.10 D 1.00	2 U 1	25 0 0	KW 90039.0 0.0	TOA 697 70	7926 0.088 0.568	5 0.088 0.568	H 0	0 1700 0.930	0 3 3	0.000 60 0.500	B 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	0 0 0	B 1389 0.502	1496 1496 0.466	
1070030	South St Simonton St Reynolds St	0.28 D 1.00	2 U 2	25 1 0	KW 90040.0 90053.0	TOA 1232 345	13999 0.088 0.568	5 0.088 0.568	H 0	0 1700 0.850	0 3 3	0.000 63 0.476	E 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	0 0 0	E 1209 1.019	1425 1425 0.865	
1080010	Flagler Ave Reynolds St White St	0.23 D 1.00	2 U 2	30 1 0	KW 90062.0 0.0	TOA 417 96	4736 0.088 0.568	5 0.088 0.568	H 0	3 1700 0.880	0 3 3	0.000 76 0.461	B 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	0 0 0	B 1212 0.344	1380 1380 0.302	
1080020	Flagler Ave White St First St	0.54 D 1.00	2 U 2	25 1 0	KW 90063.0 90068.0	TOA 1281 692	14554 0.088 0.568	5 0.088 0.568	H 0	0 1700 0.880	0 2 3	0.000 91 0.440	F 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	0 0 0	F 1134 1.129	1317 1317 0.972	
1080030	Flagler Ave First St Fifth St	0.29 D 1.00	2 U 2	40 1 0	CR 90069.0 90074.0	TOA 2038 591	23164 0.088 0.568	2 0.088 0.568	H 8	2 1750 0.860	0 2 3	538.637 61 0.455	F 2.42 1.10	2.42 1.10 951.27	0 0 0	0 0 0	0 0 0	0 0 0	F 1186 1.719	1402 1402 1.454	
1080040	Flagler Ave Fifth St Kennedy Dr	0.71 D 1.00	4 D 2	45 1 0	CR 90076.0 90081.0	TOA 2030 1441	23067 0.088 0.568	2 0.088 0.568	H 8	1 1750 0.880	0 2 3	302.161 97 0.258	F 2.42 4.77	2.42 4.77 535.88	0 0 0	0 0 0	0 0 0	0 0 0	F 1488 1.364	1590 1590 1.277	
1080050	Flagler Ave Kennedy Dr Twentieth St	0.85 D 1.00	4 D 2	45 0 0	CR 95140.0 90084.0	BOTH 1495 1271	16986 0.088 0.568	3 0.088 0.568	H 9	1 1750 0.880	0 0 0	28.235 0 0.000	A 33.83 45.02	33.83 45.02 68.00	0 0 0	0 0 0	0 0 0	0 0 0	B 4284 0.349	5423 5423 0.276	
1080060	Flagler Ave Twentieth St S Roosevelt Blv	0.13 D 1.00	4 D 2	45 1 0	CR 90084.0 0.0	TOA 1710 222	19437 0.088 0.568	2 0.088 0.568	H 9	1 1750 0.930	0 2 3	17.240 78 0.397	F 33.83 12.88	33.83 12.88 36.29	0 0 0	0 0 0	0 0 0	0 0 0	B 1 2.010	2446 2446 0.699	
1090010	Atlantic Blvd Reynolds St White St	0.26 D 1.00	2 U 2	25 1 0	KW 90056.0 0.0	TOA 433 113	4921 0.088 0.568	5 0.088 0.568	H 0	0 1700 0.940	0 3 3	0.000 15 NoSig	A 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	0 0 0	A 1966 0.220	2095 2095 0.207	
1090020	Atlantic Blvd White St Bertha St	0.54 D 1.00	2 U 2	25 1 0	KW 90065.0 90071.0	TOA 661 357	7512 0.088 0.568	5 0.088 0.568	H 0	0 1700 0.860	0 3 3	0.000 30 NoSig	A 0.00 0.00	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	0 0 0	A 1798 0.368	2095 2095 0.316	
1100010	South Roosevelt Blvd Bertha St Airport	1.40 C 1.00	4 U 2	45 0 0	SR 95110.0 0.0	FDOT 1101 1541	12509 0.088 0.568	3 0.088 0.568	H 11	1 1750 0.860	0 0 0	34.247 0 0.000	A 40.93 45.00	40.93 45.00 112.00	0 0 0	0 0 0	0 0 0	0 0 0	A 2623 0.420	3974 3974 0.277	

**Notes:**

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the peak hour VHT that is reported, is the peak hour peak direction VHT divided by D\_fac

Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Turns	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method							
										Art Class	%No Pass	Pk Hr	VHT	Los1	Agg Spd	Wld Pk	Dir	Pred	RT	Agg Los		
										Sat Flow	Ctrl Type	Cyc Len	G:C	Ratio	Spd1	Wld Pk	Vol	Pred	Juris	SvcCap	PCap	PCap
PHF	Arr Type	Sr	Cyc Len	Sr	G:C	Wld AADT	Pred Area	V:S	CAPV	P	CAP	P										
1100020	South Roosevelt Blvd Airport Flagler Ave	1.24 C 1.00	4 U 2	45 1 0	SR 95100.0 0.0	FDOT 1309	11999 1056 600	2 0.088 0.568	H 11	1 1750 0.930	0 2 3	34.169 78 0.399	A A A	40.93 38.31 116.50	0 0 0	0 0 0	0 0 0	0 0 0	2459 2459 0.429	2459 6162 0.294		
1100040	South Roosevelt Blvd Flagler Ave US1	0.28 C 1.00	4 D 2	45 1 0	SR 95090.0 0.0	FDOT 506	20556 1809 1028	2 0.088 0.568	H 11	1 1750 0.950	0 2 3	14.221 94 1.000	A A A	40.93 35.58 28.30	0 0 0	0 0 0	0 0 0	5855 6162 0.309	6162 0.294			
1110010	Northside Dr Kennedy Dr Twentieth St	0.81 D 1.00	2 U 2	25 2 0	KW 90078.0 90079.0	TOA 770	10807 951 540	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 78 0.386	D D D	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	1029 1155 0.924	1155 0.823			
1120010	US1 Roosevelt Blvd Cow Key Channel	0.20 C 1.00	4 D 2	45 1 0	SR 95190.0 0.0	EST 812	46118 4058 2305	2 0.088 0.568	H 0	1 1750 0.950	0 2 3	25.200 94 TOA	B B TOA	32.22 32.22 22.35	0 0 0	0 0 0	0 0 0	5738 6162 0.707	6162 0.659			
1130010	Duck Ave Twentieth St S Roosevelt Blv	0.13 D 1.00	2 U 2	25 1 0	KW 90087.0 0.0	TOA 60	5286 465 264	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 30 0.700	A A NoSig	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	1903 2095 0.244	2095 0.222			
2010010	Whitehead St South St United St	0.09 D 1.00	2 U 1	30 0 0	KW 90032.0 0.0	TOA 30	3830 337 191	4 0.088 0.568	H 13	3 1700 0.740	0 0 0	1.011 0 0	B B B	30.00 29.67 10.80	0 0 0	0 0 0	0 0 0	1261 1883 0.267	1883 0.179			
2010020	Whitehead St United St Truman Ave	0.23 D 1.00	2 U 1	30 0 0	KW 90024.0 90031.0	TOA 112	5547 488 277	4 0.088 0.568	H 13	3 1700 0.740	0 0 0	3.742 0 0	B B B	30.00 29.93 27.60	0 0 0	0 0 0	0 0 0	1261 1883 0.387	1883 0.259			
2010030	Whitehead St Truman Ave Southard St	0.31 C 1.00	2 U 1	30 1 0	SR 90017.0 90021.0	TOA 303	11123 979 556	2 0.088 0.568	H 14	3 1750 0.910	0 3 3	17.314 50 0.400	C C C	11.76 17.50 63.68	0 0 0	0 0 0	0 0 0	1114 1232 0.879	1232 0.795			
2010040	Whitehead St Southard St Fleming St	0.09 C 1.00	2 U 1	30 1 0	SR 90014.0 0.0	TOA 91	11485 1011 574	2 0.088 0.568	H 14	3 1750 0.910	0 3 3	13.345 73 0.411	F F F	11.76 6.82 47.53	0 0 0	0 0 0	0 0 0	1 1266 2.010	1266 0.798			
2010050	Whitehead St Fleming St Eaton St	0.08 C 1.00	2 U 1	30 1 0	SR 90009.0 0.0	TOA 93	13253 1166 662	2 0.088 0.568	H 14	3 1750 0.910	0 3 3	15.964 77 0.455	F F F	11.76 5.83 49.28	0 0 0	0 0 0	0 0 0	1 1402 2.010	1402 0.832			
2010060	Whitehead St Eaton St Caroline St	0.10 D 1.00	2 U 1	30 0 0	KW 90009.0 0.0	TOA 92	10434 918 521	4 0.088 0.568	H 14	3 1700 0.910	0 0 0	4.336 0 0	C C C	11.76 21.22 17.00	0 0 0	0 0 0	0 0 0	1551 2315 0.592	2315 0.397			
2020010	Duval St South St United St	0.09 D 1.00	2 U 1	30 0 0	KW 90034.0 0.0	TOA 42	5245 462 262	4 0.088 0.568	H 0	3 1700 0.790	0 0 0	2.511 0 0	B B B	16.73 16.73 19.58	0 0 0	0 0 0	0 0 0	1347 2010 0.343	2010 0.230			
2020020	Duval St United St Truman Ave	0.23 D 1.00	2 U 1	25 1 0	KW 90026.0 90033.0	TOA 249	12304 1083 615	5 0.088 0.568	H 0	0 1700 0.870	0 3 3	0.000 54 0.370	F F F	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	962 1107 1.126	1107 0.978			
2020030	Duval St Truman Ave Angela St	0.23 D 1.00	2 U 1	25 1 0	CR 90020.0 90025.0	TOA 302	14921 1313 746	5 0.088 0.568	H 0	0 1700 0.870	0 3 3	0.000 54 0.370	F F F	0.00 0.00 0.00	0 0 0	0 0 0	0 0 0	962 1107 1.365	1107 1.186			

**Notes:**

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Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Dir/Dir Vol	CAFT K100 D_Fac	HCS Method						Tables Method					
									Analysis method Sec No.	Art Class	%No Pass	Pk Hr VHT	Los1	Agg Spd	Wtd Pk Dir	Pred RT	Agg Los			
										Sat Flow	Ctrl Type	Cyc Len	G:C Ratio	Spd1	Wtd Pk Vol	Pred Juris	SvcCap	PCap		
									PHF	Arr Type	Sr Cyc Len	Sr G:C	Time	Wtd AADT	Pred Area	V:S CAPV:P CAP				
2020040	Duval St Angela St Southard St	0.08 D 1.00	2 U 1	25 1 0	CR 90018.0 0.0	TOA 104	14710 1294 735	5 0.088 0.568	H 0	0 1700 0.870	0 3 3	0.000 60 0.433	F 0.433 0.00	0.00 0.00 0.00	0 0 0	0 0 0	F 1296 1.151 0.999			
2020050	Duval St Southard St Fleming St	0.10 D 1.00	2 U 1	25 1 0	CR 90015.0 0.0	TOA 120	13595 1196 679	5 0.088 0.568	H 0	0 1700 0.720	0 3 3	0.000 60 0.440	F 0.440 0.00	0.00 0.00 0.00	0 0 0	0 0 0	F 1317 1.265 0.908			
2020060	Duval St Fleming St Eaton St	0.08 D 1.00	2 U 1	25 1 0	CR 90010.0 0.0	TOA 85	12110 1066 605	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 50 0.420	D 0.420 0.00	0.00 0.00 0.00	0 0 0	0 0 0	D 1257 0.944 0.848			
2020070	Duval St Eaton St Caroline St	0.10 D 1.00	2 U 1	25 1 0	KW 90007.0 0.0	TOA 93	10545 928 527	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.550	B 0.550 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1646 0.621 0.564			
2020080	Duval St Caroline St Green St.	0.09 D 1.00	2 U 1	25 1 0	KW 90001.0 0.0	TOA 50	6299 554 315	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.500	B 0.500 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1496 0.408 0.371			
2020090	Duval St Green St. Front St.	0.09 D 1.00	2 U 1	30 1 0	KW 90001.0 0.0	TOA 50	6299 554 315	5 0.088 0.568	H 0	3 1700 0.910	0 3 3	0.000 60 Def	B 0.400 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1197 0.510 0.463			
2020100	Duval St Green St Wall St	0.04 D 1.00	2 U 1	25 1 0	KW 90001.0 0.0	TOA 22	6299 554 315	5 0.088 0.568	H 0	0 1700 0.950	0 3 3	0.000 60 0.500	B 0.500 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1496 0.391 0.371			
2030010	Simonton St South St United St	0.09 D 1.00	2 U 1	25 1 0	KW 90038.0 0.0	TOA 44	5542 488 277	5 0.088 0.568	H 0	0 1700 0.930	0 3 3	0.000 61 0.500	B 0.500 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1496 0.351 0.326			
2030020	Simonton St United St Truman Ave	0.23 D 1.00	2 U 1	25 1 0	KW 90030.0 90036.0	TOA 169	8340 734 417	5 0.088 0.568	H 0	0 1700 0.790	0 3 3	0.000 60 0.417	B 0.417 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1248 0.746 0.588			
2030030	Simonton St Truman Ave Southard St	0.31 D 1.00	2 U 1	25 1 0	KW 90019.0 90028.0	TOA 245	8997 792 450	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 70 0.463	B 0.463 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1386 0.629 0.571			
2030040	Simonton St Southard St Fleming St	0.10 D 1.00	2 U 1	25 1 0	KW 90013.0 90019.0	TOA 78	8845 778 442	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 60 0.500	B 0.500 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1496 0.579 0.520			
2030050	Simonton St Fleming St Eaton St	0.08 D 1.00	2 U 1	25 1 0	KW 90013.0 0.0	TOA 60	8551 752 427	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 60 0.500	B 0.500 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1496 0.560 0.503			
2030060	Simonton St Eaton St Caroline St	0.10 D 1.00	2 U 1	25 1 0	KW 90006.0 0.0	TOA 87	9836 866 492	5 0.088 0.568	H 0	0 1700 0.870	0 3 3	0.000 66 0.440	B 0.440 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1317 0.757 0.657			
2030070	Simonton St Caroline St Water	0.27 D 1.00	2 U 1	25 1 0	KW 90004.0 0.0	TOA 205	8637 760 432	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 60 0.440	B 0.440 0.00	0.00 0.00 0.00	0 0 0	0 0 0	B 1317 0.635 0.577			

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Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol Pk Hr/dir Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method					
										Art Class	%No Pass	Pk Hr VHT	Los1	Agg Spd	Wld PK Dir	Pred RT	Agg Los	SVC	PCap	PCAP
										Sat Flow	Ctrl Type	Cyc Len	G:C Ratio	Spd1	Wld Pk Vol	Pred Juris				
PHF	Arr Type	Sr Cyc Len	Sr G:C	Time	Wld AADT	Pred Area	V.S	CAP	V	P	CAP									
2040010	Reynolds St Atlantic Blvd Flagler Ave	0.13 D 1.00	2 U 2	30 0 0	KW 90056.0 0.0	TOA 56	4921 433 246	4 0.088 0.568	H 0	3 1700 0.870	0 0 0	2.627 0 0	B 0.000 21.84	21.32 21.32	0 0 0	0 0 0	1483 2213 0.292	2213 0.196		
2040020	Reynolds St Flagler Ave South St	0.14 D 1.00	2 U 2	30 0 0	KW 90055.0 0.0	TOA 79	6445 567 322	4 0.088 0.568	H 0	3 1700 0.870	0 0 0	3.838 0 0	B 0.000 24.36	20.58 20.58	0 0 0	0 0 0	1483 2213 0.382	2213 0.256		
2040030	Reynolds St South St United St	0.09 D 1.00	2 U 2	25 1 0	KW 90052.0 0.0	TOA 23	2851 251 143	5 0.088 0.568	H 0	0 1700 0.850	0 3 3	0.000 30 0.700	A 0.00	0.00 0.00	0 0 0	0 0 0	1777 2095 0.141	2095 0.120		
2050010	Grinnell St Eaton St Caroline St	0.10 D 1.00	2 U 1	25 1 0	KW 90118.0 0.0	TOA 97	11031 971 552	5 0.088 0.568	H 0	0 1700 0.900	0 3 3	0.000 60 0.333	F 0.00	0.00 0.00	0 0 0	0 0 0	881 997 1.102	997 0.974		
2060010	White St Atlantic Blvd Flagler Ave	0.23 D 1.00	2 U 2	25 1 0	KW 90064.0 0.0	TOA 114	5648 497 282	5 0.088 0.568	H 0	0 1700 0.940	0 3 3	0.000 15 NoSig	A 0.00	0.00 0.00	0 0 0	0 0 0	1966 2095 0.253	2095 0.237		
2060020	White St Flagler Ave United St	0.23 D 1.00	2 U 2	25 1 0	KW 90060.0 90061.0	TOA 201	9907 872 495	5 0.088 0.568	H 0	0 1700 0.850	0 3 3	0.000 64 0.469	B 0.00	0.00 0.00	0 0 0	0 0 0	1191 1404 0.732	1404 0.821		
2060030	White St United St Truman Ave	0.23 D 1.00	2 U 2	25 1 0	KW 90049.0 90058.0	TOA 238	11744 1033 587	5 0.088 0.568	H 0	0 1700 0.830	0 3 3	0.000 108 0.550	C 0.00	0.00 0.00	0 0 0	0 0 0	1358 1646 0.761	1646 0.628		
2060040	White St Truman Ave Southard St	0.31 D 1.00	2 U 2	25 1 0	KW 90088.0 0.0	TOA 292	10722 944 536	5 0.088 0.568	H 0	0 1700 0.830	0 3 3	0.000 108 0.550	B 0.00	0.00 0.00	0 0 0	0 0 0	1358 1646 0.695	1646 0.573		
2060050	White St Southard St Eaton St	0.17 D 1.00	2 U 2	25 1 0	KW 90044.0 0.0	TOA 115	7686 676 384	5 0.088 0.568	H 0	0 1700 0.950	0 3 3	0.000 60 Est	B 0.00	0.00 0.00	0 0 0	0 0 0	1135 1197 0.596	1197 0.565		
2070010	First St Flagler Ave North Roosevelt	0.39 D 1.00	2 U 2	40 1 0	CR 95150.0 90067.0	BOTH 325	9479 834 474	2 0.088 0.568	H 0	2 1750 0.880	0 3 3	101.559 93 0.222	F 3.20	3.20 438.30	0 0 0	0 0 0	555 684 1.503	684 1.220		
2080010	Bertha St S Roosevelt Blv Atlantic Blvd	0.16 D 1.00	2 U 2	40 0 0	CR 90073.0 0.0	TOA 185	13139 1156 657	4 0.088 0.568	H 0	2 1750 0.860	0 0 0	6.239 0 0.000	D 29.65	29.65 19.42	0 0 0	0 0 0	1509 2252 0.766	2252 0.513		
2080020	Bertha St Atlantic Blvd Flagler Ave	0.24 D 1.00	2 U 2	40 1 0	CR 90070.0 90072.0	TOA 179	8465 745 423	2 0.088 0.568	H 0	2 1750 0.880	0 3 3	53.417 93 0.222	F 3.35	3.35 258.15	0 0 0	0 0 0	351 684 2.010	684 1.089		
2090010	Fifth St Flagler Ave N Roosevelt Blv	0.30 D 1.00	2 U 2	25 1 0	KW 95160.0 90075.0	BOTH 123	4658 410 233	5 0.088 0.568	H 0	0 1700 0.910	0 3 3	0.000 63 0.317	B 0.00	0.00 0.00	0 0 0	0 0 0	841 949 0.487	949 0.432		
2100010	Kennedy Dr Flagler Ave Northside Dr	0.41 D 1.00	4 U 2	25 1 0	KW 90077.0 90082.0	TOA 357	9885 870 494	5 0.088 0.568	H 0	0 1700 0.880	0 3 3	0.000 78 0.513	B 0.00	0.00 0.00	0 0 0	0 0 0	2697 3071 0.323	3071 0.283		

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Id	On Street From To	Length Perf_Std Psmult	Lanes Type Area	Spd Limit No_sig %Tums	Juris CS1 CS2	Source Fyvolm Vmt	AADT Pk Hr Vol	CAFT K100 D_Fac	Analysis method Sec No.	HCS Method					Tables Method							
										Art Class	%No Sat	Pass Ctrl	Pk Hr Type	VHT Len	Los G:C	1 Ratio	Agg Spd	Wtd Pk	Dir Pred	RT Juris	Agg Los	
										PHF	Arr	Type	Sr	Cyc Len	Sr	G:C	Time	Wtd AADT	Pred Area	V:S	Cap	P:CAP
2100020	Kennedy Dr	0.12	4	25	KW	FDOT	10184	5	H 0	0	0	0.000	D	0.00	0	0		D				
	Northside Dr	D	U	1	95170.0		896	0.088		1700	2	100	0.250	0.00	0	0	1324	1496				
	N Roosevelt Blv	1.00	2	0	0.0	108	509	0.568		0.950	3			0.00	0	0	0.677	0.598				
2100030	Sigsbee Rd	0.11	2	25	KW	EST	7201	5	H 0	0	0	0.000	D	0.00	0	0		D				
	N Roosevelt Blv	D	U	1	95180.0		634	0.088		1700	2	100	0.293	0.00	0	0	753	877				
	Island	1.00	2	0	0.0	70	360	0.568		0.950	3			0.00	0	0	0.842	0.723				
2110010	Twentieth St	0.12	2	25	KW	TOA	960	5	H 0	0	0	0.000	B	0.00	0	0		B				
	Flagler Ave	D	U	1	90086.0		84	0.088		1700	3	30	0.300	0.00	0	0	815	898				
	Duck Ave	1.00	2	0	0.0	10	48	0.568		0.910	3	NoSig		0.00	0	0	0.104	0.094				
2110020	Twentieth St	0.33	2	30	KW	TOA	960	4	H 0	3	0	0.977	B	28.66	0	0		B				
	Duck Ave	D	U	0	90086.0		84	0.088		1700	0	0	0.000	28.66	0	0	1551	2315				
	Northside Dr	1.00	2	0	0.0	28	48	0.568		0.910	0			41.65	0	0	0.054	0.036				

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RESOLUTION NO. 96-396

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF KEY WEST, FLORIDA, ADOPTING THE ATTACHED KEY WEST BICYCLE AND PEDESTRIAN STRATEGIC PLAN; PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, in Resolution No. 96-116, the City Commission authorized the development of a bicycle and pedestrian plan;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF KEY WEST, FLORIDA, AS FOLLOWS:

Section 1: That the attached Key West Bicycle and Pedestrian Strategic Plan is hereby adopted.

Section 2: That this Resolution shall go into effect immediately upon its passage and adoption and authentication by the signature of the presiding officer and the Clerk of the Commission.

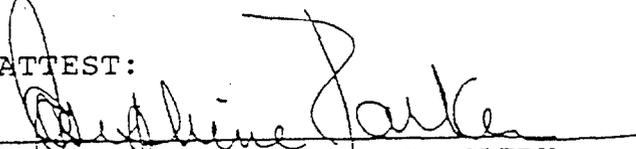
Passed and adopted by the City Commission at a meeting held this 6th day of November, 1996.

Authenticated by the presiding officer and Clerk of the Commission on November 8th, 1996.

Filed with the Clerk November 8th, 1996.

  
DENNIS J. WARDLOW, MAYOR

ATTEST:

  
JOSEPHINE PARKER, CITY CLERK

## MEMORANDUM

City of Key West  
Planning Department

### Backup Staff Report

To: Mayor and City Commissioners  
From: Tyson Smith, Assistant City Planner  
Date: October 1, 1996  
Subj: Key West Bicycle and Pedestrian Strategic Plan

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The attached document is a strategic plan for the planning and development of bicycle and pedestrian facilities in Key West over the next three fiscal years. It is before you for your consideration and approval as a guide to future public improvements.

On April 2, 1996, the City Commission passed Resolution #96-116 (see attached) that directed City staff to present a plan to implement solutions for bicycle, pedestrian and handicapped persons' safety on the streets of Key West. Since that time, staff has worked closely with members of the Southernmost Community Traffic Safety Program (CTSP) to develop the attached strategic plan and design standards and to apply them appropriately throughout the City. The plan was derived from an analysis of the needs of several different user groups and, once implemented, will provide a safer transportation system for bicyclists, pedestrians and the handicapped persons of our community. As facilities are constructed, the Americans with Disabilities Act (A.D.A.) Guidelines will be incorporated where appropriate.

The approved budget for fiscal year 1996-97 includes a number of tasks that are outlined in the Strategic Plan as Phase 1. The Engineering Department has approximately \$100,000 set aside in sidewalks and paving funds to accomplish these tasks. As the Plan explains, Phase 2 and Phase 3 represent those improvements planned for the following years, but which may change should the transportation demands of the community change. City staff will continue to work closely with the CTSP, and to adjust planned improvements to reflect the changing needs of our community. Future budget requests will be developed in accordance with these changing demands.

RESOLUTION NO. 96-116

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF KEY WEST, FLORIDA, AUTHORIZING THE CITY MANAGER TO DEVELOP AND IMPLEMENT SOLUTIONS FOR PEDESTRIAN, BICYCLE AND HANDICAPPED PERSON SAFETY ON THE STREETS OF KEY WEST, AND FURTHER AUTHORIZING THE CITY MANAGER TO PRESENT A BICYCLE AND PEDESTRIAN PLAN, INCLUDING RECOMMENDED FUNDING, FOR THE 1996-97 FISCAL YEAR; PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, Key West is widely recognized as a great city for pedestrians and bicyclists; and

WHEREAS, Key West has the highest per capita bicycle ridership in the nation during a full 12-month cycling season; and

WHEREAS, the City Commission is concerned for the safety of pedestrians, bicyclists and handicapped persons on the streets and sidewalks of the City; and

WHEREAS, the City Commission finds that the encouragement of bicyclists and pedestrians will help relieve traffic and parking congestion in Key West;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF KEY WEST, FLORIDA AS FOLLOWS:

Section 1: That the City Manager is hereby authorized to develop and implement solutions for pedestrian, bicycle and handicapped persons safety on the streets of Key West;

Section 2: That the City Manager is hereby authorized to present a bicycle and pedestrian plan, including recommended funding, for the 1996-97 fiscal year.

Section 3: That this Resolution shall go into effect immediately upon its passage and adoption and authentication by the signatures of the presiding officer and the Clerk of the Commission

Passed and adopted by the City Commission at a meeting held this 2nd day of April, 1996.

Authenticated by the presiding officer and Clerk of the Commission on April 4, 1996.

Filed with the Clerk April 4, 1996.

  
HARRY BETHEL, MAYOR PRO TEMPORE

ATTEST:

  
JOSEPHINE PARKER, CITY CLERK

# Key West Bicycle and Pedestrian Strategic Plan

## Introduction

On April 2, 1996, the Key West City Commission passed Resolution #96-116 which authorized the City Manager to develop and implement solutions for pedestrian, bicycle and handicapped persons' safety on the streets of Key West. In response to this directive, the Key West Planning Department and Engineering Department have worked closely with members of the Southernmost Community Traffic Safety Program (CTSP) to assemble this plan to be known as the Key West Bicycle and Pedestrian Strategic Plan. This plan is structured around a Task List which is based on expected capital roadway improvements from present through 1999. The first tasks proposed as part of the plan have been included in the City's 1996-97 fiscal year budget.

The goal of the bicycle element of the City of Key West Comprehensive Plan is to encourage the use of bicycles in order to ease traffic congestion, encourage energy conservation and to encourage bicycling for health and recreation purposes. In Key West, travel by bicycle and by foot are both viable means of transportation, particularly in Old Town Key West. Recent studies conducted by traffic consultants, Tindale-Oliver, Inc. indicate that 14% to 20% of overall roadway traffic is comprised of bicycle users. By developing an intermodal transportation system that is safe, convenient and desirable, we offer the City a means of reducing congestion on our roadways, and our citizens feasible transportation alternatives that are economical, healthy and safe. To devise a workable transportation system all methods of travel, motorized and otherwise, must be considered as that system is planned, funded and implemented.

## Goals and Objectives

This Strategic Plan identifies bicycle and pedestrian ways that are to be incorporated into existing roadway systems in the City of Key West. Sidewalks should remain free of impediments that may discourage or deny access for pedestrians and the handicapped. It is incumbent upon property owners to limit building activity, including landscaping, to private property to insure that the public right-of-way remains passable.

As the City executes its capital improvement program and plans for street repair, construction and reconstruction, the bicycle and pedestrian priority tasks described herein shall be a part of that planning process. When the improvements described in this plan are constructed, the City should, where possible, design new and existing facilities in accordance with the guidelines of the Americans with Disabilities Act (A.D.A.) and the American Association of State Highway and Transportation Officials. This is a general plan that will guide the City Engineering Department in developing its capital improvement program over the next two to three planning years.

### **Bicycle and Pedestrian Facility User Groups**

The Strategic Plan addresses the bicycling and pedestrian needs of several different user groups as defined below. Their needs are illustrated on the attached maps and are incorporated in the Task List at the end of this document.

1) **Commuters.** This is perhaps the user group with the most immediate need for safe bike and pedestrian access throughout the community. A housing survey conducted by the City indicated that 22.5% of workers get to work either by bicycle or by foot. Bike and pedestrian ways have been designed to allow the commuting public safe access from Cow Key Channel Bridge to the Historic District in Old Town Key West. These intermodal ways will be designated as either bike paths, bike lanes, bike routes or intermodal ways, as described in the following section.

2) **Recreational Users.** Certain parks, ballfields and other recreational sites have been identified as destinations for bike users and pedestrians of all ages. This plan identifies bike and pedestrian ways that allow these users, and particularly the young people of the community, safer access to these facilities by separating them from vehicular traffic where possible.

3) **Students.** Similar to the recreational facility user, many school children are able to commute to neighborhood schools everyday by biking or walking. This plan identifies paths,

routes, lanes, sidewalks and intermodal ways that offer safe alternatives for children who bike and walk to school.

4) **Tourists.** Key West's compact urban character has for years accommodated the biking and pedestrian populations of citizens and tourists alike. Our community has enjoyed increased popularity as a tourist destination while simultaneously experiencing increased congestion on our crowded streets and increased demand for limited automobile parking opportunities. This plan includes provisions for bike and pedestrian ways that accommodate tourists, thereby relieving some of the demand pressure on our finite and unique roadways.

The needs of each of these user groups are illustrated on the attached maps and are incorporated into the Task List below. The definitions of various bike and pedestrian ways are set forth below, as are other standards used in the design of facilities in the Strategic Plan.

### Definitions

**Bike Lane.** The bike lane is a lane within the motorized traffic way that is striped and stenciled with a standard bike symbol or decal. The suggested width is 5 feet for a lane. Although both the bicyclist and the automobile user operate on the roadway, the marked bike lane provides the bicyclist with a safer alternative that separates motorized vehicles from bicyclists.

**Bike Path.** The bike path is separated from vehicular traffic by landscaping or a curb. The bicyclist enjoys a 6 foot lane that is designated for bike use only and is separated entirely from motorized traffic. The suggested width is 10 to 12 feet for a two-way path.

**Bike Route.** Bike routes simply incorporate bike traffic with vehicular traffic with no physical, identifiable bike way. Streets designated as bike routes, however, are signed as such and speed limits are reduced to a minimum of 20 m.p.h. Also, all cross streets have stop signs with the streets designated as a Bike Route having right of way. Signage and reduced speeds make the bicyclist and motorist aware of each other and cognizant of the others' safety.

Von Phister Street, Washington Street, First Street, Staples Avenue, Reynolds Street, Patterson Avenue and Northside Drive.

In accordance with the definition above, these streets are proposed as bike routes, where signage and speed limitations would be used to allow safer, coordinated use of the existing roadways for bicyclists, pedestrians and motorized vehicles. As in all areas proposed for capital improvements, sidewalks should be modified to be in compliance with A.D.A. Guidelines as funding and time constraints allow. In a number of instances, there are obstructions to the public way in the form of landscaping or privately built fences, walls and porches. Where public sidewalks can be extended yet come into conflict with these obstructions, negotiations with individual property owners may be necessary.

2. Streets with a right-of-way of 50 feet or greater with no parking or parking only on one side. These streets typically have 10 to 12 foot wide lanes for motorized traffic, one side containing 8 foot wide on-street parking spaces, and, in some cases, a 5 foot wide sidewalk on both sides of the street. These streets have room for separate bike lanes and have been considered for such in the Strategic Plan. Portions of Duck Avenue, Bertha Street and White Street, for example, are proposed for development in accordance with this type of design.

3. One way streets with a right-of-way of 50 feet or greater with parking on both sides. These streets typically have 10 to 12 foot wide lanes for motorized traffic, two rows of 8 foot on-street parking spaces and two relatively wide sidewalks on both sides to safely accommodate pedestrian traffic. Right-of-ways with these specifications are designated for a 5 foot bike lane to provide safe, separated access for bicyclists. Examples of these types of streets are Fleming Street and Southard Street.

4. Streets with intermodal sidewalks and/or bike paths. These streets, like portions of United Street, for example, already have sidewalks at least 10 feet wide that can be striped into separate bicycle and pedestrian ways. Striping should be accompanied by the installation of standard decals or stenciling to distinguish the bike lane from the pedestrian way. Provisions for A.D.A.

compliant capital improvements will be incorporated into these tasks.

There are several existing roads, like Palm Avenue and Atlantic Boulevard which can accommodate two-way, 10 foot wide intermodal ways or bike paths. There are other areas, the Salt Pond district, for instance, for which two-way bike paths are proposed.

Where possible, sidewalks will be constructed or upgraded to provide continuity of access and to achieve A.D.A. Guideline compliance. The City has funds appropriated for sidewalks to be upgraded and installed wherever possible. Crosswalks and lighting will be installed where appropriate as sidewalks are designed and built.

### Task List

There are three maps attached to this plan which reflect the needs of the community's primary user groups and illustrate opportunities to address them in Key West. Several different bicycle and pedestrian ways have been incorporated into the plan according to need and right-of-way opportunities. For instance, where a separate striped bike lane is not feasible on a particularly narrow street, bike routes are proposed as the best alternative for that street given intermodal demands on a limited right-of-way.

The following represents the Task List as formulated by the City Engineering Department with technical assistance from the Southernmost CTSP. Note that specific plans for each phase will occur as budgeting occurs. The tasks are prioritized according to its degree of importance within the overall plan and with budgetary realities in mind. The budget for Phase 1, Fiscal Year 1996 received final approval from the City Commission on September 17, 1996 and includes the tasks listed below. Those tasks listed under Phase 2 and Phase 3 will be planned and budgeted for fiscal years 1997-98 and 1998-99, respectively.

