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KEY WEST CHAPTER 288 MILITARY BASE REUSE PLAN OBJECTIONS,  
RECOMMENDATIONS AND COMMENTS NAS KEY WEST FL  
7/20/1999  
BERMELLO, AJAMIL AND PARTNERS

# KEY WEST CHAPTER 288 MILITARY BASE REUSE PLAN



## Objections, Recommendations and Comments

July 20, 1999

## **REVIEWING AGENCIES**

The Florida Department of Community Affairs, the South Florida Regional Planning Council and various other State and Regional agencies have reviewed the Key West Chapter 288 Military Base Reuse Plan and have made comments and recommendations. The comments and recommendations are set forth in bold type followed by responses.

**Florida Department of Community Affairs Letter Dated March 19, 1999**

**South Florida Regional Planning Council Staff Report Dated March 1, 1999**

**Florida Department of Transportation Letter Dated March 24, 1999**

**Florida Department of Environmental Protection Letters Dated March 22, 1999 and May 21, 1998**

**South Florida Water Management District Letter Dated April 20, 1999**

**FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS**

1. **FLUM Amendment - The FLUM designations should include maximum percentages for the uses in order to provide assurances that the site will develop as intended. The scale of the proposed development is of enormous magnitude for Key West, given the scale of the community. Based on the assumed scenario, the project would be a DRI under the multi use thresholds with commercial at 75% and office at 100%. Given the magnitude, some controls are needed to mitigate impacts to the extent possible. Further, as discussed in the following sections, staff recommends that reduction in the amount of commercial development should be considered to ensure consistency with transportation, public facility, affordable housing and community character needs and related constraints.**

On January 12, 1999 the City Commission adopted Resolution 99-34 expressing a strong preference that the area of the Truman Waterfront parcel designated HNC-2 be developed as parks and as active and passive recreation. Subsequently, approximately 5.6 acres of land located south of Dekalb Street extending from Bahama Village to Fort Zachary Taylor has been redesignated from HNC-2 to HPS-1. See Attachment DCA-1 — Truman Waterfront Parcel Concept Plan and Truman Waterfront Parcel Proposed Land Use Classification.

The revised plan also recognizes that Mole Pier has been designated as a Coastal High Hazard Area and, therefore, development in this area may be limited. As shown in the table below, these changes create an approximately 50 percent decrease in residential, office, retail, and industrial development.

<b>TRUMAN WATERFRONT MAXIMUM DEVELOPMENT CHANGE</b>				
<b>Use</b>	<b>Agency Review Transmittal January 20, 1999</b>	<b>ORC Response July 20, 1999</b>	<b>Change</b>	<b>% Change</b>
Residential	132 du	69 du	63 du	(48)%
Office	284,966 sf	118,176 sf	146,790 sf	(55)%
Retail	291,154 sf	155,490 sf	135,664 sf	(47)%
Industrial	160,262 sf	66,382 sf	93,880 sf	(59)%
Park	19.27 ac	24.88 ac	5.61 ac	29%
NOAA/Environmental Education	25,000 sf	25,000 sf	0 sf	0%
Social Service/ Economic Development	25,000 sf	25,000 sf	0 sf	0%
Ferry Terminal Operations	20,000 sf	20,000 sf	0 sf	0%
Marina Slips	180 slips	180 slips	0 slips	0%
Cruise Ship	1 berth	1 berth	0 berth	0%

2. A. **Transportation - The analysis should not rely on 5% as the significance threshold, but instead should evaluate whether conditions can be maintained in accordance with Chapter 163, F.S. for all impacted roadways based on the adopted LOS standard. For constrained State roadways, the analysis should be based on FDOT standards for "maintain." Amendments should be submitted to update Policy 2-1.1.1, consistent with FDOT roadway should be defined as constrained and "maintained" as such in accordance with Policy 2-1.1.1.**

**For non-constrained roadways that operate below LOS D, the analysis should determine if project impacts will be diminimus. For the analyses of constrained and diminimus, the determination should be based on the project impacts combined with committed and permitted development that has occurred from the date at which the roadway operated below LOS. Cumulative development, including the project impacts based on the amendments, should not exceed the 10% limit set forth in Section 163.3180(6), F.S.**

The city acknowledges the discrepancy in the Transportation Analysis section for the report dated November 1998 relative to the adopted level of service standard for US 1. The revised Base Reuse Plan (July 20, 1999) includes updated tables and figures that reflect the correct level of service standard of "C", the previous analysis erroneously identified the standard as "D." As a result of this change no additional portions of US 1 operate below their adopted standard that were not included in the previous analysis.

Relative to the maintenance of the level of service for constrained facilities: Traffic counts from 1996 indicate that the reserve capacity allowed by the "maintain" policy has been exceeded along US1. Several studies have either been conducted or are in the process of being conducted which will review mobility options along the US1 corridor and Old Town area. FDOT has initiated a PD&E study to determine options to enhance mobility and safety along the North Roosevelt Boulevard and South Roosevelt Boulevard corridors. Additionally, the City conducted a traffic diversion study to look at options for enhancing the mobility of travel into and out of the Old Town area. Recommendations for this study, as well as the PD&E, have been reviewed for implementation and funding. Additionally, the City conducted a parking study with extensive public participation. The parking study resulted in recommendations for enhancing the parking and public transportation system in Old Town and along the US1 corridor. Recommendations from this study are currently being implemented.

- B. **Based on the analysis provided, four roadways will operate below LOS D and receive significant impact according to the 5% standard. A revised analysis may well indicate that cumulative impacts will exceed the "maintain" standard. Other roadway links with LOS deficiencies may also be identified based on LOS standard C. The analysis may also indicate that other roadways may have reached the maintain standard or that cumulative impacts from the project**

**and other permitted or committed development has or would exceed the diminimus standard; this will likely be the case, given that many of the roadways operate at LOS F, indicating that the "maintain" limit has been exceeded. For such occurrences, the plan should outline an approach to improve roadways where not constrained. Other strategies should also be included for mass transit improvement and parking controls. The City should develop an improvements schedule that links specific improvements to identified threshold levels of development.**

**We recognize that the plan promotes pedestrian and bicycle access. However, it is uncertain that the development can achieve the 40% multimodal split as suggested. As discussed in the final recommendations, it appears that significant reductions in commercial and office development should be considered to ensure diminimus impacts, "maintain" LOS on constrained roads, and achieve other planning objectives. Furthermore, a phasing approach should be considered that would allow an increment of development to occur based on the revised analysis. This would allow monitoring of the development to ensure that 40% multimodal split can be achieved and to otherwise identify enhancements and adjustments that could be incorporated into the Plan and permitting process to mitigate community impacts.**

Within the DCA review comments, concern was raised relative to the ability of the site to achieve a 40 percent pedestrian modal split. The actual modal split applied for the analysis varied by land use category and resulted in an overall modal split of 28 percent for the Truman Waterfront site. We continue to assert that the application of the modal splits in the report are appropriate for the Truman Waterfront based on extensive surveys conducted as part of the Truman Annex Traffic Diversion Study which actually indicated a higher modal split. Attention is also directed to the fact that many of the land uses proposed are complementary to the existing tourism trade in the Old Town and that no on-site capture was assumed for the site.

The submitted analysis includes all the functionally classified roadways within the City of Key West. The identification of the percent of capacity consumed was utilized to identify how far to track the trips from a particular site on the road network to a point where the project trips would be untraceable. Bear in mind that the 2003 volumes assume a 2 percent per year growth in background traffic from traffic counts taken in 1996 or a 14.8 percent increase in background traffic volumes. We believe that this approach is practical and conservative. Roadways that do not have greater than 5 percent of their adopted service capacity consumed by the proposed base reuse, yet still receive some base reuse trips and could potentially operate below their adopted level of service standard, already operate below their adopted standard as an existing condition in 1996. Furthermore the background growth rate does an adequate job of reflecting continued traffic growth on these roadways, namely US 1. FDOT has been working on a PD&E Study to address mobility and safety improvements on this corridor. To track base reuse trips to a diminimus level on US 1 east of Palm Avenue would not be a practical application of the City of Key West's planning resources and would duplicate the efforts of the FDOT PD&E Study. Further,

even with the development of a microscopic traffic assignment model, the projection of trips below a 5 percent service capacity level would be within the level of error range of any known trip distribution analysis tool. The application of the 2 percent growth rate more than accommodates the potential trips from the base reuse without an unreasonable effort to develop a forecast that would not be any more accurate.

- C. **Finally, the city should consider designating a Transportation Concurrency Management Area or Transportation Concurrency Exception Area if necessary for a compact area within the Old Town area. Other alternatives include adoption of lower level-of-service standards or a tiered LOS standard with a phased improvement approach.**

Given the compact nature and level of build-out in the Old Town area, we agree with the DCA comment concerning the potential of designating a portion of the Old Town area as a TCMA or TCEA. This would be accomplished through additional data and analysis that would support one or a combination of these options. Such an analysis would set up specific guidelines for monitoring level of service, developing a multimodal cost feasible plan, including parking, and implementing a specific set of improvements over a defined planning year horizon.

Proposed Policy 2-1.1.11 establishes the framework for the city to consider designating an area within the Old Town as a Transportation Concurrency Management Area or Transportation Concurrency Exception Area.

4. **Public Facility - Based on a revised needs analysis that accounts for the potential impacts of the amendment and other committed development, the City should determine if improvements are necessary to maintain LOS for all facilities. The City should develop an improvements schedule for drainage, sanitary sewer, and solid waste as necessary to maintain LOS. The reliance on the City's concurrency management system to prevent development beyond available capacities does not replace this requirement to prepare specific capital improvement plans for the next five years.**

The issues raised in this comment are important. But are beyond the scope of the Chapter 288 process and may be more appropriately addressed through the Comprehensive Plan's Evaluation and Appraisal Report. Furthermore, as discussed in response to DCA item 1 the change from HNC-2 to HPS-1 for a significant portion of Truman Waterfront eliminated considerable development potential and, in turn, drastically reduced potential impacts to public services and facilities.

5. **Water Quality - Further analysis should be provided to evaluate primary and secondary impacts to the marine environment from the new cruise ship berthing, proposed marinas and ferry terminals, consistent with the existing criteria in the Coastal Management and Conservation Elements of the 1994 City of Key West Comprehensive Plan. Proposed Plan Objective 5B-1 and Policy 5B-1.2. should be revised to remove the vague language and include specific guidelines to address programs or activities that will be used to protect these resources consistent with the existing language and criteria in the Coastal Management and Conservation**

## **Elements of the 1994 City of Key West Comprehensive Plan.**

**Provide comprehensive plan policies and corresponding land development regulations that include standards, design criteria, and best management practices for the prevention of non-point source pollution to groundwater, or near shore waters, from the waterfront marine trade area in the HRCC-4 FLUM, and from parking lots and other impervious areas, intensively maintained recreation fields and parkland lawns.**

The Department's comments on water quality are concerned with two areas: first, potential water quality degradation from vessel movements; and second, potential water quality degradation from storm water discharge from the site. Each area is addressed below:

**Vessel-Related Water Quality Degradation:** The Department's concern regarding potential water quality degradation due to vessel movement-caused turbidity adjacent to the Truman Waterfront Parcel is shared by the city. However, existing information (including recent turbidity measurements taken by the FDEP and a study conducted by the Key West Pilots) neither adequately quantifies turbidity levels in the harbor nor fully assesses potential impacts on adjacent natural resources. In general, the City believes that existing data is not adequate to determine if there are impacts, and if so, whether they constitute a hazard to marine communities.

The Key West Federal Harbor Project is owned and operated by the United States Army Corps of Engineers. As such, the USACE is responsible for assessing harbor operations, including maintenance needs and impacts to the environment. Therefore, it appears that the federal government is the directly responsible party for evaluating and if need be, correcting, any environmental degradation caused by use of the navigational channel. Because the channel is widely used by public recreation and commercial craft and by other large vessels, including vessels owned and operated by the United States Coast Guard, the United States Navy, and the National Oceanic and Atmospheric Administration, it is of particular importance to the federal government, and specifically the United States Army Corps of Engineers as the owners of the channel, to define whether a problem exists and to determine appropriate actions.

On April 26, 1999, the City of Key West formally requested federal study and action regarding vessel-generated turbidity in the Key West Federal Harbor Project. Coordination with the Deputy District Engineer for Project Management at the Jacksonville District Corps of Engineers has indicated that the USACE is scheduling an updated survey of harbor conditions and is scheduling a site visit to review conditions. In addition, the city has included dollars for facilitation of federal studies in its Capital Improvement Plan and has initiated contact with the Florida Department of Environmental Protection. **The city anticipates that any actions will be federally initiated due to the complexity of the issue and the nature of federal harbor projects.**

Proposed policies regarding future port expansion include extensive data and analysis requirements in accordance with the City's existing Land Development Regulations. On environmental issues alone, these regulations require that new activities or structures be assessed in terms of their impacts to wetlands, open water, wildlife habitat and other environmentally sensitive areas (see **Attachment DCA-2 - City of Key West Land**

**Development Regulations, Chapter IV: Administration of Development Plan Review and Subdivision, Article XVIII: Development Review Procedures**); further, the overall land development regulations set forth extensive environmental protection and surface water management requirements(see **Attachment DCA-3 - City of Key West Land Development Regulations, Article VI, Environmental Protection and Article VII, Surface Water Management**). These regulations implement numerous existing Comprehensive Plan policies which require development to consider environmental conditions such as: **Objective 1-3.6 Protection of Natural Resources, Objective 5-1.1 Protection of Coastal Resources; Estuarine Salt Pond Environmental Quality, Living Marine Resources, and Wildlife Habitats; Objective 6-1.2. Water Quality and Quantity; and, Objective 6-1.7. Protection of Native Vegetation and Marine Habitats.**

Due to the extent of existing policy and regulatory implementation regarding natural resource protection now in the City's Comprehensive Plan and Land Development Regulations, it is only necessary to strengthen the connection between the existing regulatory review standards and future port development. The proposed policy language and land development regulations do that, and also set new criteria for public involvement and decision-making in the review process.

**Stormwater Quality:** The city's existing Comprehensive Plan and implementing Land Development Regulations require all new development and redevelopment to meet state water quality standards. All new development and redevelopment on any of the base reuse sites – as well as anywhere else in the city – will meet these standards. Please refer to existing **Comprehensive Plan Objective 6-1.2.** and its attendant policies, and **Article VII, Surface Water Management, of the Land Development Regulations.** Please note that all the existing city planning policies and regulations apply to the base reuse sites unless specifically noted. No such exceptions are made to environmental or surface water standards by the suggested amendments; therefore, reiteration of these standards is unnecessary.

6. **Port Expansion - The comprehensive plan should be amended to include a Port Master Plan which should address existing facilities, including the proposed Truman Waterfront site. The Port Master Plan should provide clear standards for possible Port Expansion, consistent with the statutory, rule and Key West Comprehensive Plan requirements for protecting water quality, seagrasses and other resources. Alternatively, the comprehensive plan should be amended as part of the reuse process to include similar policy direction, pending the completion and adoption of the Port Master Plan.**

Issues pertaining to the correct method for updating the city's port master plan in reference to the Chapter 288 process were extensively discussed with DCA staff last year when the plan was first drafted. According to the DCA, only land within the physical boundaries of the reuse sites can be amended through the 288 plan; other areas, such as port facilities outside of the reuse area, would require modification through the regular comprehensive plan amendment process (see **Attachment DCA-4, Correspondence to Assistant Secretary Steve Pieffer dated June 1, 1998 and email response from DCA staff Michael McDaniel dated June 9, 1998.**) Subsequent conversations held with DCA legal council Stephanie Kruer on January 4, 1999, confirmed that policies in the plan could not impact port facilities outside of the reuse area. As such, the city's ability to modify the

adopted Port Master Plan was limited to those items pertaining to Truman Waterfront.

However, in order to provide complete information on how the Truman Waterfront Port will relate to the city's existing port facilities, a **complete update of data and analysis relating to all port facilities was included in the draft plan (see Key West Military Base Reuse Plan, Agency Review Transmittal dated January 20, 1999, Port Facilities Subelement, pages 90-125)**. This subelement provides extensive information on the port and the overall economic, social and ecological environment in which it operates. Further, the city has contracted with a consultant to complete an update of the overall plan as soon as the Chapter 288 Plan is adopted and any delays in adopting amendments to the Comprehensive Plan created by the EAR process are remedied. This is consistent with strategies approved by the DCA in reference to this issue.

Existing policies related to the city's existing port facilities are included in the City's **Comprehensive Plan Port Subelement**. These policies were not considered adequate to address the unique concerns relating to the Truman Waterfront Port, particularly as they pertained to public involvement and decision-making in the development review process. Therefore, the existing policies were modified to create special review processes for port expansion. These processes require that the city's existing development review process be used for new port facilities; that process includes overall requirements for compliance with the **Comprehensive Plan and Land Development Regulations**, existing documents with an extensive body of natural resource protection policy and regulation. These policies and regulations, as well as the process set forth for public review and approval of port facilities, are expected protect natural resources impacted by future port development.

7. **Affordable Housing - Retain and strengthen housing objectives and policies rather than deferring to the regulations of the Key West Housing Authority. The policies should identify the role of the KWHA in providing technical assistance and implementing the affordable housing policies of the City.**

The City should analyze the impact of new commercial and office development and reduce commercial allocations, if necessary, to ensure that affordable housing needs can be met. Additional policy direction should be provided by clarifying the Future Land Use categories, as previously recommended, to define a range of mix of uses to ensure that the intended development scenario is achieved. As part of this process, the City should adopt affordable housing strategies to ensure a portion of the residential is affordable, as necessary to meet the demand created by the level of commercial and office development authorized by the revised FLUM designations. Strategies for achieving affordable housing should include implementation of existing affordable housing requirements set forth in Policy 3-1.1.3, which include linkage policies, fees in lieu, use of affordable housing trust fund or fees for conversion of transient or market residential to affordable housing; use of land trust methods; construction of accessory units; and improved transit and mobility strategies to provide better access for low-income workers. The Department would like to work with the City to maximize potential affordable housing benefits for the site.

Portions of Policy 3-1.13 concerning affordable housing dwelling unit eligibility requirements and the applicant eligibility requirements were inadvertently deleted and

have been restored.

The HNC-2 mixed-use designation has been significantly reduced and now encompasses approximately 1.2 acres of developable area. While the Civic Center area is also designated HNC-2 the site is already developed and will be used as center for economic development and social services. Given the small amount of mixed use area it does not seem appropriate to set additional policy direction to define the range of uses.

Furthermore in revised Comprehensive Plan Policy 1-2.3.2: Historic Medium Density Residential (HMDR) and corresponding SUBSECTION 2-5.5.1 HISTORIC MEDIUM DENSITY RESIDENTIAL DISTRICT - 1 (HMDR-1) of the Land Development regulations the city has committed that if in the event the city owns the portion of the Truman Waterfront Parcel designated HMDR, the site will be developed for affordable housing. While if the site is privately owned, 30 percent of the dwelling units will be affordable. Ownership of the site will be determined, in part, through the economic development conveyance application city staff is currently drafting.

It is also important to note that the city is now exploring ways of linking port revenues to an affordable housing fund. Preliminary estimates show contributions to the fund could be as high as high \$400,000 annually starting in 2001(if excess funds are earmarked entirely for affordable housing), and growing to as high as \$694,369 annually beginning in 2005.

8. **Overall Recommendation - The Department recommends the City reconsider the appropriateness of the scale of development that would be possible under this plan, given the concerns related to transportation, affordable housing, and community character impacts. The data and analysis indicate significant impacts will occur due to the level of non-residential development allowed by the amendments. Furthermore, we believe a revised analysis that more accurately reflects potential impacts as allowed by the proposed districts would reveal even greater impacts. In addition to adjusting the scale of development, the City should consider adopting a concurrency exception area for the surrounding area in recognition that roadways cannot be expanded and level of service cannot be maintained. Complementary mobility strategies should also be adopted so that service workers and tourists that do not reside within the immediate area will have an alternative means other than by automobile to access the site.**

The public facility concerns can be addressed through updating the capital improvements schedule. However, stormwater has not been effectively addressed and should be, considering the proximity to the water. The City should analyze the impacts related to the use of the Mole Pier for regular cruise ship berths and should commit to further analyses with respect to marina siting. These issues would be more effectively addressed through a Port Master Plan, which the City should complete and adopt as part of the Comprehensive Plan.

Development of the site should be phased so that monitoring can occur for Phase I and additional transportation and housing strategies may be developed for subsequent phases. This would allow for the provision of housing through transfers of permit allocation credits, as envisioned by the Plan so that affordable housing

**impacts are minimized and phased. Implementation of existing linkage fees, as set forth in the comprehensive plan, could provide an effective funding source for the purchase of vested unit credits and demolition of dilapidated units which can then be transferred to the site.**

The items discussed in this recommendation have been addressed in responses to previous DCA comments and recommendations.

## **SOUTH FLORIDA REGIONAL PLANNING COUNCIL**

- 1. Clarification in the plan's data and analysis and policy language that would require that any residential permits allocated through the City's ROGO and transferred to the subject parcels from parcels elsewhere in the City include the corresponding development rights from the sending parcel.**

The Truman Waterfront Parcel plan has been revised and the area designated for residential development has been reduced by approximately 50 percent (see response to DCA comment 1). This reduction of potential residential development should alleviate some concern related to the designation of residential lands with density allocations that may beyond available ROGO units.

Furthermore, language clarifying that the residential permits allocated through the City's **ROGO** and transferred to the subject parcels from parcels elsewhere in the City include the corresponding development rights from the sending parcel has been added to **Policy 1-3.12.5**

- 2. Revisions to the HPS-2 zoning district or the Historic Preservation Plan that would ensure that any changes in use proposed for Peary Court Cemetery be coordinated with the appropriate historic preservation agencies and military veteran associations.**

Archaeological investigations at the Peary Court property determined that earlier burial relocation efforts were incomplete and that human remains are still present at the Peary Court Cemetery (aka Key West Post Cemetery). Subsequently, the Navy in consultation with the State Historic Preservation Officer set the site aside from any development. A Memorandum of Agreement was signed in November 1990 by representatives of the Navy, the Advisory Council on Historic Preservation and the Florida State Historic Preservation Officer. In accordance with provisions of the MOA, the historic preservation plan was prepared and implemented (see Attachment SFRPC-1). The preservation actions in the plan require preservation of the cemetery in a partially original state.

The base reuse planning process confirmed the public's desire to maintain the Peary Court Cemetery in its existing state. The Base Reuse Plan formalized the public's interest through proposed Objective 1-2.6 and the HPS-2 zoning district regulations which require site uses to be consistent with the Historic Preservation Plan. Therefore, any changes to the uses on the Peary Court Cemetery would require review by both the Advisory Council on Historic Preservation and the Florida State Historic Preservation Officer, in addition, to the review required for amendments to comprehensive plan and land development regulations.

Furthermore, proposed Policy 1A-1.1.12 Military Base reuse Plans directs the City of Key West, Historic Planner to determine appropriate actions to protect and preserve identified resources within the base sites, specifically in regard to the Peary Court Cemetery site.

- 3. Revisions to the HNC-2 zoning district that would include the encouragement of business incubators.**

The area designated HNC-2 on the revised plan for the Truman Waterfront Parcel is

entirely within the boundaries of the Bahama Village Community Redevelopment Area (CRA) boundary (see Attachment SFRPC-2) and will benefit from strategies in the recently adopted Bahama Village Redevelopment Plan - 1998 Update.

The Base Reuse Plan has reserved the former dining hall as site for social services/economic development. LRA staff is drafting an economic development conveyance for the portions of the Truman Waterfront designated HMDR, HNC-2 and HCL. These areas all adjacent to Bahama Village and are meant to provide redevelopment opportunities for that neighborhood.

The Truman Waterfront Port the primary economic engine for redevelopment of the Truman Waterfront. Both primary and secondary economics impacts will occur in Bahama Village. Economist estimate that on an annual basis cruise ships calling at Truman Waterfront contribute \$2,083,598 directly to the city's general revenue fund. Once the property is conveyed to the City direct annual revenues will increase \$953,550.

4. **Revisions to Policy 2-1.1.10 of the City's comprehensive plan that would call for special efforts to maximize the use of mass transit and other alternative modes to transportation.**

Policy 2-1.1.10 has been revised accordingly.

5. **The Plan would delete the Affordable Housing Dwelling Unit eligibility requirements and the applicant eligibility requirements (Policy 3-1.13, pp 186 and 187) and replace them with language that provides for affordable housing and affordable housing applicant eligibility requirements for the Base Reuse sites to be defined by the agreement between the City and the Florida Department of Community Affairs. This agreement requires that the Poinciana Housing Parcel be subject to those criteria that were deleted. This appears to be an oversight and should be reviewed by the City and the Department of Community Affairs and corrected as necessary to ensure that the powers of the comprehensive plan relating to affordable housing are not eroded.**

Portions of Policy 3-1.13 concerning affordable housing dwelling unit eligibility requirements and the applicant eligibility requirements were inadvertently deleted and have been restored.

6. **Revisions to Policy 2.1.7 of the City's comprehensive plan that would require that alternative mitigation measures be considered to address potential residential increases as well as measures to reconcile potential impacts of the plan with current applicable emergency management plans.**

The revised Base Reuse Plan provides for only 85 additional dwelling units —16 units on the Poinciana Housing parcel and 69 on the Truman Waterfront parcel. Development of the units can only occur when a ROGO is available or, if proposed Policy 1-3.12.5 is adopted, units (including their associated development rights) are transferred from other areas of the City.

Furthermore in revised Comprehensive Plan Policy 1-2.3.2: Historic Medium Density

Residential (HMDR) and corresponding SUBSECTION 2-5.5.1 HISTORIC MEDIUM DENSITY RESIDENTIAL DISTRICT - 1 (HMDR-1) of the Land Development regulations the city has committed that if in the event the city owns the portion of the Truman Waterfront Parcel designated HMDR, the site will be developed for affordable housing. While if the site is privately owned, 30 percent of the dwelling units will be affordable. Ownership of the site will be determined, in part, through the economic development conveyance application city staff is currently drafting.

Also, please note that Mole Pier is the only portion of the Truman Waterfront designated as a Coastal High Hazard Area.

## FLORIDA DEPARTMENT OF TRANSPORTATION

1. **No justification is provided to support the use of a 2% annual increase in background traffic. If the background traffic is increased excessively, it may mask the effect that the base traffic has on future LOS.**

We believe that the background growth rate of 2 percent is appropriate and is consistent with the methodology applied to many of the traffic impact studies we have completed in the City of Key West. Provided within the City of Key West Comprehensive Plan, July 1993 is a graph that illustrates a growth rate greater than 2 percent where actual historical data was available. Within the City, several residential developments are in some stage of development including, Truman Annex, Roosevelt Annex, and Key Cove. Additionally, commercial developments in the Old Town area include the redevelopment of the Key West Bight, Bahama Village, and the construction of the Buquebus Ferry Terminal. The application of the 2 percent per year growth rate is an attempt to adequately reflect the fact that background traffic will place continued demands on the transportation infrastructure of the City.

We agree with the FDOT concern relative to the potential for a high background growth rate to mask the impacts of a proposed development. **Attachment FDOT-1, Comparison of Background Traffic Growth Rate on Level of Service** indicates that the application of the 2 percent annual growth rate does not change the level of service of any roads on the State Road System.

2. **The majority of the project is assigned to Palm Drive and Eaton St. which have an existing LOS of "F". More project traffic should be assigned to Truman Ave., which has an existing LOS of "D".**

The city believes that this comment is in error and we disagree that a majority of project trips is assigned to the Palm Avenue/Eaton Street Corridor verses Truman Avenue. First, a greater percentage of trips is already assigned to Truman Avenue (60% West of White Street, 72% West of Simonton Street). Second, as is evident by the traffic volumes for Eaton Street and Truman Avenue, a greater proportion of existing traffic is accommodated on Eaton Street.

The city believes that this comment is in response to reviewing Figure IV.A.1a (Distribution of Trips to Site) without considering **Figure IV.A.1b - Distribution of Trips from Site**. As illustrated in **Figure IV.A.2 - PM Peak Hour Trip Assignment**, a greater proportion of traffic is assigned to Truman Avenue. The assignment of trips for the Truman Waterfront assumed that a slightly higher percentage of entering trips would arrive via the Palm Avenue / Eaton Street corridor since the northern area of Old Town is more attractive due to the tourist related activities in the area. Consistent with this assumption, a large number of trips are originated in the northern Old Town area. Exiting the site a larger proportion of trips leave the area via Truman Avenue since it is the most direct route out of the Truman Waterfront area. During the PM peak hour there are fewer entering trips (242) than exiting trips (547) also resulting in the greater assignment to Truman Avenue.

3. **The report states that 21,515 new daily and 1,297 new peak hour trip ends will result from the proposed land use designations. The conclusion that there are no new**

**adverse impacts to any transportation facility resulting from this new traffic is drawn from the fact that most of the roadway links are currently at LOS "F" or are projected to be at LOS "F" in the future analysis year. In fact, any additional traffic will further reduce mobility in this already congested area. If a lower background growth factor is used and the traffic assignment considers levels of congestion, some Truman Ave. links may fall below the adopted LOS standard.**

As mentioned previously, the trip generation projection for the Truman Waterfront has been significantly reduced as the result of a reduction in land use intensity. Daily net new trips has been reduced to **11,902** from **20,542** and likewise P.M. peak hour trips have been reduced to **789** from **1,210**. Thus the proposed impact from the redevelopment is significantly reduced.

We acknowledge that additional traffic on roadways operating below their adopted standards will increase congestion. Many of the roadways in Old Town with capacity problems and North Roosevelt Boulevard cannot be improved by adding additional travel lanes due to historical or environmental concerns. Increases in transit, bicycle, and pedestrian modal splits, as well as minor geometric intersection improvements, improved coordination of signals, signage improvements, parking improvements, and traffic diversion are all strategies that could mitigate the impacts of the proposed base reuse. However dealing only with improvements considering the base reuse would be terribly short-sighted and other improvements would be beyond the scope of the base reuse plan. For this reason the plan recommends a coordinated and comprehensive traffic circulation study that considers the cumulative impacts and needs of developments within the Old Town area. It is important to note that the base reuse plan merely identifies the anticipated impacts of the plan if fully implemented. The practical reality of the development will be that as phases of development are implemented, continuous review of traffic impacts will be made in accordance with the City of Key West's policy on Community Impact Statements. Thus additional levels of agency review and approval will continue to be a part of the redevelopment's implementation.

The identification of detailed strategies to mitigate traffic impacts are better suited and should occur when specific development proposals are submitted and reviewed.

- 4. The actions recommended in the section "Methods for Addressing Potential Impacts to Transportation Resources and Facilities" are: to conduct a traffic circulation study and to revise the City's concurrency management system to include lower LOS standards. These recommendations are repeated in the proposed amendments to the goals, objectives and policies of the City's comprehensive plans. No strategies are identified that will reduce the level of congestion caused by the proposed land use designations. The implementation of the proposed land use categories should be tied to implementation of the strategies identified in these proposed plans.**

See response to comment 3., above.

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION - (Letter of March 22, 1999)**

- 1. General: Certain projects have the potential to impact the Florida Keys National Marine Sanctuary resources, each as nearby coral communities and seagrass beds. The department will review these projects on a case-by-case basis as they enter the permitting process and provide more specific recommendations to help minimize potential adverse environmental impacts.**

This comment has been noted.

**We would like to note our concern regarding the plan's emphasis on the possible expansion of the cruise ship industry in Key West. There are indications that silt plumes created by cruise ships entering and leaving the Harbor may be affecting water quality and contributing to the decline of nearby marine communities. There is also indication that the additional turbulence is affecting structures at the Fort Zachary Taylor State Park and creating a dangerous undertow that visitors have reported to park officials (see specific recreation and parks comments below.) Although the base reuse plan discusses the possibility of altering existing cruise ship berths to accommodate larger vessels we believe that further study of the effects of cruise ships on the marine environment and park structures is needed before this occurs.**

See response below.

**DEP is currently investigating the turbidity being generated by boating activity in the vicinity of the mole pier to determine if water quality standards are being met. The permitting of additional water dependent activities will, in part, be determined by those findings. The Department needs assurances that proposed activities will meet water quality standards, and protect the sensitive environmental resources we are charged with protecting. Environmental Resource Permitting (ERP) will be required from this department for any work in waters of the state.**

The Florida Department of Environmental Regulation's concern regarding potential water quality degradation due to vessel movement-caused turbidity adjacent to the Truman Waterfront Parcel is shared by the city. However, existing information (including spot turbidity measurements taken by the FDEP and a study conducted by the Key West Pilots) neither adequately quantifies turbidity levels in the harbor nor fully assesses potential impacts on adjacent natural resources. Particularly important gaps in existing knowledge include an assessment of naturally occurring turbidity, an analysis of sediment sources, impact of vessel traffic by type and frequency, identification of habitat degradation correlated to harbor use turbidity, and an evaluation of port operations in reference to existing state and federal law for navigation harbor operation and maintenance. In general, the City believes that existing data is not adequate to determine if there are impacts, and if so, whether they constitute a hazard to marine communities.

The Key West Federal Harbor Project is owned and operated by the United States Army Corps of Engineers. As such, the USACE is responsible for assessing harbor operations, including maintenance needs and impacts to the environment. Therefore, it appears that

the federal government is the directly responsible party for evaluating and if need be, correcting, any environmental degradation caused by use of the navigational channel. Because the channel is widely used by public recreation and commercial craft and by other large vessels, including vessels owned and operated by the United States Coast Guard, the United States Navy, and the National Oceanic and Atmospheric Administration, it is of particular importance to the federal government, and specifically the United States Army Corps of Engineers as the owners of the channel, to define whether a problem exists and to determine appropriate actions.

On April 26, 1999, the City of Key West formally requested federal study and action regarding vessel-generated turbidity in the Key West Federal Harbor Project. Coordination with the Deputy District Engineer for Project Management at the Jacksonville District Corps of Engineers has indicated that the USACE is scheduling an updated survey of harbor conditions and is scheduling a site visit to review conditions. In addition, the city has included dollars for facilitation of federal studies in its Capital Improvement Plan and has initiated contact with the Florida Department of Environmental Protection. **The city anticipates that any actions will be federally initiated due to the complexity of the issue and the nature of federal harbor projects.**

Proposed policies regarding future port expansion include extensive data and analysis requirements in accordance with the City's existing Land Development Regulations. On environmental issues alone, these regulations require that new activities or structures be assessed in terms of their impacts to wetlands, open water, wildlife habitat and other environmentally sensitive areas (see **Chapter IV: Administration of Development Plan Review and Subdivision, Article XVIII: Development Review Procedures, City of Key West Land Development Regulations, see Attachment DCA-2**); further, the overall land development regulations set forth extensive environmental protection and surface water management requirements(see **Article VI, Environmental Protection and Article VII, Surface Water Management, City of Key West Land Development Regulations, Attachment DCA-3**). These regulations implement numerous existing Comprehensive Plan policies which require development to consider environmental conditions such as: **Objective 1-3.6 Protection of Natural Resources, Objective 5-1.1 Protection of Coastal Resources; Estuarine Salt Pond Environmental Quality, Living Marine Resources, and Wildlife Habitats; Objective 6-1.2. Water Quality and Quantity; and, Objective 6-1.7. Protection of Native Vegetation and Marine Habitats.**

Due to the extent of existing policy and regulatory implementation regarding natural resource protection now in the City's Comprehensive Plan and Land Development Regulations, it is only necessary to strengthen the connection between the existing regulatory review standards and future port development. The proposed policy language and land development regulations do that, and also set new criteria for public involvement and decision-making in the review process.

Finally, in regards to submerged lands ownership, the city is aware of ownership issues and has been in touch with the Division of State Lands since August 19, 1997, when a request for a determination was made to the FDEP. The city cannot make requests for use of these lands until the property enters into city ownership; therefore, no action can be taken at this time.

**The City will also need to negotiate the transfer to submerged land leases with this department for use of sovereign submerged lands. This is normally accomplished in conjunction with the Environmental Resource Permitting process.**

The city is aware of need to negotiate the transfer to submerged land leases with this department for use of sovereign submerged lands and will initiate that process at the appropriate time.

**The South Florida Water Management District will review stormwater management issues and develop appropriate permits as required to protect water quality.**

This comment has been noted.

2. **Recreation and Parks - In general, the reuse plan will enhance the recreation and aesthetics of the adjacent areas and be complimentary to park visitation. However, it will also significantly increase public use in the Truman waterfront area as well as at Fort Zachary Taylor, consequently, this may have some adverse environmental impact which will need to be closely monitored as the plan is implemented. Most of our recreational concerns relate to potential effects of the proposed boat traffic on the existing park.**

This comment has been noted.

It is not clear that the plan accurately identifies the land that the state hopes to acquire from the federal government and add to Fort Taylor. The plan needs to avoid conflict with the land use configuration we envision for anticipated additions to the park. Attached is a copy of the June 6, 1998 survey which has been submitted to the National Park Service (NPS) as part of our application to procure additional property for the park. This land, along with the existing park, needs to be under the zoning category. Figure III.B.8 of the City Commission Meeting Handouts reflects a portion of this land as public services and a portion as neighborhood commercial. All of the property should be zoned public services.

Figure III.B.8 is meant to provide a general location of proposed land use designations. Specific land use locations will be defined once a survey and legal description of the parcel is completed.

**The park currently has an access easement that is reflected on the above referenced survey. The concept plan map for the Truman Waterfront seems to impact or eliminate portions of the easement. Although we do not object to considering an alternative access, this department needs to review any proposed access amendments prior to approval. DEP needs to ensure that the park's ability to provide service to the public remains either status quo or is enhanced.**

The Base Reuse Plan does not eliminate or change any park easements. The entire Truman Waterfront will be open to the public once the property is conveyed and the easement may not be necessary. Regardless, the city will coordinate with DEP to ensure public access to park is either maintained or enhanced.

The Truman Beach parcel is part of our application to the NPS and is recognized in the reuse plan as being added to the park. Since this beach is a turtle nesting site, the City needs to pay particular attention to ensuring that the public does not adversely impact the site. We understand that the boundary line will be fenced once the transfer of title has been completed, and the property has been added to the park. However, the use of the adjacent mole and the number of people that will frequent the adjacent land may require more than a fence. Signage and diligences on the part of the City to ensure its visitors do not inappropriately cross into the park and disturb the turtle nesting area may be necessary.

The city will work with DEP and do its part to help protect the turtle nesting area.

3. **Pages 87 and 89 - Truman Beach is described as having no dune system. Shorelines in the Keys typically do not have well developed dunes. There is a small accumulation of sand and colonization by salt tolerant vegetation typical of coastal berm habitat in the Keys. The shoreline currently appears to be relatively stable. However distribution of the riprap shoreline immediately south of the beach suggests there may be an increasing problem with erosion in the future. This may be associated with the increases in cruise ship size (increasing up to 800 - 900 feet long) and number (increase of 32%) over the past three to four years. It may be necessary to implement a monitoring system that will allow some means of correcting destabilization of the park's shoreline due to activities and boat traffic at the port.**

Shoreline hardening in the vicinity of Truman Waterfront is not clearly understood. The entire area, including Fort Zachary Taylor and its beaches, consists of fill on formerly submerged tidal lands. Therefore, hardening was probably necessary to keep fill areas from eroding due to normal coastal processes and storm events. The existence of rip rap along the shoreline of the park does not immediately suggest that erosion due to ship traffic is expected in the future; it may suggest that past erosion (due to any number of causes, including dominant coastal currents and energy levels) may have caused areas in the park to need protection. Rip rap is generally considered preferable to bulkheading due to its superior ability to absorb wave energy and its higher habitat value. However, because placement of rip rap in navigational channels and along berthing areas creates significant safety concerns, bulkheading is preferred for ports along deep water channels. Therefore, it appears that construction by the Navy at the time Fort Zachary Taylor was built in 1850 all the way through construction of Truman Harbor in the 1940's used appropriate shoreline stabilization. No further stabilization is proposed to the outer harbor by the city.

A visual assessment of Mole Pier found a series of revetments along the southern half of the outer Mole Pier. These revetments appeared to function like groins, however their original purpose is not clear. Accumulation of sediments between the revetments seems to be occurring, with sediment accumulation appearing progressively greater towards the south, where the pier meets the sandy beach proposed for incorporation into the state park. If this sediment accumulation can be attributed to coastal processes, it would appear that an accumulation of material is occurring in the direction of Fort Zachary Taylor. A number of individuals participating in the public workshop process noted that this beach was a relatively recent accumulation. However, we are not aware of any studies that document this.

If erosion occurs on Fort Zachery Taylor beaches which is caused by navigation in the area, then the channel owner, the United States Army Corps of Engineers, should be notified by the state.

4. **Page 87. Historic areas.** The reuse plan indicates that a "portion of the northwest tip of the site is intended as a transportation facility." We are not aware of any outside transportation uses for land that will be acquired and incorporated into the State park. The above referenced discussion of a transportation facility is fairly vague, and clarification of the statement is requested.

Existing Building 149 and the area immediately adjacent to it is the portion of the Truman Waterfront Parcel intended to become a transportation facility.

5. **Fig. III F.2. - The park boundary in this map appears to include the five acre Navy conveyance, although it is unclear. If so, it should be clarified on the map and be shown consistently on all the maps.**

Figure III.F.2 is meant to provide a general indication of port owned and administered lands. The titles for both Figures III.F.1 and III.F.2 have been changed to clarify the general nature of these graphics. Specific locations of port owned and administered areas on the Truman Waterfront Parcel will be identified when a survey of the site is complete

6. **Page 87. Seagrass beds.** Seagrass beds seaward of Truman Beach may be impacted by the reuse plan. Large boat wakes from the shipping channel can increase turbidity, reducing water clarity and possibly uprooting seagrasses. Monitoring should be conducted to verify the current condition of the grassbeds and later to assess affects of this plan on the habitat.

There is no information to suggest that the Key West Federal Harbor has resulted in impacts to seagrass beds. In fact, biological analysis of seagrass beds alongside the reuse site indicated that the beds are healthy and grow progressively lush towards Fort Zachary Taylor. If anything, concentration of coastal energies by the bulkhead along Mole Pier is probably responsible for creating higher energy conditions less conducive to seagrass growth. However, imperical evidence is incomplete and further review by experts familiar with seagrasses and deep water channels appears necessary. The city has contacted the United States Army Corps of Engineers, the owner and operator of the channel alongside the Truman Waterfront Parcel, and asked that the USACE assess the merit of concerns and determine an appropriate plan of action.

7. **Page 88. Estuarian conditions.** The occurrence of coral on the upper surfaces of a seawall cannot be used as a single indicator that overall water quality within the dredged basin is good as this section states. DEP regulations prohibit permitting of new or modified marina activities which will degrade conditions in the adjacent open waters which are designated Outstanding Florida Waters.

Although many boats use the area, the large draft of cruise ships (up to 28 feet) far exceeds any other type of vessel in the area. Consequently, consideration of impacts from the cruise ships is a valid concern. This section seems that no turbidity problems by boat traffic in the area were found by researchers. References which

**led to this conclusion should be included in the text. Details need to be provided on parameters that were tested (e.g. turbidity, light availability or total suspended solids), the time and frequency of sampling, with the results enumerated.**

No specific testing of water turbidity associated with the channel or harbor was available at the time the text for the document was finalized in January 1999. However, an extensive body of general information was available, including commonly understood and accepted notions of coastal processes relevant to water quality analysis. Additional research included contact with NOAA, Florida International University and the University of Miami Rosenstiel School of Marine and Atmospheric Science, institutions which were actively engaged in researching water quality in the Florida Keys. Some of the most relevant information on overall coastal processes and resident sediments suspension in the vicinity came from the NOAA Environmental Research Laboratories, Atlantic Oceanographic and Meteorological Laboratory; this information suggested that there are likely high levels of background turbidity in the area. Background conditions are a key component in measuring turbidity impacts, as is flushing, habitat type and habitat adaptivity, and frequency and endurance of events.

Since the plan was submitted, the FDEP has taken some limited water quality measurements at the thrusters of docking cruise vessels. In addition, turbidity samples have been taken at Pier B as part of permit compliance. The FDEP samples showed turbidity elevated above background levels; the Pier B samples did not. Neither set of samples establishes that turbidity is or is not a problem.

The channel alongside the Truman Waterfront Parcel is federally owned and maintained, and the city has initiated contact with the United States Army Corps of Engineers to address proper study and assessment of turbidity related to vessels in the channel. This is a complex issue which must be examined in the context of the overall navigational and natural environment.

9. **Pages 108-109. Port demand for wastewater and solid waste. With over 1000 people per ship, port operations will generate significant wastewater and solid waste. The reuse plan needs to require pump-out facilities at all docking areas for wastewater disposal with provision for disposing of solid waste at the Key West solid waste facility. Assurances are needed that these additional demands on the City's capacities for wastewater treatment and solid waste disposal will be accommodated within the established levels of service.**

The port does not accept wastewater from the cruise ships at the Truman Waterfront. Therefore, port operations do not place demands on the Key West wastewater system.

The port does allow for offloading of cruise ship solid waste. In the past this has generated negligible amounts of solid waste usually composted or discarded boxes and litter from garbage receptacles located at the port facility.

9. **Fig. III F.6. Least tern nesting sites are shown on the map in the area of the warehouses to be conveyed to the park service. This should be verified and corrected if necessary. According to park information, nesting was known to occur on buildings southeast of the park.**

Based on a 1996 study conducted by the U.S. Navy the information shown on Figure III.F.6. is correct.

10. **P.112. Listed species.** The plan mentions manatees and turtles and excludes other listed species. Attached is a list of the designated species observed at Fort Taylor Park entitled "Florida Natural Areas Inventory - May 1997." The majority of these species are wading and migratory birds which more likely will pass over or utilize the adjacent area; consequently, they could be impacted by certain aspects of the project. Increased visitor activity or lighting at night in the vicinity of Truman Beach will have a negative impact on loggerhead sea turtle nesting activity and needs to be addressed in the more detailed plan.

Development and modification of the Truman Waterfront Parcel will require detailed plans which will be subject to rigorous state and local approval processes. Issues such as lighting and buffering of activities will be addressed in those plans and through those review processes.

10. **Manatee issues -** While manatees are more frequently found in the upper keys, they do occasionally inhabit the waterways of Key West. If impacts to native habitat such as submerged aquatic vegetation are anticipated, we will need to reevaluate additional information concerning the anticipated loss of habitat. The following conservation measures will need to be incorporated into the permit for water related activities at the Truman Waterfront:

a. **The standard manatee construction conditions need to be followed for all in-water construction:**

b. **A manatee educational program needs to be developed, and approved by this Department's Bureau of Protected Species Management, and implemented before any of the permitted docking facilities are occupied by vessels. Information concerning this educational program may be obtained from the Bureau of Protected Species Management at the following address: 3900 Commonwealth Boulevard, Mail Station 245, Tallahassee, Florida 32399-3000 (telephone 850/922-4330). The program needs to include, but not limited to the following:**

- (1) **In order to provide protection of manatees during the operation of this facility, it is recommended that permanent manatee educational awareness signs be installed and maintained to increase boater awareness of the presence of manatees, and the need to minimize the threat of boats to these animals. Signs should be installed prior to beginning additional operations at the waterfront, and replaced in the event they fade or become damaged. Information on the number, type and procedures for installing and maintaining permanent manatee signs, may also be obtained from our Bureau of Protected Species Management;**

- (2) It is requested that the committee install and maintain a manatee education display kiosk in the immediate vicinity of the docking facilities. The display kiosk should include information exhibits regarding manatee characteristics and behavior, and how to minimize human impacts to manatees.

The Base Reuse Plan does not anticipate impacts to manatee habitat. Development and modification of the Truman Waterfront Parcel will be coordinated with all appropriate federal, state and local review agencies. If it is determined that development creates impacts to manatee habitat, conservation measures will be incorporated.

11. **Turtle Issues** - Although the sections addressing listed species (pages 112 and 123) mentioned loggerhead nesting, the plan did not address the occurrence of loggerhead, green, and hawksbill turtles in the waterways of Key West. The seagrass beds and hardened areas with corals and sponges are likely to be foraging grounds for these species. The plan stated that conservation was only necessary for the mangrove habitat (page 128, pages 137-138), and did not address either of the above in-water resources. If impacts to these resources are expected, our Bureau of Protected Species Management would like to reevaluate the project with any additional information concerning the expected loss of habitat.

With regard to nesting habitat we have no objections to this project since the beach portion of the property is expected to become part of Fort Zachary Taylor State Park, and additional beach activity is not proposed. If in-water impacts to seagrass beds or hardened areas are not expected, then we have no objections to the proposed project.

The Base Reuse Plan does not expect to create impacts the seagrass beds or hardened areas with corals and sponges. If such impacts are anticipated to occur the city will coordinate with DEP.

#### Florida Department of Environmental Protection (Letter of March 21, 1998)

1. **Domestic Wastewater Strategies** - Within the conceptual Truman Annex reuse plan, the Land Redevelopment Authority (LRA) has proposed development of housing, retail operations, and neighborhood revitalization. This strategy for the City of Key West will require evaluation of wastewater disposal and reuse options as well as upgrading effluent disposal. With the added impacts on the Key West wastewater treatment plant, evaluation of that existing capacity is critical.

Any new wastewater connections from the reuse site to the municipal sewer system will most likely require collection system permits from this Department in accordance with Chapter 62-604; F.A.C. Before any new permit can be issued, the wastewater flow which is generated from the new development at these sites will have to be evaluated in order to provide reasonable assurances that the permitted capacity of the existing municipal collection and the treatment facilities can handle the additional water flow. Also, the municipal sewer system is currently in disrepair and subject to high levels of groundwater infiltration. This problem has resulted in violations of the State permit which has required enforcement action by this department. As a result,

**the City of Key West is operating under a Consent Judgement which requires complete rehabilitation of the municipal sewer collection system within a five year schedule. Any new connections to the municipal sewer system will have to be consistent and shall not interfere with, the requirements of the Consent Judgement.**

The city recognizes this issue and has been working to cure the problem. The city further understands that any new connection to the sewer system will be subject to the requirements of the consent judgement.

The city is also understands that before any new permit can be issued, the wastewater flow which is generated from the new development at these sites will have to be evaluated in order to provide reasonable assurances that the permitted capacity of the existing municipal collection and the treatment facilities can handle the additional water flow.

- 2. Stormwater Strategies - The stormwater management section of the FKNMS Management Plan addresses reducing the amount of pollution from stormwater runoff by identifying hot spots and altering land use layouts to reduce impacts to surface waters. This could also involve using grassed parking area, and pollution control structures to include detention and retention facilities to reduce stormwater pollutants. The LRA has proposed a large scale development of housing and port related activities in its conceptual reuse plan, as well as warehousing and marine industrial activities, all of which have the potential for increasing stormwater discharge pollutants. In order to remedy this potential problem, the city should confer with this department's Marathon office, as well as the South Florida Water Management District on standards of the surrounding Outstanding Florida Waters. If stormwater retention systems are inadequate to reduce pollutants, the city may need to consider the use of injection wells or implement a reuse plan for stormwater runoff.**

The city, as well as the state, have extensive stormwater regulations regarding quality and quantity of discharge. The city fully intends to require new development and redevelopment on realigned lands to meet or exceed these standards. Due to particular concerns on the Truman Waterfront Parcel, which was constructed prior to these standards being put into effect, the city has included a planning, engineering and design study in its Capital Improvement Plan. The capital plan also includes infrastructure improvement dollars to upgrade utilities within the site itself. Both capital items are dependent upon revenues from existing port facilities for funding. The actual design of stormwater facilities is dependent upon the findings of the overall study and site development needs.

- 3. Marina and Live Aboard Strategies - The city's conceptual use plan proposed two separate marinas, one on the west quay wall and another along the east quay wall. One can speculate that the marinas could also contain "live aboard" activity. Within the Marina and Live-Aboard Section of the final FKNMS Management Plan, seven strategies were developed for protecting the environment. These seven strategies involve a variety of pollution reduction approaches ranging from a restriction of discharges to educating the public on proper methods of contaminant disposal. The following is a discussion of some of these strategies.**

All marinas with 10 or more boat slips, as defined by the State of Florida, are required to install pump facilities which would increase the number and accessibility of these facilities in the Florida Keys and hopefully encourage proper sewage disposal practices. Other strategies involve optimizing marina siting as well as design and reduction of pollution from marina operations by establishing containment areas for boat maintenance operations. The LRA needs to identify the Best Management Practices it intends to use in order to meet surface water quality standards where marinas are proposed.

Marina and live-aboard activities may generate pollutants, and it is recommended that marinas seek assistance from this department in developing the necessary stormwater treatment systems which will utilize the most current technology for protecting surface waters from pollution. Opportunities for instruction and training of residents and tourists to heighten the environmental awareness of how human activities adversely affect water quality in the Keys should also be utilized. Well designed marinas, in conjunction with pollutant reducing methods, should decrease the overall adverse environmental impacts from the activities being proposed.

A Mobile sewage pump-out service and related utilization requirements should be developed by their local government to serve areas where permanent marina pump-out facilities are not yet available. With local supervision of the quality and cost of this service, it could be operated by (a) private contractor(s) who would provide this service for live aboard vessels moored outside of marina facilities. Historically, there are several live aboard areas around Key West that could use this service, including Rat Island, Cow Key Channel, Boca Chica, and Christmas Tree Island. These areas are ready for and could support a mobile sewage pump out station operation. The addition of a mobile pump out facility to the LRA final reuse plan would directly reduce the amount of sewage discharged into the keys environment, and provide a major benefit to the community.

Marina uses presented in the plan are conceptual and dependent upon feasibility studies which include assessment of environmental impacts. The city has strict marina development regulations, as do other regulatory agencies with jurisdiction over final development approval of future facilities. Whether these facilities will include live-aboards is impossible to predict at this time. However, structured marina facilities will almost certainly be required due to the physical conditions in the harbor; therefore, water and sewer facilities will probably be constructed as part of overall docking amenities.

4. **Hazardous Materials Strategies** - The proposed conceptual plan defines an area for "light industrial marine maintenance." One might expect that marine maintenance activities may result in accidental spills of hazardous materials. Strategies in the Sanctuary Plan describe methods of reducing the impact of hazardous material spills in and near the Keys. Among others, strategy one calls for the improvement of response and commitment techniques with a revision of the contingency plan that includes the location of a crew and equipment in the Keys. These activities need to be coordinated with this department's Waste Management Program through the pollution prevention processes. Based upon the information provided, there may be additional permitting requirements that evolve as particulars are developed. For

**additional assistance on this requirement please contact Mr. Ken Blackburn in this department's South District office at (941) 332-6975**

The city will coordinate with DEP on this issue as site-specific plans are developed for the Waterfront.

5. **The Final Conceptual Plans for reuse proposes berthing for cruise ships along the outer Mole Pier. Since cruise ships are currently berthing along the outer mole, the primary cruise ship berth is not in question. However, the addition of a secondary cruise ship berth may have significant impacts. The area proposed for the secondary cruise ship berth is not of adequate depth and would require dredging. The added ship activity could also increase water turbidity, thus decreasing overall water quality of the area. This proposed activity should undergo further review to determine ways in which adverse impacts may be minimized.**

The second cruise ship berth was eliminated by the City Commission and was not included in the draft Chapter 288 Plan.

6. **Proposals for public and professional marinas would likely involve State Lands Environmental Resource Permitting (SLERP) issued in conjunction with a determination of submerged land ownership. It should not be assumed that all proprietary issues have been resolved with regard to ownership of submerged lands which have been under the control of the U.S. Navy. The permitting process will need to incorporate an appropriate title search of submerged land ownership prior to an official transfer of the properties, or preparation of submerged land lease agreements.**

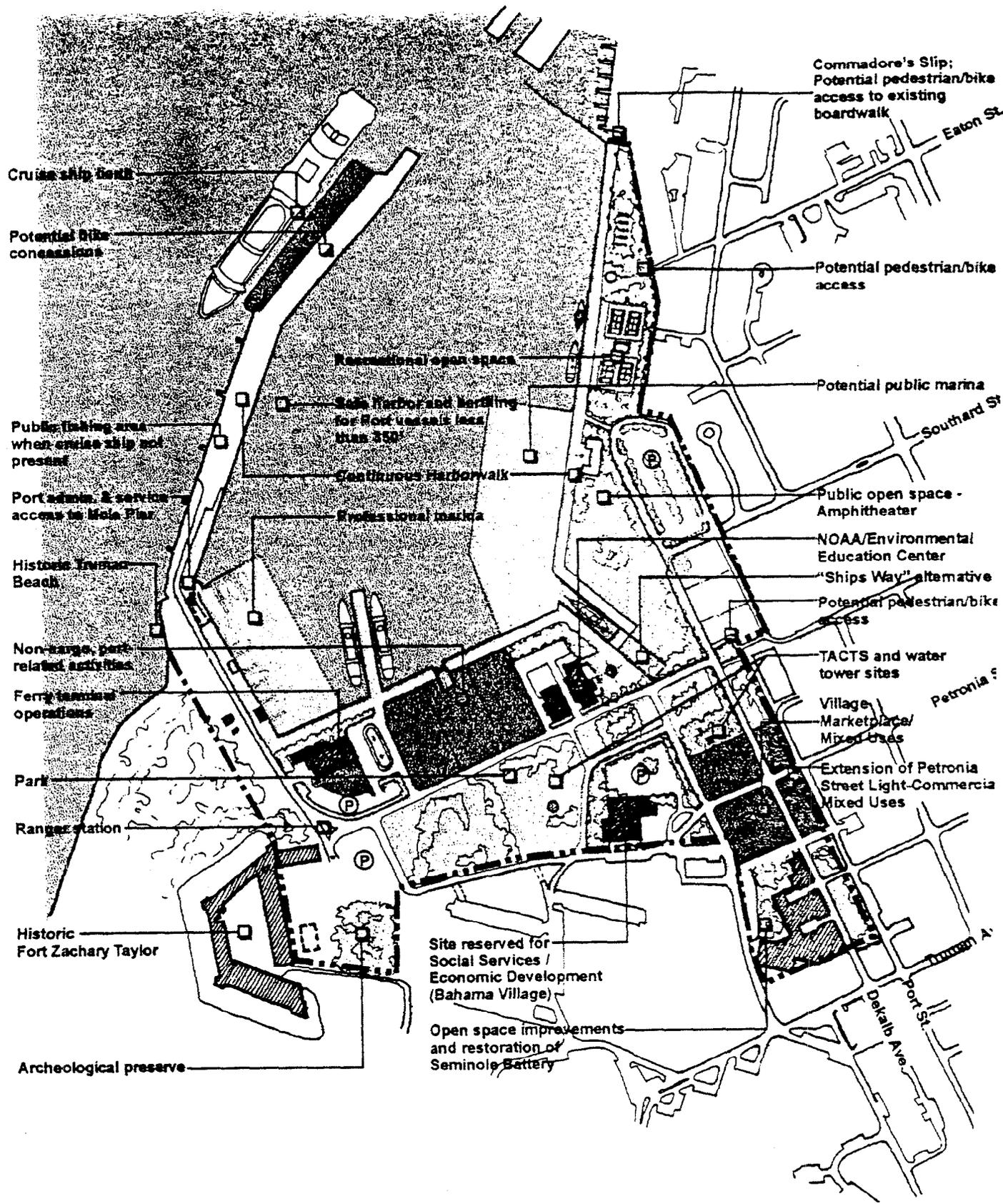
The city does not assume that all proprietary issues have been resolved with regard to ownership of submerged lands which have been under the control of the U.S. Navy. The city further recognizes that the permitting process will need to incorporate an appropriate title search of submerged land ownership prior to an official transfer of the properties, or preparation of submerged land lease agreements.

The city is aware of need to negotiate the transfer to submerged land leases with this department for use of sovereign submerged lands and will initiate that process at the appropriate time.

# **Attachment DCA-1**

**Truman Waterfront Parcel**

**Concept Plan and  
Proposed Land Use Classification**



**Legend**

--- SITE BOUNDARY

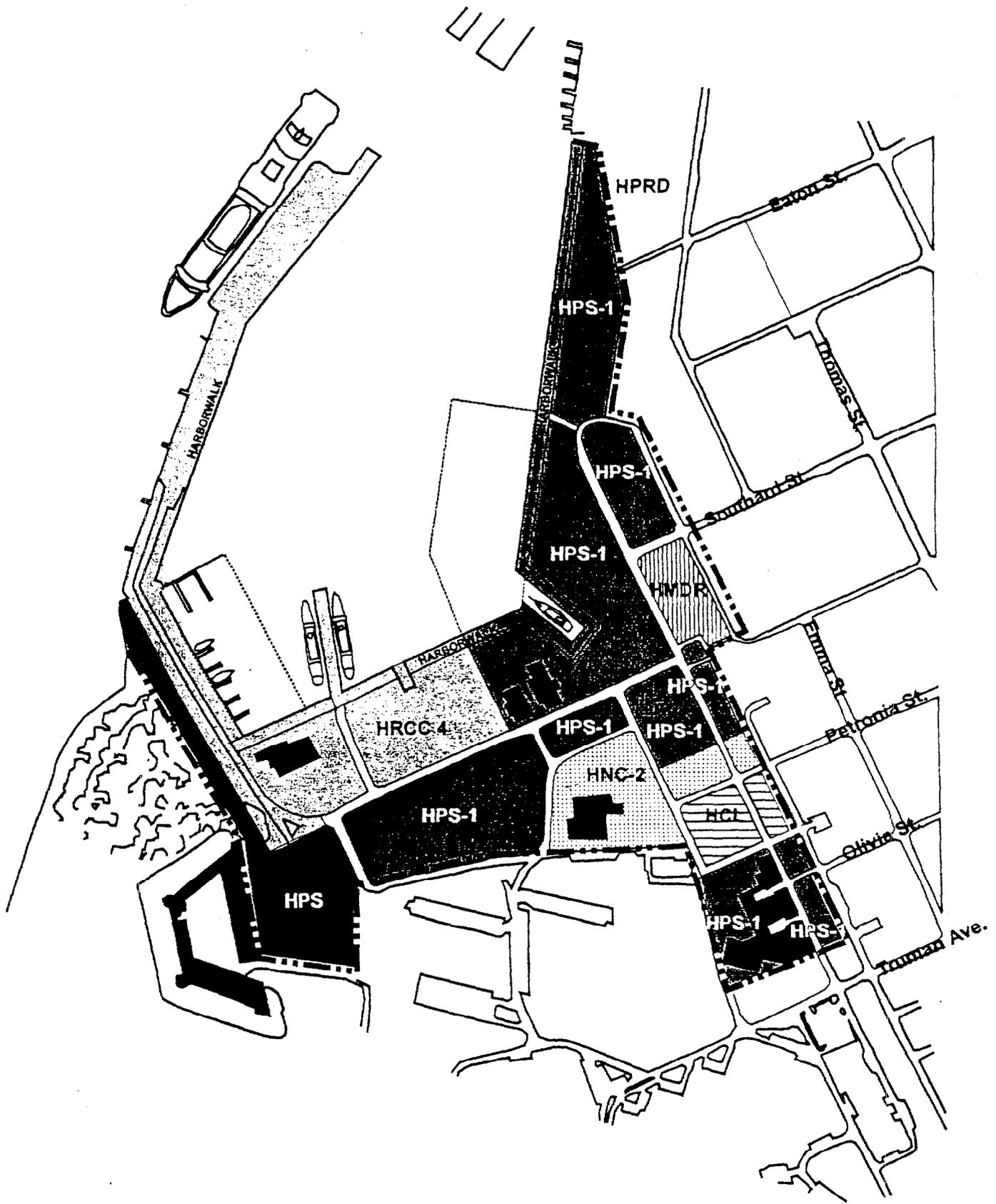
(P) PARKING

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

FS2:\Lands\Landplan\Derry\Key West\9627\Figure III\B6.REV

Figure III.  
TRUMAN WATERFRONT PARCEL CONCEPT PL  
KEY WEST MILITARY BASE REUSE PL





**Legend**

- SITE BOUNDARY
- RCC4** PORT & PORT-RELATED ACTIVITIES
- HNC-2** NEIGHBORHOOD COMMERCIAL
- HMDR** MEDIUM DENSITY RESIDENTIAL
- HPRD** LIMITED COMMERCIAL
- HPS** HISTORIC PUBLIC SERVICES
- HPS-1** HISTORIC PUBLIC SERVICES - TRUMAN WATERFRONT
- HRC-4** HISTORIC PUBLIC SERVICES
- HCL** HISTORIC PUBLIC SERVICES

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



Not to Scale



REMBOLD - ALVARO  
 & PARTNERS, INC.

## **Attachment DCA-2**

**City of Key West Land Development Regulations**

**Chapter IV: Administration of Development Plan Review and Subdivision,  
Article XVIII: Development Review Procedures**

**SECTION 4-18.4: DEVELOPMENT REVIEW PROCESS**

- A. **Review and Action By the Planning Board.** The Planning Board's review of a development plan shall be carried out in accordance with rules and procedures established by the Planning Board, so as to prevent unnecessary inconvenience and delay to the project. After reviewing a development plan and staff recommendations, the Planning Board shall act to approve, approve with conditions, or disapprove based on specific development review criteria contained in the land development regulations, especially Chapter III. The Planning Board shall provide written comments documenting any conditions of approval. If the development plan is recommended for disapproval, the Planning Board shall specify in writing the reasons for recommending denial. The Major Development Plan Review projects, as defined in Section 4-18.3(B), shall be reviewed and acted upon by the City Commission. Therefore, the Planning Board, subsequent to reviewing a major development shall forward written recommendations to the City Commission for final action.
- B. **Appeals of Decisions Rendered by the Planning Board Directed to the City Commission.** The decisions of the Planning Board shall be final unless otherwise stated herein. However, any aggrieved person may appeal the decision by filing a written appeal with the City Clerk within ten (10) days of the decision of the Planning Board. The City Clerk shall place the matter of appeal on the City Commission agenda for public hearing as expeditiously as possible. The hearing shall be duly noticed pursuant to §4-18.4(D). At the City Commission all interested parties shall have the right to appear before the City Commission in regard thereto, and the City Commission shall thereupon render its decision therein. The decision of the City Commission shall be final, unless otherwise appealed to the courts.
- C. **Review and Action by City Commission on Major Developments.** The development plan of a major development shall be reviewed and acted upon by the City Commission after considering recommendations of City staff and the Planning Board. The City Commission shall act upon major developments as defined in §4-18.3(B) and may also act where actions of the Planning Board are appealed. In such cases, the City Commission shall consider the recommendations of staff and the Planning Board and approve with or without conditions, or disapprove the development plan based on specific development review criteria contained in the land development regulations, especially Chapter III. The City Commission may attach to its approval of a development plan any reasonable conditions, limitations or requirements which are found necessary, in its judgement, to effectuate the purpose of this article and carry out the spirit and purpose of the Comprehensive Plan and the land development regulations. Any condition shall be made a written record and affixed to the development plan as approved. If the Commission disapproves a development plan, the reasons shall be stated in writing.
- D. **Notification Procedures.** Prior to taking any action under Sub-Sections 4-18.4 (A), (B), or (C) regarding development plan review, the Planning Board and the City Commission, respectively, shall be required to notify adjacent property owners. Notice shall be mailed by certified mail (return receipt requested) to all property owners within fifty (50) feet of the property boundaries of the subject site under consideration for residential development plan approval, and one hundred (100) feet of the property boundaries of the subject site under consideration for mixed use and non-residential development plan approval. The notice shall include the time, date, place, and location of the public hearing together with the location of subject site and the nature of the intended use of the property. The notice shall be advertised in a local paper with daily circulation and shall be published at least five (5) days prior to the scheduled meeting to consider the subject development plan. Such notice shall also be published before any action is taken on appeals to any prior decisions on which appeals are generated pursuant to Sub-section 4-18.4 (B).

**SECTION 4-18.5: INFORMATION TO BE INCLUDED IN DEVELOPMENT PLAN**

A development plan, for the purposes of this section, shall include, but not necessarily be limited to, the following requirements. With the exception of Subsections 4-18.5 (A) (1-3), the City Planner may waive or modify requirements, information and specific performance criteria for development plan review after rendering a finding in writing that such requirements:

- (1) are not necessary prior to development plan approval in order to protect the public interest or adjacent properties;
- (2) bears no relationship to the proposed project or its impacts; and
- (3) is found to be impractical based on the characteristics of the use, including the proposed scale, density/intensity, and anticipated impacts on the environment, public facilities and adjacent land uses.

**A. General Information****1. Title Block**

- a. Name of Development
- b. Name of Owner/Developer
- c. Scale
- d. North Arrow
- e. Preparation and Revision Date
- f. Location/Street Address of Development

**2. Identification of Key Persons.**

- a. Owner
- b. Owner's Authorized Agent
- c. Engineer and Architect
- d. Surveyor
- e. Landscape Architect and/or Environmental Consultant
- f. Others involved in the application
- g. Verified statement showing each and every individual person having a legal and/or equitable ownership interest in the subject property, except publicly held corporations whose stock is traded on a nationally recognized stock exchange, in which case the names and addresses of the corporation and principal executive officers together with any majority stockholders will be sufficient.

**3. Project Description - should be included on site plan sheet.**

- a. Zoning (include any special districts)
- b. Project Site Size (Acreage and/or square footage)
- c. Legal Description
- d. Building Size
- e. Floor Area Ratio - permitted and proposed
- f. Lot Coverage - permitted and proposed
- g. Impervious surface
- h. Pervious surface
- i. Landscape areas
- j. Parking spaces - permitted and proposed
- k. Delineate location of existing and proposed structures
- l. Denote existing and proposed development type by land use including density/intensity
- m. Setbacks

**4. Other Project Information. A general outline of the proposed development shall include the following criteria where applicable:**

- a. Proposed stages (or phases) of development or operation and facility utilization
- b. Target dates for each phase
- c. Expected date of completion
- d. Proposed development plan for the site
- e. A written description of characteristics of the proposed development (i.e., number and type of residential units, floor area by land use, number of tourist accommodations units, seating or parking capacities, number of hospital beds, any proposed outside facilities or areas to be used for storage, display, outside sales, waste disposal or similar use, and any other proposed uses).
- f. For planned unit developments, indicate design techniques (i.e., clustering, zero lot line, or other techniques) used to reduce public facility costs, reduce disturbance of natural resources, and preserve scenic quality of site.
- g. Buildings and siting specifications which shall be utilized to reduce damage potential and to comply with federal flood insurance regulations.
- h. Protection against encroachment together with proposed mitigation measures to be employed within environmentally sensitive areas.

**5. Residential Developments. If the development includes residential units, the following characteristics shall be discussed in the written description: a breakdown of the proposed residential units by number of bedrooms; tenure (i.e., owner occupied or rental); and structure type (such as single-family, duplex, multiple-family, mobile home). Refer to §2-7.24 for information and legal instruments needed to satisfy the City's affordable housing requirements.**

## 6. Intergovernmental Coordination.

- a. Provide proof of coordination with applicable local, regional, state and federal agencies, including but not limited to those agencies cited below, that will be involved in the project:
 

• South Florida Regional Planning Council (SFRPC)	• City Electric System (CES)
• Florida Department of Environmental Protection (DEP)	• Army Corps of Engineers (ACOE)
• South Florida Water Management District (SFWMD)	• Department of Transportation (DOT)
• Florida Department of Community Affairs (DCA)	• Florida Keys Aqueduct Authority (FKAA)
• Florida Freshwater Fish and Game Commission (F&GC)	• Monroe County
- b. Provide evidence that any necessary permit, lease or other permission from applicable local, regional, state and federal agencies have been obtained for any activity that will impact wetland communities or submerged land.
- c. In cases where intergovernmental coordination efforts are incomplete the applicant shall provide evidence of good faith efforts towards resolving intergovernmental coordination issues.

## B. Concurrency Facilities and Other Utilities or Services. Development Plans shall satisfy concurrency management regulations cited in Article IX. This component of the plan shall identify demands on concurrency facilities generated by the proposed development and identify how the demands shall be accommodated through improvements. The development plan shall also list the utility providers currently serving the site together with a description of the existing infrastructure serving the site. Include the location, design and character of all concurrency facilities and other utilities, such as underground or overhead electric lines, gas transmission lines, or other similar facilities or services, on the development plan. Concurrency facilities shall include the following:

### 1. Potable Water Supply

- a. Identify projected average daily potable water demands at the end of each development phase and specify the consumption rates which have been assumed for the projection.
- b. Provide proof of coordination with the Florida Key Aqueduct Authority. Assess the present and projected capacity of the water supply system and the ability of such system to provide adequate water for the proposed development.
- c. Describe measures taken to ensure the water pressure and flow will be adequate for fire protection for the type of construction proposed.
- d. Denote both planned system improvements required to establish and/or maintain adopted level of service and proposed funding resources to provide these improvements.

### 2. Wastewater Management

- a. Provide projection of the average daily flows of waste water generated by the development at the end of each development phase. Describe proposed treatment system, method and degree of treatment, quality of effluent, and location of effluent and sludge disposal areas. Identify method and responsibilities for operation and maintenance of facilities.
- b. If public facilities are to be utilized, provide proof of coordination with the Key West Public Service Department. Assess the present and projected capacity of the treatment and transmission facilities.
- c. If applicable, provide a description of the volume and characteristics of any industrial or other effluent.
- d. Denote both planned system improvements required to establish and/or maintain adopted level of service and proposed funding resources to provide these improvements.

### 3. Water Quality. Discuss disposal areas, septic tank drain field, urban runoff areas impervious surfaces, and construction related runoff. Describe anticipated volume and characteristics. Indicate measures taken to minimize the adverse impacts of potential pollution sources upon the quality of the receiving waters prior to, during and after construction.

- a. Identify any wastewater disposal areas, septic tank drain field, urban runoff areas impervious surfaces, and construction related runoff. Describe anticipated volume and characteristics. Indicate measures taken to minimize the adverse impacts of these potential pollution sources upon the quality of the receiving waters prior to, during and after construction.
- b. Describe plans for re-vegetation and landscaping of cleared sites including a completion schedule for such work.

4. **Stormwater Management.** A stormwater management plan for the site shall be provided, including:
    - a. Retention of runoff or discharge of such runoff into adequately sized natural vegetative filtration areas in manner approximating the natural runoff regime;
    - b. Permanent drainage systems which make maximum use of natural drainage patterns, vegetative retention and filtration; and
    - c. Evidence that the proposed drainage improvements shall accommodate stormwater run-off without adversely impacting natural systems or the City's adopted level of service for drainage.
  5. **Solid Waste.** Identify projected average daily volumes of solid waste generated by the development at the end of each phase. Indicate proposed methods of treatment and disposal. Provide proof of coordination with Key West Technical Service Department. Assess the present and projected capacity of the solid waste treatment and disposal system and the ability of such facilities to provide adequate service to the proposed development.
  6. **Roadway.** Provide a projection of the expected vehicle trip generation at the completion of each development phase. Describe in terms of external trip generation and average daily as well as peak hour traffic. Evaluate the capacity of the existing roadway network serving the development. Provide recommendations for any required improvements to the existing network required by the proposed development including additional R/W, roadway improvements, additional paved lanes, traffic signalization, access and egress controls, and other similar improvements.
  7. **Recreation.** Identify projected demand generated by the development and cite land and facility improvements provided to ensure the City's level of service is not adversely impacted.
  8. **Fire Protection.** Identify existing and proposed hydrant locations in relationship to building(s) and other fire protection systems. The applicant may be required by the Fire Department to provide fire wells to augment the available water supply.
  9. **Reclaimed Water System.** Include the amount of any reclaimed water to be utilized and method of application on the site.
  10. **Other Public Facilities:** Discuss provisions included in the proposed development to minimize adverse affects upon the following facilities: educational, police, fire protection, recreational, electric power, health care and disaster preparedness. Include map of the service areas of all existing and proposed public facilities (such as sewage, water supplies, fire protection, health care) which serve the site, and a map of the highway and transportation network map of the site and surrounding area. A letter of coordination with City Electric System (CES) shall be include in the development plan.
- C. **Appearance, Design, and Compatibility.** The development plan shall satisfy criteria established in Article X.
1. **Site Location and Character of Use.** The development plan submitted for review should be in compliance with all applicable performance criteria set forth in Chapter III of this code.
    - a. **Vicinity Map.** Provide a vicinity map with project's location noted together with a general written description of the proposed development. Show relationship of site to surrounding streets and public facilities at a scale of approximately 1":200'.
    - b. **Land Use Compatibility.** Identify adjacent land uses including current zoning designation, conditional uses and/or special districts within fifty (50) feet of the boundaries for a minor development, and one-hundred (100) feet of the boundaries for a major development. If applicable, assess the impact of the proposed development upon unincorporated Monroe County.
    - c. **Historic and Archeological Resource Protection.** Include a review of the project's impact on archaeological and historic resources. In addition to compliance with development plan review procedures of Article XVIII, developments within the historic district shall be consistent with the U.S. Secretary of the Interior's "Standards for Rehabilitation" and the City's Historic Architectural Review Commission's (HARC) "Design Guidelines in Key West's Historic District" (Cross reference §3-10.3). Include the written record of the HARC review of the project's impacts in the development plan.

- d. **Subdivision of Land.** Any subdivision of land shall comply with Article XI, "Subdivision Review Procedures" and Article XIX, "Subdivision" regulations.
2. **Appearance of Site and Structures.** The applicant shall submit a development plan that exhibits harmonious overall design characteristics in compliance with the performance standards stipulated in §3-10.2.
- a. **Site plan.** Development plans shall be drawn at a scale of one inch to 100 feet or larger. The maximum sheet size for development plans shall not exceed 24 inches by 36 inches. Multiple sheets may be used provided each sheet is numbered and the total number of sheets is indicated on each sheet. Cross referencing between sheets shall be required. Necessary notes and symbol legends shall be included. Abbreviations should be avoided but if used they shall be defined in the notes. The development plan shall address the following issues:
- i. Existing (where appropriate) and proposed building layout.
  - ii. Lot configuration.
  - iii. Finished floor elevations.
  - iv. Proposed topographic contours showing proposed drainage patterns and stormwater retention measures.
  - v. Building coverage/open space ratio for the proposed development.
  - vi. Size and Dimensions in compliance with zoning district regulations.
  - vii. Type, quantity and density of dwelling unit.
  - viii. Floor area ratios.
- b. **Architectural Drawings.** All architecture or engineering designs must be prepared and sealed by a professional architect or engineer registered in the State of Florida pursuant to Florida Statutes 471 and 481 respectively. Drawings submitted for development plan approval shall include the following minimum information:
- i. A scaled drawing of the side, front and rear facades of the building or structure, including roof pitch, fenestration including treatment of roof line, windows, and doors.
  - ii. Description of materials to be used.
  - iii. Generalized floor plan indicating uses and square footage of each proposed use within each building or structure, building exterior construction material, and building height.
  - iv. Location, height and general character of perimeter or ornamental walls, fences, landscaping, including berms and other required screening devices and other plans for protecting adjacent property owners.
- c. **Site Amenities.** The site plan shall include amenities required to comply with appearance, design and compatibility regulations outlined in Article X.
- i. Existing. All existing site amenities (i.e., signs, lighting fixtures, water features, etc.) shall be indicated as to location, character, color, and dimension.
  - ii. Proposed. State the location, size, character, color, height and design of all newly proposed site amenities in the form of working drawings and/or photographs.
3. **Site Survey.** A site survey prepared by a certified land surveyor illustrating the following:
- a. **Existing Conditions.**
- i. A site survey at a scale of 100 feet to one inch showing topographic contours at five (5) foot intervals and extending 25 feet beyond the property boundaries.
  - ii. High water elevation or boundaries of coastal shoreline and/or other waterbodies and canals, both on site and within 50 feet of site.
  - iii. Existing surface drainage characteristics of site including relationship to adjacent land areas. The site survey shall include all existing structures. Any existing structures on-site which do not comply with Federal Emergency Management Agency (FEMA) flood hazard regulations shall be identified on the survey.
  - iv. Federal Emergency Management Agency (FEMA) flood hazard zone or limits of 100-year flood.
  - v. Boundaries of environmentally sensitive areas, including an environmental survey and audit as needed. Management plans must be submitted and approved by state and/or federal regulatory agencies for areas recognized as a habitat for species listed by the Florida Game and Freshwater Fish Commission as endangered, threatened, or species of special concern.

- b. **Proposed Development.** The City shall require plans prepared by a Florida registered engineer and other competent professionals as may be required which shall demonstrate compliance with the City's stormwater management performance criteria in Article XII. In addition, the plans for land excavation or fill shall demonstrate that the proposed site alterations shall include mitigation techniques designed to comply with performance criteria addressed in Article XII.
  4. **Soil Survey.** As identified in the Soil Survey, Monroe County, Florida, U.S.D.A. Soil Conservation Service or other competent expert evaluation. When soil suitability limitations are indicated for the proposed development, the City Engineer may require a preliminary soil analysis by a qualified soils engineer. The development plan shall comply with environmental protection criteria in Article XI.
- D. **Environmentally Sensitive Areas.** Using maps from the Comprehensive Plan: Future Land Use Map Series (FLUM), indicate whether or not the parcel is located within a floodplain, floodway or drainageway, wetland, open water, upland wildlife habitat, or coastal high hazard area. Site specific surveys may be required.
1. **Proposed Impact.** Illustrate how any activity or structure that will impact environmentally sensitive areas will be performed, located, constructed and/or maintained to prevent or mitigate any adverse impacts to wetland and endangered upland vegetative communities, wildlife habitats, floodplain, and other environmentally sensitive areas.
  2. **Shoreline Protection.** If the project fronts a shoreline, indicate measures to allow public access to the shoreline, such as easements or rights-of-way; and illustrate any structure that may impede movement along the shoreline below the mean high water line, and demonstrate measures being taken to mitigate any such impediment. The development plans shall comply with §2-7.12 and applicable provisions of §3-11.4.
  3. **General Requirement.** If environmentally sensitive areas are found in or adjacent to the site the following information is necessary:
    - a. **Existing Conditions.** Developers shall provide an existing vegetation map identifying boundaries of environmentally sensitive areas and indicating alterations in these areas including dredging, filling, spoil sites, canals and channels.
    - b. **Preservation.** Developers shall preserve the functions of these environmentally sensitive areas and shall comply with restrictions and interpretations for development in wetlands found in Article XI. Management plans must be submitted and approved by state and/or federal regulatory agencies for areas recognized as a habitat for species listed by the Florida Game and Freshwater Fish Commission as endangered, threatened, or species of special concern.
- E. **Land Clearing, Excavation and Fill, Tree Protection, Landscaping, and Irrigation Plan**
1. **Land Clearing, Excavation and Fill.** The development plan and all development activity shall comply with §3-10.6. The development plan shall include a statement of procedures which the developer shall carry out in order to ensure compliance with all applicable performance criteria in Article XI governing: 1) native habitat preservation (Cross reference §3-11.1, 3-11.4, and 3-11.5); 2) soil erosion control and sedimentation. (Cross reference §3-11.2); 3) freshwater lens protection (Cross reference §3-11.3); flood damage prevention (Cross reference §3-11.7); and 4) protection of native vegetation (Cross reference §3-11.5).
  2. **Tree Protection.** The development plan shall satisfy performance criteria of Article XIV. The plan shall indicate location, size and type of existing trees as required, including all proposed tree removals requiring a tree removal permit pursuant to 3-14.6. The plan shall also identify existing trees to be protected and explain or illustrate method to preserve such trees during and after construction.
  3. **Landscaping Plan.** The development plan shall satisfy the performance criteria of Article XIII as well as the open space and land use screening requirements of §3-10.7 and §3-10.8. The landscaping plan shall include a scaled working drawing indicating planting specifications for landscaping, buffers, open spaces, recreation areas and other required landscaped areas which shall comply with those performance criteria included in Article XIII. The plan shall also show any environmentally sensitive areas and preservation areas, as well as those areas involving aquatic plantings.

4. **Irrigation Plan.** The development plan shall satisfy the performance criteria of § 3-11.11 and §3-13.12(C). The irrigation plan shall be prepared by a registered landscape architect, engineer or an irrigation contractor working under the supervision of a registered landscape architect or engineer and shall utilize the current techniques emphasizing design efficiency and water conservation, as well as public health, safety, and welfare as discussed in Article XIII. The minimum requirements for plan approval shall include:
  - a. Location and specifications for irrigation equipment;
  - b. Design which promotes water conservation and efficient relationship of plant types to water demanded; and
  - c. Source of water for irrigation system.
  
- F. **On- and Off-site Parking and Vehicular, Bicycle, and Pedestrian Circulation.** Development plans shall satisfy on- and off-site vehicular and bicycle circulation, and parking requirements of §3-10.5 and Article XV. Development plans shall include location, dimensions and typical construction specifications for:
  1. Existing and proposed driveways, approaches and curb cuts;
  2. Vehicular access points, accessways and common multi-modal access points with pavement markings or other improvements to achieve safe internal circulation without conflict among modes of travel;
  3. Existing and proposed vehicle and bicycle off-street parking spaces, loading, unloading and service area space requirements;
    - a. Number of employees and number and type of vehicles owned by the establishment; and
    - b. Any combined off-street parking facilities shall be submitted with an agreement specifying the nature of the arrangement, its anticipated duration, and signatures of all concerned property owners.
  4. Other vehicular use areas;
  5. Bicycle ways as well as pedestrian ways and other pedestrian use areas;
  6. Typical cross-sections, by type of improvement;
  7. Traffic control devices;
  8. Proposed parking surface material, pavement markings, and other related improvements; and
  9. Dedicated easements including cross easements, indicating their purpose, design, location, alignment, dimensions, and maintenance responsibilities.
  
- G. **Housing.**
  1. If the project includes residential development, provide a breakdown of the proposed residential units by price or rental range and type of unit (such as single-family, duplex, townhouse, mobile home).
  2. If lots are to be sold without constructed dwelling units, indicate the number and percentage of such lots and the extent of improvements to be made prior to sale.
  3. Assess the potential of the proposed development to meet local or regional housing needs. In particular, indicate any measures taken to provide low and moderate income housing.
  4. Describe hurricane evacuation considerations which acknowledge the current evacuation and emergency operations plans, how project residents will be informed about these plans, and any developer responsibilities identified in such plans.
  
- H. **Economic Resources.**
  1. Provide an analysis of the estimated average ad valorem tax yield from the proposed project during each phase of development. Indicate assumptions and standards utilized including but not limited to assessed value, exemption, millage rate.
  2. For each development phase, estimate the average annual construction expenditure by type (labor, materials) and the percentage of this expenditure which will occur within the City.
  3. For nonresidential developments, project the number of permanent employees using appropriate standard industry classifications.

**I. Special Considerations.**

1. Describe the relationship of the proposed development to city land use plans, objectives and policies. Also, indicate relationship to existing or proposed public facilities plans (such as wastewater treatment, transportation). Identify any conflicts.
2. Indicate any relationship of the project to special zoning districts (such as airport noise and hazard zones, solid or liquid waste treatment or disposal areas).
3. If applicable, assess the proposed development's impact on unincorporated Monroe County.
4. If the project fronts a shoreline, indicate measures to allow public access to the shoreline, such as easements or rights-of-way, and illustrate any structure that may impede movement along the shoreline below the mean high water line, and demonstrate measures being taken to mitigate any such impediment.
5. Indicate any special facilities that will be provided to accommodate bus ridership, i.e., bus stop, bus access lane, or other similar facilities.
6. Describe any special design features that will be utilized to reduce energy consumption. Further, describe any measures that will be taken to utilize solar energy or other alternative energy sources.
7. If the building is to be elevated, indicate by square footage the uses for the area between the bottom floor and the grade.
8. Indicate the size and nature of private and public recreation facilities provided on the site.
9. Provide proof of coordination with applicable local, regional, state and federal agencies (including Florida Department of Environmental Resources and Army Corps of Engineers) that will be involved in the project.
10. Provide evidence that any necessary permit, lease or other permission from the Florida Departments of Environmental Regulation and Natural Resources has been obtained for any activity that will impact wetland communities or submerged land.

**J. Construction Management Plan and Inspection Schedule.** In cases where the proposed development contains two or more phases and/or the project's proposed construction schedule is anticipated to exceed a period of one (1) year, the applicant shall be required to submit a construction management plan and inspection schedule as part of the development plan.

1. **Content of Construction Management Plan and Inspection Schedule.** The construction management plan shall specify the following:
  - a. The timing and phasing of construction activities, including specific benchmarks for the completion of structures accommodating the principal use(s);
  - b. A schedule of inspections which complies with the City's adopted building codes, including a program of improvements anticipated to be completed prior to each scheduled inspection;
  - c. The building permit shall not be valid for a period exceeding two (2) years and no single phase of development shall extend for a period longer than two (2) years;
  - d. The schedule shall acknowledge in writing that a new building permit must be obtained whenever:
    - i. Construction is not commenced within 90 days from the time the permit was released;
    - ii. Construction activity is dormant for a period of six (6) months or more;
    - iii. The developer fails to call for and achieve approved inspections within planned 120 day intervals as shall be evidenced in the construction schedule; and
    - iv. A new phase of a phased development is commenced.
  - e. The applicant shall acknowledge in writing that the applicant shall bear the burden of demonstrating that the construction activity is consistent with the development plan and has occurred in a timely manner consistent with the approved construction management plan and inspection schedule. The applicant shall further acknowledge that upon failure to meet the inspection schedule, the building permit shall expire. A new building permit shall be required in order to undertake construction activity on a site where a building permit has expired.

## **Attachment DCA-3**

**City of Key West Land Development Regulations**

**Article VI, Environmental Protection and  
Article VII, Surface Water Management**

## ARTICLE XII: SURFACE WATER MANAGEMENT

### SECTION 3-12.1: APPLICABILITY

The surface water management regulatory provisions herein established shall apply to all development within the City of Key West.

### SECTION 3-12.2: PURPOSE

The purpose of this surface water management policy is to protect the health, safety, and welfare of the citizens of the City of Key West; to implement those drainage objectives and policies found in the Public Facilities element of the City's Comprehensive Plan; to ensure protection of land and improvements together with natural resources through the use of responsible stormwater management and flood protection practices; to ensure replenishment of the City's surficial aquifer system and to provide a continuing usable water supply; and to ensure compliance with level of service criteria and concurrency management policies established in the Comprehensive Plan.

### SECTION 3-12.3: RULES OF CONSTRUCTION

These requirements are intended to complement regulations of the Florida Department of Environmental Protection (DEP) including but not limited to those found in the Florida Administrative Code, Chapter 17-25, "Regulation of Stormwater Discharge," and the Surface Water Management Rules of the South Florida Water Management District, all as adopted or as may be amended from time to time. Approval of a stormwater management system under these requirements shall not relieve any applicant of the necessity to obtain required permits or approvals from other state, regional, or local agencies, including specifically, but not limited to, observance of DEP permitting requirements for use of the "landward extent of waters of the State," as defined in Section 17-4.02(17), FAC. In the event of a conflict between the City regulations and State regulations, the more restrictive regulations shall prevail.

### SECTION 3-12.4: DEFINITIONS

**Adverse Impacts:** Any modifications, alterations or effects upon a feature or characteristic of water or flood prone land, which are, or potentially may be, harmful or injurious to water resources and environmentally sensitive areas, as well as human health, welfare, safety or property, or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation. The term includes secondary and cumulative as well as direct impacts.

**Alter or Alteration:** Any work beyond maintenance of the original condition including additions to an existing system, changes of any part of an existing system to capacities or locations different from those originally constructed, and changes in the rate, volume, or timing of discharges.

**Best Management Practice (BMP):** Best Management Practices for stormwater are those which meet discharge quantity and quality criteria as contained in Manual of Stormwater Management Practices, and future amendments, as prepared for Monroe County by the South Florida Regional Planning Council.

**Coastal High Hazard Area:** As defined in Rule 9J-5.903(19), FAC, the coastal high-hazard area shall encompass the evacuation zone for a category 1 hurricane as established in the regional hurricane evacuation study applicable to the City of Key West.

**Control Elevation.** The lowest elevation at which water can be released through the discharge structure.

**Detention (or to detain):** The collection and temporary storage of stormwater in such a manner as to provide for treatment through physical, chemical, or biological processes with subsequent gradual release of the stormwater to the receiving waters, in which the capacity for the specified treatment volume of stormwater is again provided within seventy-two (72) hours following a storm event. On-line detention is temporary storage along the axis of the drainage system, whereas "off-line" detention is temporary storage at a location away from the system's direct path.

**Detention, Dry.** Water storage with the bottom elevation at least one foot above the control elevation. Sumps, swales, and other minor features may be at a lower elevation.

**Detention. Wet.** Water storage with the bottom elevation lower than one foot above the control elevation of the system.

**Development Project:** Any man-made change or improvement to land which increases the amount of impervious cover or results in the change in elevation of any portion of the land or changes the existing stormwater system and flood management system. A development project shall include but shall not be limited to all projects which require site plan or subdivision approval under the City's land development regulations.

**Discharge:** The outflow of water from a project site, drainage basin or other facility.

**Drainage System (Artificial):** Any canal, ditch, culvert, dike, storm sewer or other man-made facility which tends to control the surface flow of water.

**Drainage System (Natural):** Surface streams or marshes which convey water to natural points of drainage.

**Elevation:** Height in feet expressed in relation to mean sea level and referenced to the National Geodetic Vertical Datum (NGVD).

**Filtration or to Filter:** The selective removal of suspended matter from stormwater by passing the water through suitable fine textured granular media such as porous soil, sand and gravel or other natural or artificial aggregate, which may be used in conjunction with filter fabric or underdrain pipe or both.

**Flood or Flooding:** A general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters.
- (2) The unusual and rapid accumulation of runoff of surface waters from any source.

**Flood Insurance Rate Map (FIRM):** An official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

**Flood Insurance Study:** The official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the flood boundary-floodway map and the water surface elevation of the base flood.

**Floodway:** The normal channel of a watercourse and the adjacent land areas that must remain unobstructed to convey the regulatory flood discharge without raising flood elevations above specified levels as determined in §3-12.7(D)(3)(d).

**Hydrograph:** A graph of discharge, or, for the purposes of these regulations, volume of stormwater, verses time.

**Impervious Surface:** A surface which is highly resistant to infiltration by water. It includes surfaces such as compacted sand, limestone, or clay, as well as most conventionally surfaced streets, roofs, sidewalks, porous and nonporous parking lots and other similar structures.

**Legal Positive Outfall:** Is the availability of a permanent and legally established water course or similar facility or means which has the hydraulic capability of conveying the stormwater discharge from a development project to receiving waters downstream. "Legally established water course" refers to a water course which is established by either an express easement, plat dedication, or other documentation, or implied easement or servitude as may be demonstrated to exist in accordance with Florida Law.

**Lowest Floor:** The top surface of the lowest area within the inside perimeter of the exterior walls of a building. For slab-on-grade type buildings or buildings with basements, the top surface of the slab or basement floor would constitute the lowest floor. For footing, foundation walls, or pile type buildings with crawl spaces under the building without basements, the top surface of the finished flooring above the horizontal joist, beam or other supporting member would constitute the lowest floor.

**Maintain or Maintenance:** To keep in an acceptable state of performance and repair as determined by the City Engineer. The City Engineer shall determine if the performance standards of the respective water management plans are maintained. The type and height of aquatic vegetation shall be secondary to the integrity of the water management plan.

**Mangrove Stand:** An assemblage of one or more of the following species: Black Mangrove (*Avicennia nitida*); Red Mangrove (*Rhizophora mangle*); White Mangrove (*Languncularia racemosa*); and Buttonwood (*Conocarpus erecta*).

**Master Stormwater Management Plan or Master Plan:** An engineering plan, written report, or engineering drawing outlining the primary and secondary drainage and stormwater treatment facilities needed for the proper development of a specific increment of the incorporated area of the City of Key West.

**National Geodetic Vertical Datum (NGVD):** As corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

**Regulatory Flood:** The one hundred year flood. The one hundred year flood is that flood which has, on the average, a one percent probability of being equalled or exceeded in any given year, as indicated on the official City of Key West flood hazard map.

**Retention or To Retain:** The prevention of, or to prevent the discharge of a given volume of stormwater runoff into surface waters of the State by complete on-site storage where the capacity to store the given volume of stormwater is again provided within 72 (seventy-two) hours following the storm event. The required storage volume must be provided by a decrease of stored water caused by percolation through soil, evaporation, evapotranspiration, or spray irrigation. Retention shall be "off-line" (i.e. outside of the primary drainage path), unless it is demonstrated by the applicant that water quality in the receiving waters will not be adversely impacted by "on line" retention. Wet retention refers to an area the lowest elevation of which penetrates the dry season groundwater table. Dry retention refers to an area the lowest elevation of which lies at least two (2') feet above the wet season groundwater table.

**Sediment:** Fine particulate material which is capable of gravity settlement, whether mineral or organic, and which is in suspension or has settled in a waterbody.

**Stormwater and Flood Management System:** A system of natural or artificial waterbodies or watercourses which stores, conveys and/or treats water. The system generally includes a dam, impoundment, reservoir, inlet, pipe, swale, ditch, appurtenant work or works, or a combination thereof, that is intended to provide drainage, water storage conveyance, prevent or impair inundation, or other water management capabilities in and for a discrete area or a work that traverses waters in the City of Key West. A system may be designed and constructed in phases.

**Water:** All water on or beneath the surface of the ground including natural or artificial water courses, lakes, ponds, or diffused surface water and water standing, percolating or flowing beneath the surface of the ground, as well as all coastal waters within the City of Key West.

**Waterbody:** Any natural or artificial pond, lake, reservoir or other area which ordinarily or intermittently contains water and which has a discernible shoreline.

**Watercourse:** Any natural or artificial channel, ditch, canal, stream, river, creek, waterway or wetland which flows either continuously or intermittently, and which has a definite channel, bed, banks or other discernible boundary.

**Watershed:** A drainage area or drainage basin contributing to the flow of water directly or indirectly into receiving waters.

**Wetland:** Wetlands shall be defined based on hydrology as well as hydric soil and wetland vegetation. Wetlands shall include transitional wetlands and shall include those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do, or would support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The following vegetative species are wetland species commonly found in the City of Key West, although the applicable State and federal list of jurisdictional wetland vegetation shall apply:

<u>Common Name of Wetland Species</u>	<u>Specific Name</u>
Black Mangrove	Avicennia germinas
White Mangrove	Laguncularia racemosa
Red Mangrove	Rhizophora mangle
Buttonwood	Conocarpus erectus
Saltwort	Batis maritima
Glasswort	Salicornia spp.
Sea Purslane	Sesuvium portulacastrum
Sea Blite	Suaeda linearis
Sea Oxeye Daisy	Borrchia spp.
Salt Grass	Distichlis spicata
Dropseed	Sporobolus virginicus
Key Grass	Monanthochloe
Fringe-Rushes	Fimbristylis spp.
Cordgrass	Spartina spartanæ
Sawgrass	Cladium jamaicense
Spike Rush	Eleocharis cellulosa
Cattail	Typha spp.

Wetland jurisdictional determinations shall be consistent with those of the DEP, SFWMD, and the U.S. Army Corps of Engineers.

#### SECTION 3-12.5: PROHIBITED ACTIVITY

1. It shall be illegal and subject to the penalties provided herein for any person to construct, or arrange for, authorize, or participate in the construction of a development project within the unincorporated area of the City of Key West without first obtaining a valid permit to construct either a stormwater management system (hereinafter referred to as a Type A Permit) or a flood protection-stormwater management system, when applicable, (hereinafter referred to as Type B Permit) pursuant to this ordinance.
2. It shall be illegal and subject to the penalties provided herein for any person to construct any structure in such a manner as to impede the functioning of a drainage system that is: 1) publicly maintained or 2) located on private property and is a part of a drainage system serving more than one owner when such system is located in an easement which exists for the benefit of other land owners. Notwithstanding, this regulation shall also apply to natural tributaries for which no designated easement exists. A structure which meets the requirements of the City of Key West Standard Specifications for the construction of public facilities and physical improvements shall not impede the functioning of the drainage system.

#### SECTION 3-12.6: EXEMPTIONS

The following activities shall be exempt from the surface water management permitting requirements herein established:

1. Bona fide agricultural uses except when an artificial drainage system will be used to increase the flow of surface water from the applicant's land to a City maintained drainage system, or when the particular agricultural use requires site plan approval.
2. Maintenance work performed on existing mosquito control canals or impoundment areas.
3. Any maintenance, alteration, renewal, repair, use or improvement of an existing structure or the construction of any structure or modification thereto which does not create an impervious surface exceeding five hundred (500) square feet. This provision shall not exempt the applicant from retaining the first one inch of rainfall on-site as required by Chapter 17-25 of the Florida Administrative Code.
4. A change to any part of an existing drainage system without changing the flow characteristics of the artificial water course.

5. All activities by a water management district, drainage district, or water control district established under the laws of the State of Florida and all activities undertaken by the State of Florida.
6. These surface water management policies shall not be construed to prevent the doing of any act otherwise lawful and necessary to prevent material harm to or destruction of real or personal property as a result of a present emergency, including but not limited to fire, infestation by pests, or hazards resulting from violent storms or hurricanes or when the property is in eminent peril and the necessity of obtaining a permit is impractical and would cause undue hardship in the protection of the property.

A report of any such emergency action shall be made to the City Engineer by the owner or person in control of the property upon which emergency action was taken as soon as practicable, but not more than ten (10) days following such action. Remedial action may be required by the City Engineer subject to appeal to the City Commission in the event of dispute.

#### SECTION 3-12.7: SURFACE WATER MANAGEMENT REVIEW CRITERIA FOR ALL DEVELOPMENT PROJECTS

All developments not exempted pursuant to Section 3-12.6 are required to obtain a Type A Permit. No Type A Permit to construct a development project shall be issued unless the following criteria are met:

- A. **Water Quality Criteria.** All new surface water management systems will be evaluated based on the ability of the system to prevent degradation of receiving waters and the ability to conform to state water quality standards established in Chapter 17-302, FAC. Developments which plan to utilize Outstanding Florida Waters for discharge of stormwater will be given more detailed evaluation by the City staff. The following criteria shall be met:
  1. **Discharge.** Projects shall be designed so that discharges will meet state water quality standards, as set forth in Chapter 17-3, FAC.
  2. **Retention/Detention Criteria.** The first flush of runoff contains the majority of pollutants. As a minimum, the amount of water to be treated in a stormwater management system shall be equal to the first inch of runoff or 2.5 inches times the percent of impervious coverage. Commercial or industrial projects shall provide at least one-half inch of dry detention or retention pretreatment as part of the required retention/detention.

Systems with inlets in grassed areas will be credited with up to 20% of the required wet detention amount for the contributing areas. Full credit will be based on a ratio of 10:1 pervious area runoff to impervious areas with proportional credit granted for greater ratios. Grassed areas must be permanently protected from vehicular use and structural encroachment.

Projects having greater than 40% impervious area which discharge directly to sensitive receiving water shall provide dry detention or retention pretreatment equal to 50% of the total required depending on the arrangement of on-site facilities. Sensitive receiving waters are defined as:

- a. Class I or Class II waters;
- b. Class III, Outstanding Florida Waters;
- c. Canals connecting with these waters.

Water surfaces can be deducted from site areas for water quality previous/imperious calculations.

3. **Master Drainage Plan for Subdivisions.** Projects to be subdivided for sale are required to have installed by the permittee, as a minimum, a stormwater management system which provides for a master stormwater collection and conveyance system to interconnect the retention/detention system with the outfall, with access points to the system available to each individual lot or tract. The systems shall be sized to limit discharge under design conditions to the allowable discharge. Projects permitted in such a manner may require deed restrictions which identify to lot or tract purchasers the amount of additional on-site stormwater management necessary to provide flood protection for specific design events and any additional retention/detention required for water quality proposed.

- B. **Water Quantity Criteria.** All new stormwater management systems will be evaluated on the ability of the system to prevent flooding of on-site structures, adjacent properties, roads, and road right-of-ways based upon antecedent rainfall conditions. The following criteria shall be met:
1. **Discharge.** Off-site discharge is limited to amounts which will not cause adverse off-site impacts. These amounts are:
    - a. Historic discharges based on natural site drainage patterns, or
    - b. Amounts determined in previous South Florida Water Management District or Monroe County permit actions.
  2. **Drainage and Flood Protection Criteria.** The surface water management system shall be designed using a 24 hour rainfall duration and 25-year return frequency in computing allowable off-site discharge rate. The applicant shall also provide data indicating the effect of a 25 year 72 hour storm on the development project as proposed. If the more intense storm event will cause drainage problems for the proposed surface water management system, than City Staff shall require the surface water management system to be designed for the 25 year 72 hour storm event instead of the 25 year 24 hour storm event. Flood protection and floodplain encroachment standards shall be those established in this ordinance. If post-development conditions are such that a volume greater than the retention and/or detention volume required for stormwater management is already being retained on-site that condition will be maintained.
- C. **Construction Criteria.** Construction of all new stormwater management systems shall meet the following criteria:
1. **Discharge Structures.** Discharge structures shall comply with the following:
    - a. All design discharges from the site shall be made through and controlled by structural discharge facilities. Earth berms shall be used only to disperse or collect sheet flows from or to ditches, swales, or other water channels, served by discharge structures.
    - b. Discharge structures shall be constructed so that they are stationary.
    - c. Discharge structures shall include gratings for safety and maintenance purposes. Removal of trash is mandatory if the stormwater management system discharges into surface waters and/or Outstanding Florida Waters.
    - d. Discharge structures shall include a method which would allow discharge from the middle of the water column and shall include a cleanable jump area for the sediment removal. Discharge structures for areas with greater than fifty percent impervious area or systems with inlets in paved areas shall include a baffle, skimmer, or other mechanism suitable for preventing oil and grease from passing through the structure.
    - e. Direct discharges, such as through culverts, storm drains, or weir structures, will normally be allowed to receive waters, which by virtue of their large capacities and configuration, are easily able to absorb concentrated discharges. Such receiving waters might include existing storm sewer systems and man-made ditches, canals, the bay, channels, and the ocean.
    - f. Indirect discharges, such as overflow and spreader swales, are required where the receiving water or its adjacent supporting ecosystem might be degraded by a direct discharge. The discharge structure would therefore discharge into the overflow, spreader swale, or other channel, which in turn would release water to the actual receiving water. Such receiving waters might include marshes, wetlands, salt marshes, and land naturally receiving overland sheetflow.
  2. **Dry Retention/Retention Areas (not applicable to natural or mitigation wetland areas).** All dry retention/detention areas shall comply with the following criteria:
    - a. Dry retention/detention areas shall allow for the return of the groundwater level in the area to the control elevation.
    - b. On-site mosquito control ditches or other appropriate features for such purposes, shall be incorporated into the design of dry retention/detention areas.
    - c. The design of dry retention/detention areas shall incorporate considerations for regular maintenance and vegetation harvesting procedures.
  3. **Wet Retention/Retention Areas.**
    - a. **Dimensional Criteria (as measured at or from the control elevation).**
      - Depth - a minimum of twenty percent (20%) of the area shallower than six (6) feet is required.

- Side Slopes - for purposes of public safety, water quality enhancement and maintenance, all wet retention/detention areas should have side slopes no steeper than 4:1 (horizontal:vertical) out to a depth of two (2) feet below the control elevation, or an equivalent substrate. Side slopes should be top soiled, nurtured or planted from two (2) feet below to one (1) foot above control elevation to promote vegetation growth (Reference Appendix XVI-A Recommended Plant Material for suitable plant selection).
- b. **Support Facility Design Criteria.** Perimeter maintenance and operation easements of twenty (20) foot (minimum preferable) width at slopes no steeper than 4:1 (horizontal:vertical) should be provided beyond the control elevation water line. Control elevations must be set so as not to cause flooding in roadways and protect road subgrades.
4. **Impervious Areas.** Runoff shall be discharged from impervious surfaces through retention areas, detention devices, filtering and cleansing devices, and/or subjected to Best Management Practice (BMP) prior to discharge from the project site. In projects which include substantial paved areas, such as shopping centers, large highway intersections with frequently stopped traffic, and high density developments, provisions shall be made for the removal of oil, grease, and sediment from stormwater prior to discharge into the receiving waters of watercourse.
  5. **Stagnant Water Conditions.** Configurations which create stagnant water conditions shall not be allowed.
  6. **Disposition of Stormwater Runoff.** The stormwater management system for developments located predominately on excessively drained soils should maximize stormwater infiltration. This shall be accomplished through the use of infiltration or exfiltration facilities, grading to retard runoff, natural or artificial retention or detention basins, or other methods depending on the characteristics of the land area. Specific guidelines are as follows:
    - a. Areas and lots shall be developed to maximize the amount of natural rainfall which is percolated into the soil and to minimize direct overland runoff into adjoining streets and water courses. Stormwater runoff from roofs and other impervious surfaces should be diverted into swales, or terraces on the lot.
    - b. Street drainage shall be by grassed swales or curb and gutter in accordance with City specifications, provided all curb and gutter systems shall discharge or direct water into a best management practice. Whenever practical, as indicated by soil characteristics, water table elevation, and topography, the overflow from any swale used shall be diverted to percolation areas, ponding areas or natural or artificial seepage basins of sufficient capacity to retain and provide for the maximum infiltration of stormwater runoff from each drainage area for the 25 year, 24 hour storm. Except in those development projects where temporary ponding is allowable pursuant to Section 3-12.7(C)(10), each percolation or retention area shall include positive drainage facilities which provide for drainage to public outfalls or a lake, or water course, to handle the runoff from storms of longer duration and severity than the 25 year, 24 hour storm. The area surrounding these retention or detention basins is recommended to be used as public or private open space and shall be grassed.
  7. **Material Specifications for Culverts and Storm Sewers.** The following pipe materials are acceptable:
    - a. Reinforced concrete pipe; bituminous coated, corrugated steel pipe; aluminum pipe; aluminum pipe arch; bituminous coated structural plate steel pipe; and bituminous coated steel pipe arch. PVC pipe shall be acceptable only for installations in a privately maintained system and only if it is comprised of an appropriate wall thickness for the intended use.
    - b. Workmanship and pipe materials shall conform to Florida Department of Transportation (FDOT) Standard Specifications, latest edition.
    - c. Only concrete and aluminum pipes shall be used under public right-of-way pavement and/or into salt water outfalls. Concrete for reinforced concrete box culverts shall conform to FDOT's Standard Specifications, latest edition.
  8. **Inlets.** Design and spacing of inlets shall be in accordance with FDOT's Standard Specifications or the City of Key West Standard Specifications. These standards shall be prepared by the City Engineer and shall be adopted by resolution of the City Commission.
  9. **Drainage Structures.** All cross drains and storm sewers shall have headwalls, flared-end sections, mitered end sections or terminating structures in accordance with City Standard Specifications or FDOT's Specifications. Endwalls, inlets, or other appropriate terminating and intermediate structures, and backflow devices may be required where necessary.

10. **Control of Temporary ponding.** Temporary ponding is allowable in areas specifically designed with high percolation rates so that ponding does not last more than eight (8) hours. The height of allowable ponding shall not exceed one quarter of the distance between the ground and the lowest floor.
  11. **Facilities Impacting Roads.** Materials used in drainage facilities which cross, traverse, or encroach major roads as depicted on the City of Key West Thoroughfare Plan shall be designed in accordance with FDOT standards.
  12. **Water Management Tracts.** All stormwater facilities shall be established in dedicated water management tracts, easements, or specified common areas. Condominium documents, deed restrictions, or other legally binding instruments shall describe the location of such areas, specifically define the mechanism for preservation and maintenance of any private drainage systems, and shall appoint an entity responsible for maintenance and preservation. All water management tracts shall include a maintenance berm, the top of which may be level or have a slope not steeper than an eight (8) foot horizontal to one (1) foot vertical slope. In addition such facilities, as well as open channels and ponds, shall have an easement for access to and around the perimeter for maintenance. Retention or detention facilities shall be graded to slopes not steeper than four (4) foot horizontal to one (1) foot vertical above the conservation elevation and shall be graded to slopes not steeper than three (3) foot horizontal to one (1) foot vertical below the conservation elevation. Dry retention slopes and wet retention slopes above the designed low water elevation shall be grassed or otherwise stabilized.
  13. **Watershed Areas.** In watershed areas where the City has an adopted Master Stormwater Management Plan, all proposed facilities shall be in conformance with the adopted plan.
  14. **Impacts on Drainage Districts.** Stormwater systems connected to any local, regional, or State drainage district system shall be designed with consideration given to the capacity of the overall system and shall be compatible with the objectives of each respective jurisdiction.
- D. **Other Criteria.** All new surface water management systems shall comply with the following general criteria:
1. Rainfall runoff from roads, parking lots, roofs, and other impervious surfaces shall be directed to areas where percolation into the soil can be accomplished prior to introduction into any off-site receiving facilities. Pervious areas on-line shall be covered with grass or suitable ground cover which has effective filtering characteristics. Where pervious or grassed areas are not available, runoff from impervious surfaces should be directed into some other kind of stormwater best management practice for pretreatment prior to discharging into a watercourse.
  2. The stormwater management system shall handle all stormwater that flows into, through and from the project without creating adverse impacts on other lands served by the stormwater management system or by the receiving waters relative to flooding, erosion hazards, or water quality and quantity.
  3. The applicant will demonstrate that the development project is not in a flood hazard zone. Flood hazard zones are identified under the following procedure:
    - a. A flood hazard zone shall encompass all lands subject to inundation by the regulatory flood, including lands in a critical flood zone or coastal high hazard zone.
    - b. A critical flood zone shall encompass:
      - Lands subject to inundation by a ten (10) year flood, i.e., the flood that has a ten (10%) percent probability of being equaled or exceeded in any given year;
      - Wetlands, watercourses and waterbodies;
      - Floodways (see "d" below);
      - Isolated topographic depressions with a history of flooding or a high potential for flooding.
    - c. A coastal high hazard zone is defined in Section 3-12.4 of this Article.
    - d. A floodway shall include the normal channel of a watercourse and adjacent lands that must remain unobstructed to convey the regulatory flood discharge without causing flood elevations to rise along any stretch of the watercourse above a specified permissible increase known as the floodway surcharge.

The floodway surcharge shall be established, considering both existing and potential development, at a level that avoids an increase in potential flood damage. The floodway surcharge may be increased; however, if an applicant wishes to construct some additional obstruction, flowage easements must first be obtained from the owners of all land that would be affected by increased levels. In no case, however, may a floodway surcharge exceed one foot. The floodway shall normally be calculated assuming equal encroachment on the floodplain from both sides of the watercourse, unless legally enforceable deed restrictions, limiting development rights, as recorded for the lands needed for the floodway.

- e. "Flood hazard zones", "critical flood zones", "coastal high hazard zones", and flood elevation data has been identified through flood hazard studies and delineated on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM). A copy of these maps are on file in the City Planning Office.

### SECTION 3-12.8: ADDITIONAL STORMWATER MANAGEMENT POLICY FOR FLOOD HAZARD ZONES (TYPE B PERMIT REQUIREMENTS)

When a development project is determined to be within a flood hazard zone according to the procedure set forth in Section 3-12.7(D)(3)(a-e), a Type B Permit shall be required and the project shall be reviewed under the criteria of Section 3-12.7 and must meet the following additional criteria:

1. An equal volume of storage capacity must be created for any volume of the regulatory flood that would be displaced by fill or structures, excepting storm surge flood areas along the Atlantic Ocean, Gulf of Mexico, or other tidal influenced waters.
2. The mean and peak velocity of the regulatory flood must not be adversely altered on any watercourse.
3. All structures, including buried storage tanks, must be anchored as necessary to resist flotation, lateral forces and the impact of floating debris.
4. No development will be allowed that poses a significant threat of releasing harmful quantities of pollutants to surface waters or groundwaters during flooding.
5. The flood protection elevation shall be set for each project at the elevation of the regulatory flood plus one (1) foot. In "coastal high hazard zones", the flood protection elevation shall be established with consideration given to wind-drive wave action.
6. Residential buildings must have the lowest floor elevated to the flood protection elevation for that site.
7. Industrial, commercial or other non-residential buildings must have the lowest floor elevated to the flood protection elevation or be flood-proofed as follows:
  - a. A Florida registered professional engineer or architect must certify that the building has been designed and constructed so that below the flood protection elevation, the structure and attendant utility facilities are watertight and capable of resisting the effects of the regulatory flood. The design must take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effect of buoyancy, and impacts from debris.
  - b. All flood-proofing improvements and related devices must function without human intervention and without an outside source of electricity.
8. Accessory buildings may be constructed below the flood protection elevation provided there is a minimal potential for significant damage by flooding.
9. Sewage collection and treatment systems and potable water supply systems must be designed and located to prevent inflow or contamination of surface waters up to the flood protection elevation. Electrical and communication utilities must be designed to avoid flood damage up to the flood protection elevation.
10. Mobile homes must be anchored, tied down and blocked in accordance with the standards of Section 15C-1.10. FAC. Mobile homes must not be installed in a floodway or "coastal high hazard zone".
11. If any lot in a residential subdivision lies within a flood hazard zone, then the following additional standards apply to approval of the plat:

- a. Each lot must include a site suitable for constructing a residential building in conformity with the standards of this ordinance.
- b. One or more elevation benchmarks must be established and indicated on the plat. Said elevations must be referenced to the NGVD (1929) and shall be calculated to within 0.1 feet.
- c. All prospective agreements for deeds, purchase agreements, leases, or other contracts for sale or exchange of lots within the flood hazard zone and all prospective instruments conveying title to lots within the flood hazard zone must carry the following flood hazard warning prominently displayed on the document:

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### FLOOD HAZARD WARNING

"This property may be subject to flooding. You should contact local building and zoning officials and obtain the latest information regarding flood elevations and restrictions on development before making plans for the use of this property."

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12. All roads shall be set at or above the ten-year flood elevation, but in no case shall a road be constructed at an elevation below five (5) feet above sea level. All roads shall be designed to maintain drainage flow beneath the road bed so that equalization may occur.
13. If the development project is in a critical flood zone, it must be demonstrated, in addition to compliance with Section 3-12.7(A through D), that:
  - a. The elevation or mean and peak velocity of the regulatory flood will not be increased as a result of any obstruction or displacement of flood waters.
  - b. There is no significant threat of releasing quantities of pollutants which have the effect of degrading water quality below standards established in Florida Administrative Code Chapter 17-3, as amended from time to time, to surface or groundwater during the regulatory flood.
  - c. The capacity of the critical flood zone to store and convey surface waters or perform other significant water management functions will not be impaired.
14. If the development project is in a coastal high hazard zone, it must be demonstrated, in addition to compliance with the Section that:
  - a. All buildings or structures shall be elevated so that the lowest horizontal supporting member is located no lower than the flood protection elevation, with all space below the lowest horizontal supporting member open so as not to impede the flow of water. Such space shall not be used for human habitation nor enclosed in the future. Lattice work or decorative screening may be constructed below the flood protection elevation provided it is not part of the structural support of the building and is designed so as to breakaway, under abnormally high tides or wave action, without damage to the structural integrity of the building. Solid walls will not be allowed. Only wood or mesh screening may be used.
  - b. Pilings or columns used as structural supports are designed and anchored to withstand all applied loads of the regulatory flood including velocity flow and hurricane wave wash. Fill must not be used as structural support. Compliance with these provisions must be certified by a Florida registered Professional Engineer.
  - c. Mangrove stands are not altered so as to increase potential flood damage.

### SECTION 3-12.9: REQUIRED INFORMATION FOR A TYPE A SURFACE WATER MANAGEMENT PERMIT APPLICATION

A detailed description and drawing (scale 1"=50' or larger) of the proposed stormwater management system shall be submitted to the City Engineer by a Florida registered engineer. The following information shall be required:

1. Hydrologic data including design rainfall, project drainage area, tributary off-site drainage area, existing and proposed land cover and soil characteristics relevant to the infiltration capacity of the soil including depth to seasonal high water table. Soil borings at four hundred (400') feet spacing to a depth of six (6') feet shall be provided. Alternate representative soil profiles may be used if approved in writing by the City Engineer and if demonstrated to be from a reliable and generally recognized source. A one-half (0.5) foot interval contour topographic map of development area including off-site area of sufficient size to indicate the general neighboring elevations. The delineation of the latter area shall be satisfactory to the City Engineer.

2. Hydrologic calculations for determining existing and proposed stormwater runoff.
3. Hydraulic data including receiving water stages, stage-storage and stage-discharge data for proposed retention and/or detention facilities, and percolation test data which follow a standardized percolation methodology approved by the City Engineer.
4. Hydraulic calculations for sizing channels, culverts, inlets, retention/detention ponds, pond discharge structures, and determining discharge rates and maximum water surface elevations.
5. Erosion and sedimentation control plans, during and after construction.
6. Statement of all assumptions and reference sources used in the conduct of the study.
7. A certificate from a professional engineer licensed in the State of Florida that the soils are suitable and proper for the uses and purposes of the proposed development; or submission of a plan calling for the removal and replacement of unsatisfactory soils. If the applicant submits a plan for removal and replacement of soils, the applicant shall submit a certificate from a professional engineer after the removal and replacement of soils has been completed, stating the new soils are suitable and proper for the uses and purposes of the proposed development. Such certificate shall be furnished to the City Engineer prior to the issuance of a certificate of completion.
8. Where percolation is proposed, at least one boring per basin shall be submitted. Said borings shall be to a depth of twenty (20) feet below the invert of the basin or to a depth sufficient to locate the groundwater table or impervious soil layer.
9. A general description of the manner in which the stormwater management system is to be maintained, indicating who or what entity shall be responsible and by what method the responsibility shall be created and documented.
10. A list of all agencies (State, Federal or local) having permit jurisdiction for the project.
11. Type B Permit and Type C Permit - In addition to the information required for Type A Permits in Section 3-12.9(1-10), an applicant for a Type B Permit shall submit to the City Building Department the information described below.

A single-family dwelling or duplex located within a flood hazard zone shall require a Type C Permit. Applicants for a Type C Permit shall submit the information described Section 3-12.9(5) and (10), together with the information below:

- a. Elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures.
- b. Elevation in relation to mean sea level to which any non-residential structure will be flood-proofed.
- c. Provide a certificate from a Florida registered professional engineer or architect that the non-residential flood-proofed structure meets the flood-proofing criteria in Section 3-12.8 (7)(a-b).
- d. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

#### **SECTION 3-12.10: REQUIRED INFORMATION TO BE SUBMITTED BY TYPE B PERMIT APPLICATIONS AFTER ISSUANCE OF PERMIT**

Applicants receiving Type B Permits shall provide to the City Engineer a flood elevation or flood-proofing certification after the lowest floor is completed, or in instances where the structure is in a "coastal high hazard area", after placement of the horizontal structural members of the lowest floor. Within twenty-one (21) calendar days of establishment of the lowest floor elevation, or flood-proofing by whatever construction means, or upon placement of the horizontal structural members of the lowest floor, whichever is applicable, it shall be the duty of the permit holder to submit to the City Engineer, a certification of the elevation of the lowest floor, flood-proofed elevation, or the elevation of the lowest portion of the horizontal structural members of the lowest floor, whichever is applicable, as built, in relation to mean sea level based on National Geodetic Vertical Datum. Said certification shall be prepared by, or under the direct supervision of, a Florida registered land surveyor or professional engineer and shall be certified by that Florida register surveyor or professional engineer.

When flood-proofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work done within the twenty-one (21) calendar day period and prior to submission of the certification shall be at the permit holder's risk. The City Engineer shall review the flood elevation survey data submitted and shall respond promptly as to any deficiencies noted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being permitted to proceed. Failure to submit the survey, or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.

#### SECTION 3-12.11: SURFACE WATER MANAGEMENT PERMIT APPLICATION AND REVIEW PROCEDURES

- A. **Preliminary Permit Application.** Any person in doubt as to whether a proposed activity requires a permit under this section may request a review by the City Engineer upon completion of a preliminary application form supplied by the City Clerk. No fee may be charged for the preliminary application pursuant to City Commission resolution. The preliminary application form shall be filed by the owner/applicant and shall contain the following elements: 1) A location map; and 2) A statement and sketch expressing the intent and scope of the proposed project. The completed preliminary application shall be submitted to the City Engineer for review. Within ten (10) working days after submission of the complete preliminary application, the City Engineer will notify the applicant that either the project is approved, is exempt, or a formal permit application must be filed for the project.
- B. **Review Procedures for Type A or B Permit Applications.** If a Type A or Type B Permit is required for the project, the applicant shall furnish all required stormwater management information, together with flood protection information, if applicable, to the City Engineer on forms furnished by the City Clerk. The requirements of the surface water management policies shall be administered during the site plan review processes (see Article XVIII) if the project requires site plan review. If the applicant is subdividing, then administrative provisions for administrating subdivision review shall apply.
- C. **Review Procedures for Type C Permit Applications.** If a Type C Permit is required for the project, the applicant shall furnish all necessary flood protection information to the City Engineer on forms furnished by the City Clerk. The application shall be reviewed by the City Engineer within ten (10) working days of receipt of the application. The City Engineer's recommendation shall be submitted to the Planning Board for approval. The decision of the Planning Board may be appealed to the City Commission pursuant to procedures cited in the Administrative Procedures of this Code. In reviewing such permit application, the Planning Board, and the City Commission in appeal cases, shall consider the recommendations of the City Engineer as well as criteria cited herein and the applicant's plan and supportive data. No development shall be approved if such development will result in an increase in the elevation of the regulatory flood, additional threats to public safety, extraordinary public expense, nuisance impacts, or violation of the public interest, or local ordinance. A fee schedule may be established by resolution of the City Commission.

#### SECTION 3-12.12: ALTERNATIVE METHOD: GRAVITY INJECTION WELLS

The City Engineer may, where appropriate, require the use of gravity injection wells for stormwater management instead of the requirements set forth in this Article. Gravity injection wells offer an important benefit because they reduce the discharge of stormwater directly to economically valuable and environmentally sensitive coastal receiving waters. At a minimum gravity injection wells shall meet the following criteria:

- A. **Baffle Box and Pre-Treatment.** All gravity injection wells shall have a baffle box in order to capture sediment and floatable material from stormwater flows. The baffle box shall meet all design standards established by the City Engineer. Where possible, stormwater shall be pre-treated through swales and/or ponds, in conjunction with the baffle box, prior to entering the gravity injection well. All pre-treatment shall meet South Florida Water Management District standards.
- B. **Gravity Injection Wells.** All gravity injection wells within Key West shall be 90' to 100' in depth and the first sixty (60) feet below the surface shall be cased. The casing material shall be approved by the City Engineer. The remaining thirty (30) feet or more shall be open to allow for exfiltration of the stormwater. The width of the gravity injection well shall depend on the amount of stormwater to be managed.

- C. **Permitting of Gravity Injection Wells.** All permits for gravity injection wells shall be approved by the Florida Department of Environmental Protection (DEP) and the City Engineer. The City shall not approve any development plan utilizing an gravity injection well unless documentation showing DEP's authorization is submitted to the City Engineer.
- D. **Maintenance of Gravity Injection Wells.** All development plans using a gravity injection well and baffle box shall include an agreement acceptable to the City Engineer for perpetual maintenance by the owner or successor in ownership.

### SECTION 3-12.13: ADMINISTRATIVE DUTIES

- A. **Stormwater Management Duties of the City Engineer.** The City Engineer shall perform the following specific duties:
1. **Render Professional Determinations.** Make all professional engineering determinations required with respect to analysis of any given application.
  2. **Provide Recommendation on Any Modifications.** Recommend appropriate courses of action regarding any requested changes or amendments to an approved stormwater management plan.
  3. **Provide Necessary Information.** Provide courtesy notice as to the general description and location of newly constructed wet or dry retention facilities to special districts or political entities as may be appropriate.
  4. **Certificates of Completion.** After the completion of a project, require as-built plans from the owner or applicant and a Certificate of Completion from the Engineer of Record.
  5. **Maintenance Recommendations.** Any surface water management improvements required by this ordinance shall be maintained by the owner, successor owners, or an entity designated by the owner, except that the City Engineer may recommend that the City Commission accept certain drainage facilities or systems for City maintenance. The selection of critical areas or structures to be maintained by the City shall be recommended to the City Commission by the City Engineer. All areas or structures to be maintained by the City must be dedicated to the City by plat or separate instrument and expressly accepted by the City Commission. For any system which is to be maintained by the applicant or entity succeeding in ownership other than the City, easements shall be established which permit the City to inspect and if necessary, as determined by the City, to take corrective action should the entity fail to properly maintain the system. Such easements shall also establish a right of entry as may be necessary for special purposes as directed by State laws or as may be duly determined by the City. Should the applicant or entity succeeding in ownership fail to properly maintain a system as required, the City Engineer shall give the applicant or entity succeeding in ownership written notice of the nature of the corrective action necessary. Should the applicant or entity succeeding in ownership fail, within thirty (30) days from the date of the notice to take, or commence taking, corrective action to the satisfaction of the City Engineer, the City may enter upon lands, take corrective action and the cost of such corrective action shall become a lien on the property benefited.
- B. **Flood Protection Management.** The City Engineer or other designated City official shall have authority to administer this ordinance, and shall perform the following specific duties:
1. **Determine Adequacy of Information.** Determine any additional information that must be submitted for flood management review.
  2. **Determine Completeness of Applications and Evaluation.** Review applications for compliance with the standards of surface water management policies of this section after input from the administrative staff and the City Attorney as to those matters within their professional disciplines; and either approve, approve with conditions, or deny the application based on that review. If application approval is denied, the City Engineer shall state the reasons for denial.
  3. **Filing of Building Plans.** The Building Official shall maintain a record of the actual, "as built" elevation or flood-proofing of all buildings constructed after flood management review.
  4. **Coordinating Review Functions.** Coordinate the review with other permitting agencies, if necessary.

## **Attachment DCA-4**

**Correspondence to Assistant Secretary Steve Pieffer dated June 1, 1998  
and  
Email Response from DCA staff Michael McDaniel dated June 9, 1998**



BERMELLO-AJAMIL  
& PARTNERS-INC

ARCHITECTURE • ENGINEERING • PLANNING • INTERIOR DESIGN • LANDSCAPE ARCHITECTURE

## Memorandum

To: Steven Pfeiffer

From: Amy Kimball 

Date: June 1, 1998

Subject: **Key West Military Base Reuse Plan**  
**Outstanding Chapter 288 Issues**

The following outlines outstanding issues pertaining to the Key West Base Reuse Plan.

1. A DCA coordination team for the project which will remain constant and that has the background to address the issues definitively is needed.
2. The draft Chapter 288 schedule shows adoption of the Comprehensive Plan amendments and implementing land development regulations by separate ordinance at the same hearing (see attached). However, the LDRs may not be found not in compliance because the comprehensive plan amendments will not be in compliance at the time the LDRs are reviewed. Monroe County used a process which allowed adoption of the amendments and LDRs at the same hearing with an understanding that the LDRs would not be transmitted for review until after the amendments were approved (see Charles Pattison's letter dated February 2, 1998); would a similar process be appropriate for Key West? Streamlined adoption of the amendments and LDRs is critical to the city, in order to ensure that the sites can be used as soon as possible to meet critical affordable housing demand.
3. The schedule also assumes that the Area of Critical State Concern review for both the amendments and LDRs would occur at the same time after the adoption hearing. Review of the schedule in light of both the Chapter 288 and Chapter 380 requirements would be helpful.
4. The City of Key West Evaluation and Appraisal Report has not been adopted per the schedule in the rule; apparently, when the EAR is late other comprehensive plan amendments are not allowed. How will this affect the Chapter 288 plan, which requires amendments to the Comprehensive Plan? Would exemptions from this requirement that apply to DRIs also apply to the Chapter 288 plan?
5. The DCA made a verbal commitment to "vest" the housing units in the Poinciana Housing Parcel from the Building Permit Allocation System, so long as those units are used as affordable housing. The actual mechanism for "vesting" the units is unclear, perhaps because the vesting is more of a policy decision than a technical decision. How should the Chapter 288 plan address housing and ensure that the DCA commitment is realized?

**Memorandum**

**June 1, 1998**

**Page 2**

6. The base reuse sites are at a master planning level in the planning process. As such, facility demand and generation rates were calculated in the federal-level Base Reuse Plan. Actual demand and generation will vary depending upon the development plans for the sites; those plans will evolve at a later date. Given the level of detail available at this point in the planning process, what type of information will be required in the Chapter 288 plan and the subsequent Chapter 380 review?
  
7. The Chapter 288 planning area includes a deep water harbor which will be used to expand the city's existing port facility. To what extent can or should the Chapter 288 port master plan incorporate existing port facilities which are outside the base reuse boundaries? In addition, are other mechanisms appropriate to the Chapter 288 process (such as the port DRI exemption or master plan-based agreement) appropriate for all or part of the port facility?

Thank you for your assistance on this important project. Please call me with any questions and comments.

**End of Memorandum**

Attachment (draft schedule)

xc: Mike McDaniel, DCA  
Alan Woolwich, DCA  
Bill Harrison, City of Key West LRA  
Rob Curtis, B&A  
File Number 9827.000

**City of Key West  
Military Base Reuse Plan  
Chapter 288 Plan and Implementing Land Development Regulations  
Draft Schedule  
(Revised 5/18/98)**

<b>May 18, 1998</b>	Kick-off public workshop
July 10, 1998	Complete drafts of Comprehensive Plan and Land Development Regulation (LDR) amendments
<b>Week of July 20, 1998</b>	<b>Second public workshop</b>
August 13, 1998	Submit material for Planning Board Hearing
<b>August 20, 1998</b>	<b>Planning Board Hearing</b>
August 24, 1998	Submit material to Local Redevelopment Authority (LRA) Director for agenda meeting for the September 1, 1998, City of Key West City Commission (KWCC)/LRA hearing
<b>September 1, 1998</b>	<b>KWCC/LRA Transmittal Hearing</b>
September 23, 1998	Proposed plan and LDRs transmitted to DCA, etc.* (Note: in order to keep the following schedule, DCA should receive the documents by next day delivery)
November 25, 1998	Agencies comments to Key West *
<b>Week of December 7, 1998</b>	<b>Possible third public workshop</b>
December 28, 1998	Submit revised plan and LDRs to LRA Director for agenda meeting for January 5, 1999, KWCC/LRA hearing
<b>January 5, 1999</b>	<b>First KWCC/LRA public hearing *</b>
<b>January 19, 1999</b>	<b>Second public hearing to adopt plan and LDRs *</b>

\* per City of Key West/DCA Agreement

Author: Mike McDaniel <Mike.McDaniel@dca.state.fl.us> at Int .net

Date: 6/9/98 9:05 AM

Priority: Normal

TO: AMY\_KIMBALL at BAP

CC: Carol.Forthman@dca.state.fl.us at INTERNET, Ken.Metcalf@dca.state.fl.us at INTERNET,  
Sherry.Spiers@dca.state.fl.us at INTERNET, Steven.Pfeiffer@dca.state.fl.us at INTERNET,  
rpm1mar@mail.state.fl.us at INTERNET, rpm2mar@mail.state.fl.us at INTERNET

Subject: Key West -Reply

Thanks Amy. I have answers to your questions which are presented below and track the questions in your June 1st memo to Steve Pfeiffer.

1. The DCA coordinating team for this project will be Carol Forthman (our new Division Director), myself, Alan Woolwich, Sherry Spiers (attorney), and Lee Rohe (attorney).

2. The LDRs can be adopted at the same meeting as the Reuse Plan provided the LDRs are not transmitted for DCA approval until after the final order approving the comp plan amendments is effective. The LDR ordinance must state in clear, plain language that the ordinance will not be transmitted for review by the Department until the Base Reuse Amendment is in effect.

3. In order to help expedite the review process the Department will conduct a simultaneous review of both the adopted comp plan amendments and the LDRs. The review of the LDRs, however, will be on an informal basis only since pursuant to paragraph 2 they will not have formally transmitted for review.

4. Based on s.288.975(1), F.S., the Department believes that the prohibition on comp plan amendments due to the failure to adopt an EAR does not apply to the 288 Base Reuse Plan.

5. The Department agrees the units on the Poinciana Housing Parcel are vested for affordable housing and believes that this can be covered by including a policy in the Base Reuse Plan. If these assurances are needed in advance of the plan being adopted, the Department would be willing to enter into a 380.032 agreement to acknowledge the vested status for affordable housing.

6. Facilities needed to maintain the adopted level of service for the amount of development projected over the next five years must be identified and if a deficit is projected, the capital improvements element must be amended to include appropriate financially feasible capital improvements. A policy should be included in the Base Reuse Plan to prevent development from proceeding beyond existing and planned LOS capacities of the supporting infrastructure.

7. The 288 Base Reuse Plan should only include that portion of the port that is being transferred from the federal government. The Port Master Plan should be amended to incorporate the 288 Base Reuse Plan when appropriate.

The Port of Key West was only designated by the legislature as a deepwater port in 1996. Since that time, they have not incorporated their port master plan into the city's plan as required in 163.3178 (Coastal Element) for deepwater ports. According to their port director, they are in the process of updating the port master plan which will then be submitted to the city for incorporation into its comp plan. Prior to their designation as a deepwater port, they were under the population threshold required to include a port, aviation and related facilities element in their plan.

8. The revised schedule dated 5-4-98 looks okay with the exception of the LDRs. Under January 29, 1999, you have "submit copy of the plan and LDRs to the DCA for review and issuance of an order approving or rejecting the plan and LDRs based on consistency with the Principles for Guiding Development". The LDRs cannot be submitted and approved until the final order approving the comp plan is effective, as is stated in Charles Pattison's letter of February 2, 1998. Therefore delete this item under January 29, 1999, and add a couple of more items as follows:

April 10, 1999 - Final Order approving comp plan effective

April 11, 1999 - Submit LDRs for approval by DCA

April 26, 1999 - DCA issues final order approving LDRs

May 11, 1999 - Final order approving LDRs becomes effective

>>> <AMY\_KIMBALL@bamiami.com> 06/08/98 10:59pm >>>

Mike: I really appreciate all your help on getting these issues resolved! Thanks for your hard work, Amy

# **Attachment SFRPC-1**

**Archeological and Historical Investigations for  
Proposed U.S. Navy Peary Court Housing Project**

**Historic Preservation Plan**

## EXECUTIVE SUMMARY

The Naval Air Station (NAS) Key West plans to construct a 160-unit Family Housing Project in Key West, Florida. On May 31, 1990, a Public Hearing was conducted for the construction of the NAS Key West Family Housing project in Key West, Florida. In the course of complying with Section 106 of the National Historic Preservation Act of 1966, as amended, a Case Alternatives Report was compiled which provides an analysis of potential location alternatives for siting of the 160-unit housing project. The review and analysis of sites for the housing project identified Peary Court as the most logical and cost effective site for the construction of the project. The Case Alternatives Report, in addition to discussing the historic architectural concerns that would be addressed by NAS Key West, also made note of the archeological potential at Peary Court. Accordingly, a commitment was made by the Naval Air Station to conduct an archeological survey of the area.

U.S. Army Corps of Engineers, Mobile District archeologists began field work at Peary Court on October 30, 1990. NAS Key West provided a backhoe and operator for mechanical excavations.

Originally, field investigations were scheduled to be completed on November 16, but NAS Key West extended field time to allow additional studies to be conducted. Field investigations were subsequently completed on November 19, 1990.

A Memorandum of Agreement (MOA) was signed in November 1990 by representatives of the Navy, the Advisory Council on Historic Preservation and the Florida State Historic Preservation Officer. In accordance with the MOA, archeological investigations at Peary Court were conducted in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23), taking into account the National Park Service (NPS) publication, The Archeological Survey: Methods and Uses (1978). In addition, properties identified through this archeological site survey were evaluated in accordance with 36 CFR 800.4(c).

Archeological investigations at the U.S. Navy Peary Court property determined that burial relocation efforts in 1927 were incomplete and that human remains are still present at the Key West Post Cemetery. Subsequently, the Navy in consultation with the Florida State Historic Preservation Officer and the Mobile District, has decided to set aside from any future development the area identified as the Key West Post cemetery. This will leave undisturbed those burials which were not moved in 1927 and obviate the need for additional archeological investigations in this area. In accordance with provisions of the Peary Court Memorandum of Agreement, a historic preservation plan has been prepared to outline the cemetery preservation and maintenance needs.

Within the Barracks area, only the artesian well, located adjacent to the remains of Cistern 10 and other wells thought to be under the southern portion of the Peary Court loop drive should be avoided. Their projected locations have been marked by Mobile District and provided to Naval Air Station Key West.

The archival research and archeological investigations conducted by Mobile District strongly indicate that no significant archeological remains will be found associated with the few surviving structural elements from the Key West Army Barracks. Demolishment of the Barracks buildings, erection and subsequent destruction of the Wherry housing units, and construction of the park ball fields have dramatically disturbed the Peary Court lands.

Although three semi-subterranean cisterns were located and more may be expected, none contained significant archeological materials or deposits. The Barracks cisterns appear to have been used and kept clean until their destruction in the 1940s. Because of their raised construction style, only a few concrete piers and brick column remnants may be expected to remain from the barracks, officer's housing, and public buildings. These sort of remains do not merit additional archeological investigations; the available maps and period photographs tell us more about the Barracks buildings than could formal excavations. Encountering such remains would not in our opinion constitute an emergency discovery situation under the provisions of the Peary Court Memorandum of Agreement.

No Army refuse dumps or outhouses were discovered by the Mobile District investigations. Although it is believed that Army refuse was hauled off post and that outhouses were emptied by "night carts", there is the possibility that an emergency discovery of these sort of features or even isolated burials could occur during construction of the new Navy housing. Therefore, if these sort of remains are encountered, the Navy should be prepared to implement the emergency discovery provisions of the Peary Court Memorandum of Agreement.

It is the opinion of the Mobile District that construction be allowed without notification at all areas within Peary Court except for the area of the Key West Post Cemetery and a buffer zone, the well at Cistern 10 and the area of suspected wells under the loop road. The required cemetery buffer zone lies on the north and northeast sides of the cemetery and consists of a 5' set back from the original fence post holes to a new wrought iron fence, a 25' set back from the original fence post holes to new dwellings, and a 50' setback from the original fence post holes to any storm water runoff ponds.

HISTORIC PRESERVATION PLAN  
Key West Post Cemetery  
Florida

Introduction

In May 1990, a Public Hearing was conducted for the construction of the Naval Air Station (NAS) Key West Family Housing project in Key West, Florida. In the course of complying with Section 106 of the National Historic Preservation Act of 1966, as amended, a Case Alternatives Report was compiled which provides an analysis of potential alternatives for the siting of the 160-unit housing project. All known potential sites in the Key West area were analyzed, including those suggested during the Public Hearing.

The review and analysis of sites for the housing project identified Peary Court as the most logical and cost effective site for the construction of the project. The Case Alternatives Report, in addition to discussing the historic architectural concerns that would be addressed by NAS Key West, also made note of the archeological potential at Peary Court. Accordingly, a commitment was made by the Naval Air Station to conduct an archeological survey of the area.

Discussions between NAS Key West and the Mobile District, U.S. Army Corps of Engineers, in August 1990, led to agreement that Mobile District would conduct the archeological survey of Peary Court. Originally, field investigations were scheduled to be completed on November 16, but NAS Key West extended field time to allow additional studies to be conducted. Field investigations were subsequently completed on November 19, 1990.

Peary Court is located on the north side of the City of Key West. It is Navy-owned land consisting of 28.65 acres situated east of White Street and south of Palm Avenue, across from the main entrance to Trumbo Point Annex. This triangular plot of land has in the past been the site of Navy Wherry Family Housing, which was demolished in 1975. Following demolition of the housing, the land was licensed to the City of Key West at no cost. The City of Key West constructed two softball diamonds there for use by the City softball league.

Of the 28.65 acres of land contained on the site, the Navy Federal Credit Union occupies approximately 1.0 acre, the existing roadway system occupies approximately 7.65 acres, and the remaining 20.0 acres is undeveloped and would be available for construction of the family housing.

Figure 1  
Key West, Florida, Location Map.

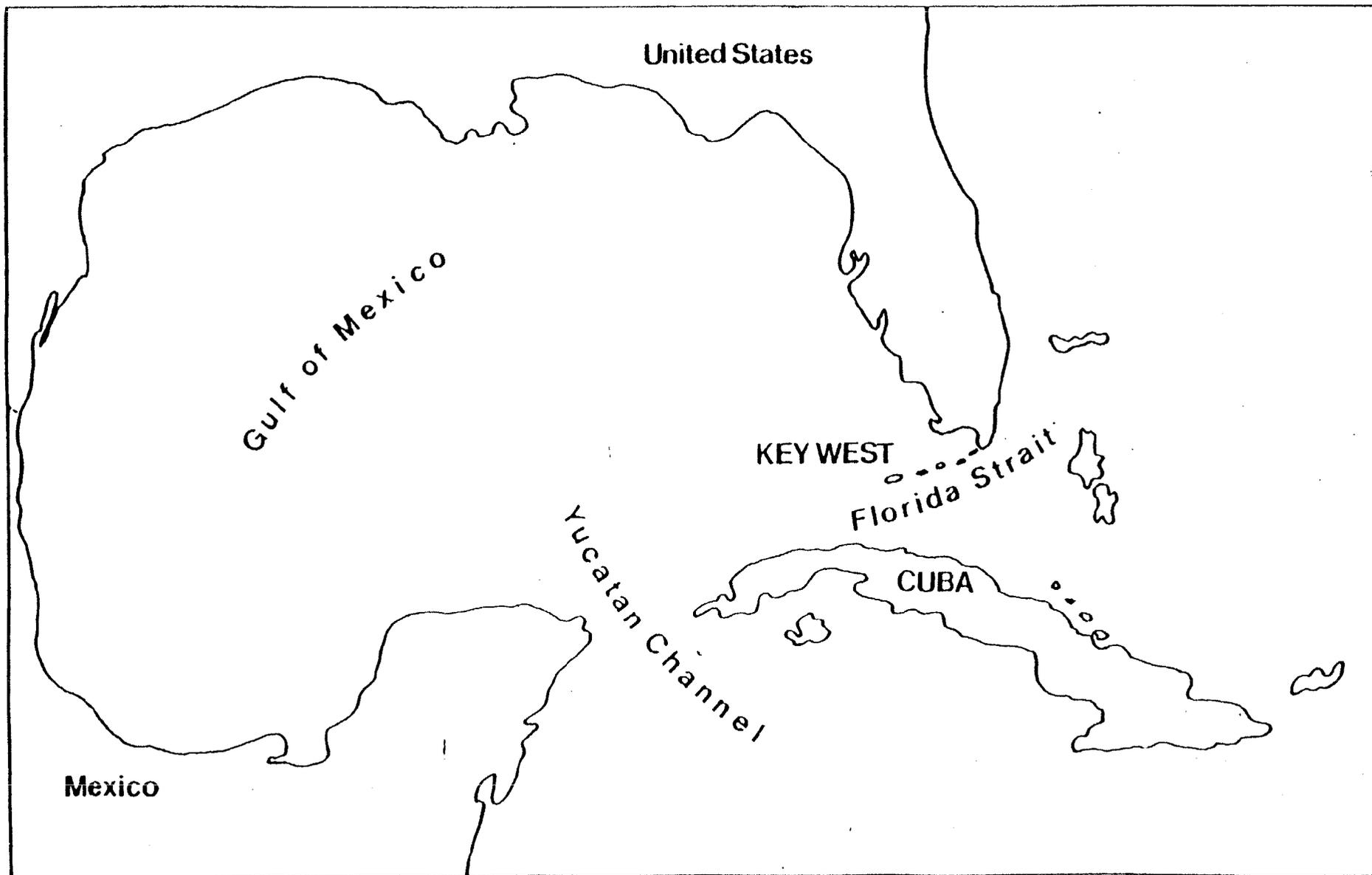


FIGURE 1

### Historical Background

The cemetery was associated with the U.S. Army Barracks at Key West, established January 2, 1831, by Company H, 4th Infantry pursuant to Orders No. 65, The Adjutant General's Office, November, 13, 1830 (RG 393, Records of United States Army Commands). Major James M. Glassel arrived with infantry troops in February, 1831.

Much of the information contained here has been taken from a paper prepared by Mr. Lewis G. Schmidt, Allentown, Pennsylvania (Schmidt, n.d.). Mr. Schmidt conducted extensive research in 1983 and 1984 while attempting to locate the grave of a family ancestor, George Smith, a Union soldier in Company B, 47th Pennsylvania Volunteers stationed at Key West who died there in 1862. Mr. Schmidt's past research and current willingness to share information on the cemetery have proved to be invaluable in writing this report. Collections in the Florida Room, Monroe County Library also contained useful information. Contemporary maps of the post show the general location of the cemetery in the southwest corner of the reservation. Unfortunately, no plat of the grave locations within the cemetery has been found.

As was noted previously, the U.S. Army Barracks at Key West were established in 1831 and abandoned in December, 1835 due to a yellow fever epidemic. The first deaths at the post are recorded in July and August of that year. After the post was reoccupied in 1850, the count of deaths reflect periods of epidemic with the highest death count of 14 being recorded at the post in a four month period during the summer and fall of 1854. During 1851, 1852, 1853, and 1859 only one death per year was reported.

No deaths were reported for 1860 - 1861, however with the influx of Union troops who occupied Key West throughout the Civil War, the death toll increased dramatically. In 1862, the 47th Pennsylvania Volunteers, 90th and 91st New York Infantry were garrisoned on Key West. All of these units suffered heavy casualties from yellow fever and typhoid fever. Mr. Schmidt's family ancestor, George Smith died of typhoid fever on July 6, 1862. Another fatality Jesse Ketchum, Company I, 90th New York Regiment died on September 4, 1862, his death being one among many reported in the September 13, 1862 issue of the New Era, a Key West newspaper. Ketchum's gravestone was uncovered during archeological excavations at the cemetery.

The years 1862 and 1864 saw the greatest number of victims of yellow fever and typhoid fever, with heavy casualties being recorded among the New York and Pennsylvania Regiments discussed above. The 2nd Colored U.S. Infantry also suffered heavy losses to fever, particularly in 1864 - 1865. The high death counts among northern troops was attributed to their not being acclimated to the tropical climate of Key West.

In the years following the Civil War, the death rate recorded at the U.S. Army Barracks decreased dramatically. There were several reasons for this decline. The need to quarantine fever victims was recognized and treatment facilities were established at Fort Jefferson on the Dry Tortugas islands. After the end of the war, the number of federal troops occupying Key West was greatly reduced; in 1880 the U.S. Army Barracks were again abandoned for over a decade, and finally in the early 20th century the cause and treatment of yellow fever were identified.

It should be noted that civilians as well as soldiers were buried at the Key West Post cemetery. Burial records of St. Paul's Episcopal Church from 1831 - 1878 reveal the names of the wives and children of soldiers buried at the Army cemetery, including the wife and child of a Sergeant Doyle in June and September 1840. Information gathered by Lewis Schmidt reveals that at least one family, (Jeremiah Weaver and his wife and two children died within 12 days of each other in 1880 (Schmidt, n.d.).

It was noted earlier that no formal plat showing the locations of grave rows or individual graves has been found for the cemetery. Maps of the post dating from the 1880's through the 1920's show the cemetery as an irregular shaped parcel bordering White Street on the west. Angela Street on the south has been closed and the cemetery extends approximately one half block south of Angela Street towards Newton Street. The northern and eastern boundaries of the cemetery are within the boundaries of the post.

Microfilm copies of U.S. Army records dating to the 1880's on file at the Monroe County Library contain an interesting series of correspondence concerning the southern part of the post cemetery (i.e. the tract acquired from Euphemia Maloney in 1897). This tract was briefly mentioned earlier in the discussion of the acquisition of the post lands. The following information is extracted from Record Group 92, Office of the Quartermaster General, General Correspondence and Reports and Record Group 393, U.S. Army Continental Command, Key West Barracks, Record of Interment, (Vol. 1).

A "Proposal for Work and Key West Cemetery" was issued by the Quartermaster General on December 14, 1895. The work proposed included the following:

"Picket fence - 220 feet of wooden picket fence to be taken up on the north side and reset on a line 30 feet farther north. Add 30 feet extension of picket fence on the east side of the property going north. Both old and new fence to be set in a substantial and workable manner."

"Removal of Remains - 214 bodies to be removed from south part of cemetery and reburied in another part. Bodies were to be placed in new boxes and headstones are to be removed and reset. The graves for reentrant shall not be less than 4 and one half feet deep."

"Removal and rebuilding of stone wall - 244 feet of stone wall on the south and east sides of the cemetery. Rebuild 130 feet of stone wall on newly established boundaries between cemetery and land of W. C. Maloney. New wall to be similar to that marking the west boundary of the cemetery."

"All work to be completed before March 31, 1886."

Bids received to complete the work ranged from \$0.15 to \$0.50 per linear foot to remove and reset the picket fence; \$0.28 to \$0.75 per linear foot for new picket fence; from \$8.50 to \$12.00 per body for reinterment of remains, and \$1.00 to \$3.00 per linear foot for relocation and rebuilding of the stone wall. Subsequent correspondence between the Quartermaster General and prospective bidders in February, 1886 indicates that the contract for work at the Key West Post Cemetery had not been awarded.

On May 1, 1886, the husband of Euphemia Maloney, W. C. Maloney, wrote to Florida Senator Wilkinson Call complaining that the Government had taken possession of his property 21 years earlier since which time the land had been used as part of the post cemetery. In response to Mr. Maloney's complaint, Senator Call wrote to Secretary of War, W.G. Endicott, requesting that the cemetery be moved from Maloney's land. Secretary Endicott responded to Senator Call's request on May 19, 1886 stating that funds had been appropriated for the purchase of the disputed tract of land by a Congressional Act of July 22, 1876. Mr. Maloney had refused an offered price of \$2,000.00. Furthermore, the health authorities of Key West had prohibited removal of the bodies. Endicott indicated that the War Department to not intend to continue to pursue the matter. It was not until 1897 that the Government acquired the tract of one third acre for the price of \$1,000.00 from Maloney's widow, Euphemia Maloney. It is uncertain whether any graves were relocated from this tract during the intervening years.

In February, 1927 articles in the Key West Citizen, indicated that 463 bodies were being removed from the Key West Post Cemetery and being transferred to the military cemetery at Fort Barrancas, Pensacola, Florida. The February 2, 1927 edition of the Key Largo Breeze indicated that the work was being done by a Jacksonville undertaking firm, whose name was not given.

In March, 1947 a series of articles pertaining to the Key West Barracks appeared in the Key West Citizen. The first, on March 15 announced the Army's intention to close the post. A second article on March 27, announced the Army's request for bids to remove 62 surplus buildings from Army facilities on Key West. One completely equipped latrine and 2 barracks were offered for sale at the U.S. Army Barracks. An article on the March 29 issue stated that the City of Key West was seeking to obtain control of the site of the army barracks. It was hoped that a professional base ball team would use the site as a training camp. This transfer was apparently never completed, for in 1949 what is now Peary Court was transferred from Army to Navy control. Photographic archives in the Florida Collections, Thompson Memorial Wing, Monroe County Library contain contemporary photographs of the Key West Army

Barracks from the late 19th and early 20th century, as well as photographs showing the removal of the last of the buildings in 1951. Several of the old barracks buildings are still in use on Key West and neighboring Stock Island.

### Historic Setting

NAS Key West wishes to set aside the area of the Key West Post Cemetery and preserve it as a historical park. Although the cemetery is marked on several old maps, only a single historical photograph, Plate 1, of the cemetery has been found. The photograph has been heavily used as a reference to describe the cemetery in an original setting.

### Fencing

As can be seen in the photograph, the cemetery was enclosed on the northern side by a wooden picket fence. The picket fence appears to have extended northeast from White Street, then turned southeast to Angela Street. During archeological excavations at the cemetery, a fragment of one of the pickets is believed to have been found. Measuring  $2 \frac{9}{16}$ " wide and  $1 \frac{1}{16}$ " thick, the fragment shows evidence of having been whitewashed. Wood type has not been determined, but it appears to be pine or cypress. Height of the pickets in the photograph appears about 4'.

The pickets seen in Plate 1 appear to be pointed, but it is difficult to see whether it is a decorative or simple point. Archeological investigations revealed that the fence posts had been reset at least once and spaced about 5 feet apart. Posts seen in the photograph also appear to be about 5' apart, although there is some variation. A postmold was located in Trench 2 where cement had been poured to support the post. Measuring 4" x 6" the post was likely a gate support post and may mark the location of the main entrance gate. Fence posts would have probably not been as large, more likely 4" x 4".

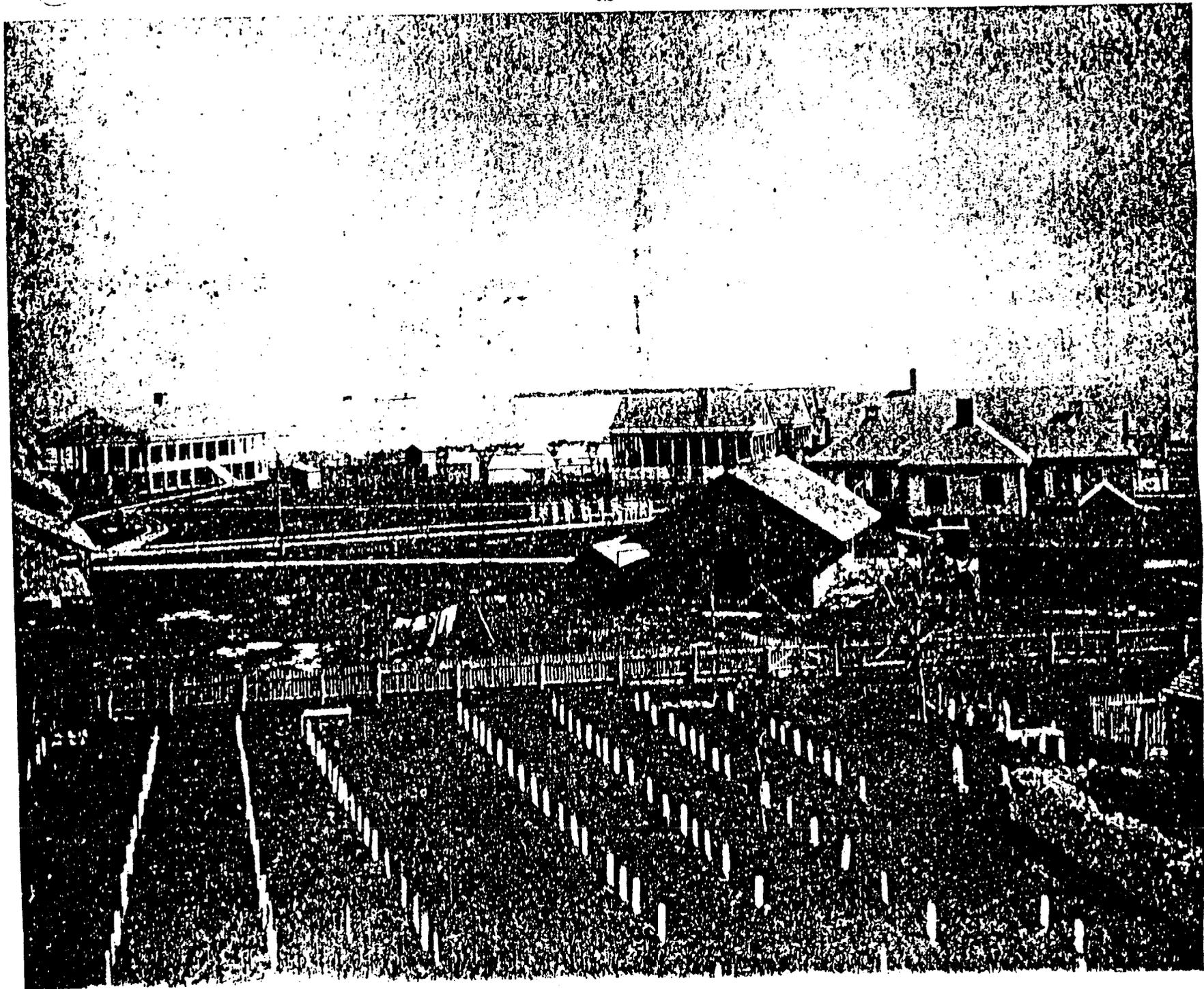
Along White Street and the half block southern extension, the cemetery was apparently enclosed by a wall. Plate 1 shows a portion of this wall, apparently of cut cap stone, either dry laid or mortared. The uneven top edge to the wall seen in the photograph was likely a result of years of neglect rather than purpose. The wall along White Street is today a plastered brick, but it may have originally been similar to that in the photograph.

### Gates

A double gate is seen in the photograph, apparently leading to the Quartermaster's Stable. A small corral is seen on the 1906 Post map, which shows this gate. Opening outward, towards the stable, the placement of this gate is somewhat confusing. It seems unlikely that the main gate to the cemetery would open to the stables, and it is probable that the cement supported post in Trench 2 marks the location of an entrance gate. It may be that horses were allowed to graze in the cemetery, thus feeding the stock and maintaining the grass

Plate 1

Historic Photograph of Key West Army Barracks and Post Cemetery.



A double gate, wide enough to allow passage of a horse drawn hearse, would likely have served as entrance to the cemetery, although there may have been smaller ones for visitors. Hinge and latch hardware would have been simple and sturdy, probably strap hinges and a slide bolt.

#### Landscaping

As seen in the photograph, the cemetery is grassed, probably with a hardy, native variety. Trees were also growing in the cemetery.

#### Maintenance

Beyond keeping the grass trimmed, possibly by allowing horses to graze, and periodically painting the picket fence there is little evidence in the photograph for maintenance activities at the cemetery.

#### Archeological Excavations

Archeological excavations at the Key West Post Cemetery began on 31 October 1990. Excavations at Peary Court were initiated in the southernmost projection of the property, where historic maps show the Post cemetery to have been located. This area is partially bounded by White and Angela Streets. Shovel test pits were first excavated throughout the area to determine the general soil profile and to potentially locate some of the grave pits prior to utilizing power equipment to strip the topsoil from larger areas of the site. Generally, six to twelve inches of dark brown topsoil overlay either the cap stone or disturbed soils which were believed to be part of grave pits. The disturbed soils were often mixed in nature and contained large amounts of cap stone rubble.

Plate 1 shows the graves to have been laid out in rows which were oriented roughly north/south. In order to locate the grave pits a backhoe was used to cut four trenches within the suspected cemetery area. Trench 1 was placed diagonally across the land projection at the south end of Peary Court. It was thought that orienting the trench in this fashion would allow it to cut across the maximum number of grave rows. Trenches 2, 3, and 4 were placed so as to define respectively the northern and eastern boundaries of the cemetery. The backhoe was used to remove a majority of the soil overlying the cap stone level. Grave pits encountered during the trench excavations were marked so that a sample could be excavated later to determine whether the burials had, in fact, been removed. Figure 2 (Front Pocket) shows the location of these trenches. Figure 3 presents a plan view of Trenches 1 and 2, showing the location of the grave pits uncovered.

#### Trench 1

Trench 1 was approximately 175 feet long and five feet wide, oriented roughly northwest by southeast. The cap stone level in Trench 1 was found in the northwestern and central portions of Trench 1 but was not present in the

southeastern part. In the southeastern portion of the trench a whitish soil horizon was encountered that appears to consist of weathered oolite limestone. After a majority of the soil overburden was removed by the backhoe, shovels, trowels, and brooms were used to clean the trench floor. Grave pit locations were marked as Trench 1 was cleaned. Numbers were assigned to each obvious or potential grave pit, starting with number 1 at the southeastern end of Trench 1. Twenty-eight grave pits and one brick burial crypt were located.

Grave Pit 2, the northern portion of which extends into Trench 1, was the first to be excavated. Based upon the present ground surface, Grave Pit 2 appears to have been excavated to a depth of 4.3 feet below the current ground surface. The pit is 3 feet wide, and 3 feet of the grave pit extends into Trench 1. Isolated phalanges, metatarsals, metacarpals, tarsals, carpals, and rib fragments were found scattered throughout the fill of this grave pit. No long bones or axial skeletal remains were found within grave pit 2. This is the situation that would be expected if burials were removed by crews unfamiliar with human osteology, using only shovels and no screens. The Mobile District archeological crew used a 1/4 inch mesh screen to recover these human remains. Following definition of the pit on the trench floor, all excavated fill was screened. Small, extremely rusted iron fragments, thought to be the remains of coffin nails or hardware were also found in the grave pit fill.

Grave Pit 24 was the next to be excavated. This grave was excavated to approximately 4.6 feet below the present ground surface, most of the depth having been cut through the cap stone found in this area. The grave pit was approximately 3 feet wide and 8 feet long. Human remains included in the fill of this grave pit included teeth, the articular condyles of a femur, the articular head of a humerus, phalanges, and fragments of metacarpals and ribs. Also included in the pit fill, near the bottom of the grave, was the top of a broken white marble headstone, presumably the one associated with this grave pit. The following inscription was found on the headstone:

99  
Jesse Ketchum  
CO. I  
90TH  
N.Y. INF.

The September 13, 1862 issue of the New Era, a Key West newspaper, noted that Private Ketchum died on September 4, 1862 at the age of 20. The cause of death was not given. Except for a handful of miscellaneous human skeletal fragments the remains of Mr. Ketchum were obviously removed from the grave in 1927.

Grave Pit 25, which lies immediately adjacent to Grave Pit 24, was the third to be excavated in Trench 1. Unlike Grave Pits 2 and 24, Grave Pit 25 still contained the remains of the individual buried within it. For some reason, the mortuary company in charge of removing the burials at this cemetery failed to move the occupant of this grave. Portions of the cranium, right humerus, right ulna and radius, right clavicle, right scapula, ribs, pubic bone, and right

Figure 3

Plan View of Trenches 1 and 2.

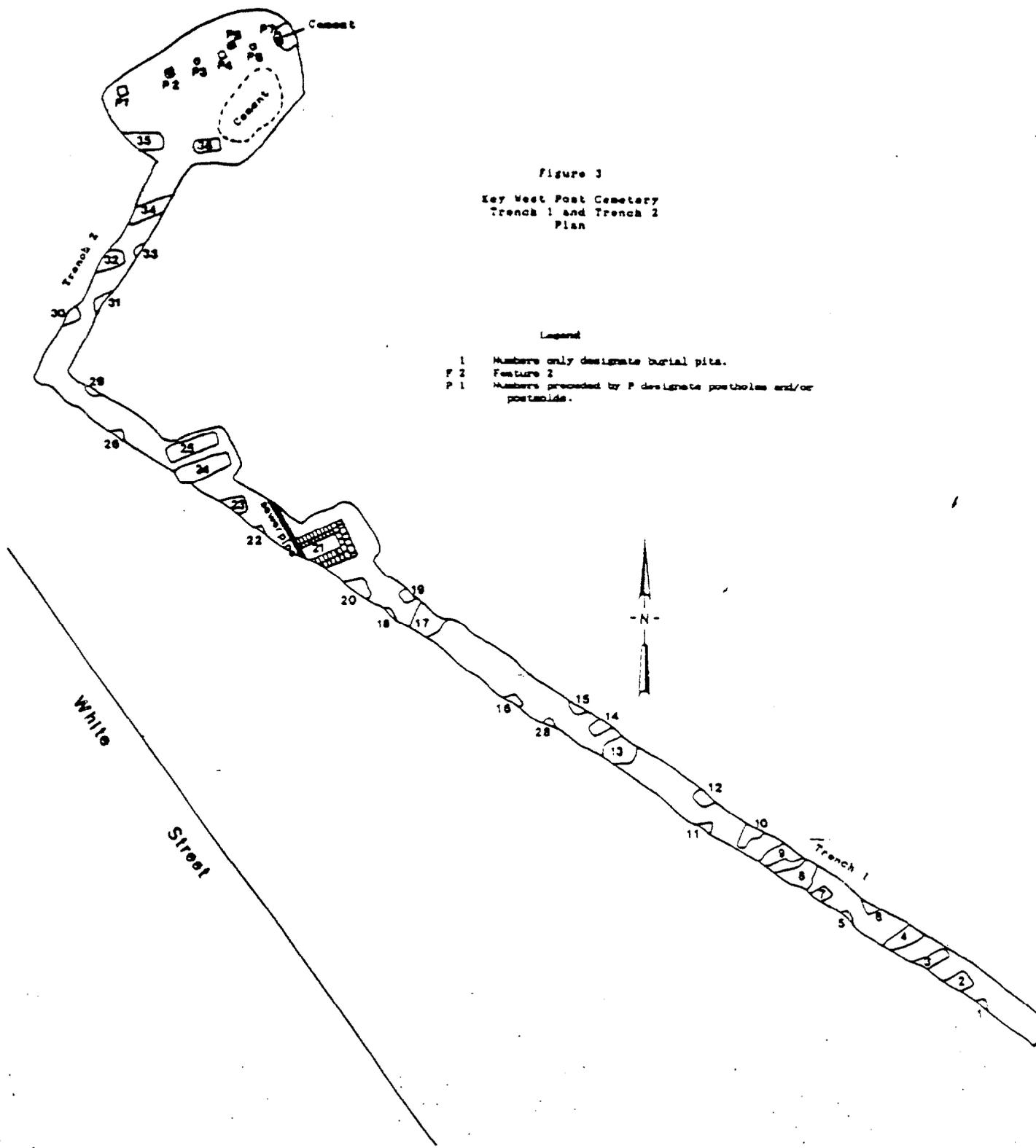


Figure 3  
 Key West Post Cemetery  
 Trench 1 and Trench 2  
 Plan

- Legend
- 1 Numbers only designate burial pits.
  - F 2 Feature 2
  - P 1 Numbers preceded by P designate postholes and/or postmounds.

femur were exposed to verify that the entire burial was, in fact, present within the grave pit. Following their discovery and partial exposure, the remains of this individual were reburied since the purpose of these investigations was to determine whether the burials had been removed, not to conduct skeletal studies. Grave Pit 25 was approximately 8 feet long and 3 feet wide. Although not fully excavated, probing showed the pit to be approximately the same depth below ground surface as Grave Pit 24, 4.6 feet.

Rusted cut nails, many with fragments of wood adhering to them, were encountered just above the burial. These are thought to be the remains of the coffin in which this individual was buried. Based upon the nearly identical size and physical proximity of Grave Pits 24 and 25, they are believed to have been dug at the same time. The individual buried in Grave Pit 25, may also have been a member of the 90th New York Infantry regiment.

#### Trench 2

Trench 2 was placed at the northwestern end of Trench 1 and is oriented generally north/south. This trench was located so as to define the northern limits of the cemetery. Since an early photograph showed that a picket fence surrounded the cemetery, it was felt that the postholes excavated for fence supports should be observable once the cap stone was exposed. Trench 2 was excavated in two stages. The first excavation episode consisted of a trench approximately five feet wide and 60 feet long. When postholes were not immediately observable the northern end of Trench 2 was expanded with the backhoe into a block excavation. A series of 6 postholes, thought to be associated with the cemetery picket fence were found within the Trench 2 excavation block. These postholes were aligned roughly east/west in a straight line. Seven burial pits were also found within Trench 2. Grave Pit 36 is smaller than most and was probably excavated to accommodate a child's burial. Feature 1 in this trench consists of a concentration of bird bone found just beneath the ground surface.

Grave Pit 34 was excavated within Trench 2. A majority of the pit was located within Trench 2, with only small portions of each end located within the trench walls. It was found that the burial had been moved. As with Grave Pits 2 and 24, a number of small human bone fragments, predominately hand and foot bones, were found in the pit fill. A number of unfused long bone epiphyses were also found, suggesting that the individual was under 20 years old (Bass 1971). As with the other burials, these are the sort of small bones that one would expect an unskilled crew to miss during removal of the graves. The most interesting artifact found within the grave pit was a white marble headstone broken into two parts but otherwise complete.

The headstone was 42 1/4 inches long, 10 1/4 inches wide, and 2 inches thick. A raised line marking the depth the base of the stone was to be buried, was found 13 1/2 inches up from the bottom. The stone was identical in dimensions to the one found in Grave Pit 24. The following inscription was found on the stone:

157  
IRA BATES  
COOK  
110TH  
N.Y. INF

Again, it is presumed that this headstone belongs with Grave Pit 34 and was thrown into the pit after the burial was removed.

#### Trench 3

Trench 3 was excavated in the area suspected to have been the eastern edge of the cemetery, before the postholes were discovered in Trench 2. Trench 3 is oriented roughly north/south, and is approximately 50.5 feet long. When first opened the trench was thought to contain 2 burial pits. Investigations found, however, that one of the pits was cut to bury an iron pipe and the other was part of Feature 2, a large hole apparently excavated just before the construction of the Wherry housing. Not all of Feature 2 was excavated, but that portion within Trench 3 was at least 30 feet long and 4.5 feet deep. The feature contained both 19th and 20th century artifactual remains jumbled together. The feature was apparently excavated with heavy machinery since teeth marks from a heavy equipment bucket were present at its base. Lenses of wood ash and coal cinders were present throughout the feature, suggesting that it may have been excavated to bury debris from the removal of the Army barracks in 1951. Part of a concrete foundation, probably from a Wherry housing unit, lay on top of the feature.

#### Trench 4

Trench 4 was sited to locate the easternmost boundary of the cemetery. The location of the trench was determined by consulting the 1906 Key West Barracks map which showed the eastern boundary of the cemetery to lie approximately 225 feet from White street. The orientation of the line was determined by sighting the transit along the row of postholes found in Trench 2 and measuring 225 feet from White Street. Trench 4 was approximately five feet wide and L-shaped. The trench was made L-shaped to locate where the cemetery fence made a turn to the south. This turn would mark the easternmost boundary of the cemetery. After clearing the overburden from the trench a series of postholes was found with a turn being made in the expected location. The fence line had obviously been rebuilt since a number of the postholes parallel each other in a slightly different alignment. No burials were noted in Trench 4.

After encountering the intact skeleton, discussions by representatives of NAS Key West and the Mobile District with Mr. Louis Tesar of the office of the Florida State Historic Preservation Officer and Mr. Jim Miller, Florida State Archeologist, led to the decision to rebury all bones, associated artifacts and the headstones in the graves from which they were recovered. Reburial of all items was subsequently accomplished. NAS Key West then decided to preserve the cemetery and set it aside as a historical park, thus avoiding it.

Excavations were conducted to determine the boundaries of the Key West Post Cemetery. Backhoe trenches were excavated at the northwest edge and northeast/east edge of the cemetery. Posthole alignments were found remaining from the original wooden fence surrounding the cemetery, and coordination was made with NAS Key West for accurate survey location of the fence to be rebuilt around the cemetery.

In accordance with Stipulation 2.b. Archeological Resource Protection, Treatment, of the Memorandum of Agreement Regarding Key West Family Housing Project, this preservation plan has been developed in consultation with the Florida State Historic Preservation Officer for the Key West Post Cemetery.

#### Preservation Actions

1. Preserve the cemetery in a partially original state. Place a picket fence along the west side (White Street) and south side only. One gate would be placed at White Street on the west to allow pedestrian traffic. No cap stone wall would be built and the picket fence would be placed as close as possible to original alignment. No further excavations would take place. The same wrought iron fence to be installed elsewhere on White and Angela Streets shall be installed along the north and northeastern sides of the cemetery.

The picket fence will be built to approximate that shown in Plate 1 and described in the Historical Setting of this Plan. Dimensions will be approximately as follows:

Pickets: 2 9/16 inches wide, 1 1/16 inch thick, 4 feet tall and pointed on the end.

Posts: 4 x 4 inches thick, approximately 4 feet tall (above the ground), set approximately 5 feet apart. Gate posts appear to be 4 x 6 inches thick, also set 4 feet above the ground.

Gate: double type construction, using same size pickets as above with single diagonal support, see Plate 1. Simple T-strap hinges and slide bolts will be used on the gate.

The existing low wall along the White Street side of the cemetery does not appear in historical photographs of the Barracks and is apparently not original. For this reason we recommend placement of the picket fence along White Street. The existing low wall may be removed to allow installation of the picket fence.

2. Place a permanent type historical marker or small monument describing Barracks history and the presence of the Key West Post Cemetery within the cemetery grounds.

3. Maintain the cemetery area in some variety of native or other appropriate grass, keeping existing mahogany trees pruned and fertilized, and grass cut. Periodically the picket fence will be painted white, and all weeds around the fence will be kept trimmed.

A privately owned storage building encroaches onto Government land and the original cemetery area at the eastern side at Angela Street. It is possible that graves are present under the structure and a portion of the intersection of Angela and Gonzalez Streets in front of the structure. The owner of the structure, as well as the City planning and building agencies should be notified of the fact that the cemetery extends under the structure and the intersection of Angela and Gonzalez Streets. This building will act to enlave the eastern side of the cemetery. As such, no permanent fencing will be installed along the western side of the building. The intersection of present day Gonzalez and Angela Streets appears to lie within a portion of the cemetery, probably due to past street widening. The City planning and building agencies should also be notified of this possibility. It is probably more practical to place the cemetery fence along the boundary of these streets, rather than considering street realignment.

Caution must be taken that future construction activities do not, however, disturb those cemetery areas preserved under the pavement at the intersection of Gonzalez and Angela Streets. Of particular concern would be ground disturbing work by the City of Key West, such as relocating storm or sewer lines, and removal of pavement and grading.

Lastly, to maintain visual attractiveness and to provide a safety factor around the cemetery, it is recommended that a buffer be provided outside of the original picket fence. It is possible that past realignments of the cemetery fence resulted in isolated burials being located outside the fence line discovered by Mobile District. This buffer will help to insure that potential isolated burials would be avoided by construction. The required cemetery buffer zone lies on the north and northeast sides of the cemetery and consists of a 5' set back from the original fence post holes to a new wrought iron fence, a 25' set back from the original fence post holes to new dwellings, and a 50' setback from the original fence post holes to any storm water runoff ponds.

## **Attachment SFRPC-2**

**Bahama Village Community Redevelopment Plan  
Ordinance Adopted December 3, 1996**

**City Planning Department  
Key West, Florida**

**TAX DISTRICT 11KW  
Bahama Village  
Community Redevelopment Plan  
Ordinance 96-31 Adopted by the  
City Commission of Key West December 3, 1996**



Scale 1" = 300'

Not prepared on November 17, 1997

THE INFORMATION AREA OF THE BAHAMA VILLAGE CDP WAS DERIVED FROM THE CITY OF KEY WEST, FLORIDA, RECORDS AND THE CITY OF KEY WEST, FLORIDA, RECORDS. IT DOES NOT REPRESENT THE CITY OF KEY WEST, FLORIDA, RECORDS AND THE CITY OF KEY WEST, FLORIDA, RECORDS. THE INFORMATION AREA OF THE BAHAMA VILLAGE CDP WAS DERIVED FROM THE CITY OF KEY WEST, FLORIDA, RECORDS AND THE CITY OF KEY WEST, FLORIDA, RECORDS. THE INFORMATION AREA OF THE BAHAMA VILLAGE CDP WAS DERIVED FROM THE CITY OF KEY WEST, FLORIDA, RECORDS AND THE CITY OF KEY WEST, FLORIDA, RECORDS.

-  Condominium
-  Condominium Common Area

## **Attachment FDOT-1**

### **Comparison of Background Traffic Growth Rate on Level of Service**

Comparison of Background Traffic Growth Rate on Level of Service

Id	On Street	From	To	LOS Std.	1996		2003 WOP		2003 WP		LOS Change?	
					AADT	LOS	AADT	LOS	AADT	LOS	96->WOP	96->WP
1010010	Caroline St	Whitehead St	Duval St	D	2,514	A	2,888	A	3,195	A	No	No
1010020	Caroline St	Duval St	Simonton St	D	3,601	B	4,136	B	4,136	B	No	No
1010030	Caroline St	Simonton St	Grinnell St	D	4,440	B	5,100	B	5,100	B	No	No
1020010	Eaton St	Whitehead St	Duval St	D	5,071	F	5,825	F	6,734	F	No	No
1020020	Eaton St	Duval St	Simonton St	D	10,910	F	12,532	F	14,248	F	No	No
1020030	Eaton St	Simonton St	Grinnell St	D	10,502	F	12,063	F	14,461	F	No	No
1020040	Eaton St	Grinnell St	White St	D	25,975	F	29,837	F	31,269	F	No	No
1030010	Palm Ave	N Roosevelt Blv	Eisenhower Dr	D	24,929	F	28,635	F	29,919	F	No	No
1030020	Palm Ave	Eisenhower Dr	White St	D	24,929	F	28,635	F	29,919	F	No	No
1040010	Truman Ave	Whitehead St	Duval St	C	1,620	C	1,861	C	7,191	C	No	No
1040020	Truman Ave	Duval St	Simonton St	C	5,343	C	6,137	C	10,546	C	No	No
1040030	Truman Ave	Simonton St	Windsor Ln	C	6,137	C	7,049	C	9,867	C	No	No
1040040	Truman Ave	Windsor Ln	White St	C	6,137	C	7,049	C	9,231	C	No	No
1040050	Truman Ave	White St	Eisenhower Dr	C	16,478	F	18,928	F	20,417	F	No	No
1040060	Truman Ave	Eisenhower Dr	Palm Ave	C	16,478	F	18,928	F	19,405	F	No	No
1050010	North Roosevelt Blvd	First St	Fourth St	C	32,878	F	37,766	F	37,914	F	No	No
1050020	North Roosevelt Blvd	Fourth St	Fifth St	C	32,878	F	37,766	F	37,914	F	No	No
1050030	North Roosevelt Blvd	Fifth St	Overseas Mkt	C	39,352	F	45,203	F	45,351	F	No	No
1050040	North Roosevelt Blvd	Overseas Mkt	Kennedy Dr	C	32,738	F	37,605	F	37,810	F	No	No
1050050	North Roosevelt Blvd	Kennedy Dr	US1	C	30,764	A	35,338	A	35,338	A	No	No
1060010	United St	Whitehead St	Duval St	D	4,582	A	5,263	A	5,263	A	No	No
1060020	United St	Duval St	Simonton St	D	4,582	B	5,263	B	5,263	B	No	No
1060030	United St	Simonton St	Reynolds St	D	7,823	C	8,986	C	8,986	C	No	No
1060040	United St	Reynolds St	White St	D	8,080	C	9,281	C	9,281	C	No	No
1070010	South St	Whitehead St	Duval St	D	6,900	A	7,926	A	7,926	A	No	No
1070020	South St	Duval St	Simonton St	D	6,900	B	7,926	B	7,926	B	No	No
1070030	South St	Simonton St	Reynolds St	D	12,187	C	13,999	E	13,999	E	Yes	Yes
1080010	Flagler Ave	Reynolds St	White St	D	4,123	B	4,736	B	4,736	B	No	No
1080020	Flagler Ave	White St	First St	D	12,492	D	14,349	F	14,554	F	Yes	Yes
1080030	Flagler Ave	First St	Fifth St	D	19,987	F	22,959	F	23,164	F	No	No
1080040	Flagler Ave	Fifth St	Kennedy Dr	D	19,903	F	22,862	F	23,067	F	No	No
1080050	Flagler Ave	Kennedy Dr	Twentieth St	D	14,609	B	16,781	B	16,986	B	No	No
1080060	Flagler Ave	Twentieth St	S Roosevelt Blv	D	16,921	B	19,437	B	19,437	B	No	No
1090010	Atlantic Blvd	Reynolds St	White St	D	4,284	A	4,921	A	4,921	A	No	No
1090020	Atlantic Blvd	White St	Bertha St	D	6,540	A	7,512	A	7,512	A	No	No
1100010	South Roosevelt Blvd	Bertha St	Airport	C	10,890	A	12,509	A	12,509	A	No	No
1100020	South Roosevelt Blvd	Airport	Flagler Ave	C	10,357	A	11,897	A	11,999	A	No	No
1100040	South Roosevelt Blvd	Flagler Ave	US1	C	17,717	A	20,351	A	20,556	A	No	No
1110010	Northside Dr	Kennedy Dr	Twentieth St	D	9,230	C	10,602	D	10,807	D	Yes	Yes
1120010	US1	Roosevelt Blvd	Cow Key Channel	C	40,149	B	46,118	B	46,118	B	No	No
1130010	Duck Ave	Twentieth St	S Roosevelt Blv	D	4,523	A	5,195	A	5,286	A	No	No
2010010	Whitehead St	South St	United St	D	3,334	A	3,830	A	3,830	A	No	No
2010020	Whitehead St	United St	Truman Ave	D	4,829	A	5,547	A	5,547	A	No	No
2010030	Whitehead St	Truman Ave	Southard St	C	7,833	C	8,998	C	11,123	C	No	No
2010040	Whitehead St	Southard St	Fleming St	C	6,635	C	7,621	C	9,576	C	No	No
2010050	Whitehead St	Fleming St	Eaton St	C	8,174	C	9,389	C	11,344	C	No	No
2010060	Whitehead St	Eaton St	Caroline St	D	8,174	C	9,389	C	10,434	C	No	No
2020010	Duval St	South St	United St	D	4,566	B	5,245	B	5,245	B	No	No
2020020	Duval St	United St	Truman Ave	D	9,930	C	11,406	E	12,304	F	Yes	Yes
2020030	Duval St	Truman Ave	Angela St	D	10,883	D	12,501	F	14,921	F	Yes	Yes
2020040	Duval St	Angela St	Southard St	D	12,806	D	14,710	F	15,392	F	Yes	Yes
2020050	Duval St	Southard St	Fleming St	D	11,470	E	13,175	F	14,277	F	Yes	Yes
2020060	Duval St	Fleming St	Eaton St	D	10,177	B	11,690	C	12,792	D	Yes	Yes
2020070	Duval St	Eaton St	Caroline St	D	9,180	B	10,545	B	10,545	B	No	No
2020080	Duval St	Caroline St	Green St.	D	5,484	B	6,299	B	6,299	B	No	No
2020090	Duval St	Green St.	Front St.	D	5,484	B	6,299	B	6,299	B	No	No
2020100	Duval St	Green St	Wall St	D	5,484	B	6,299	B	6,299	B	No	No
2030010	Simonton St	South St	United St	D	4,825	B	5,542	B	5,542	B	No	No
2030020	Simonton St	United St	Truman Ave	D	6,460	B	7,420	B	8,340	B	No	No

Comparison of Background Traffic Growth Rate on Level of Service

Id	On Street	From	To	LOS Std.	1996		2003 WOP		2003 WP		LOS Change?	
					AADT	LOS	AADT	LOS	AADT	LOS	96->WOP	96->WP
2030030	Simonton St	Truman Ave	Southard St	D	7,239	B	8,315	B	8,997	B	No	No
2030040	Simonton St	Southard St	Fleming St	D	7,700	B	8,845	B	10,072	B	No	No
2030050	Simonton St	Fleming St	Eaton St	D	7,444	B	8,551	B	9,778	B	No	No
2030060	Simonton St	Eaton St	Caroline St	D	8,038	B	9,291	B	9,836	B	No	No
2030070	Simonton St	Caroline St	Water	D	7,519	B	8,637	B	8,637	B	No	No
2040010	Reynolds St	Atlantic Blvd	Flagler Ave	D	4,234	B	4,921	B	4,921	B	No	No
2040020	Reynolds St	Flagler Ave	South St	D	5,511	B	6,445	B	6,445	B	No	No
2040030	Reynolds St	South St	United St	D	2,482	A	2,851	A	2,851	A	No	No
2050010	Grinnell St	Eaton St	Caroline St	D	8,742	C	10,042	E	10,349	E	Yes	Yes
2060010	White St	Atlantic Blvd	Flagler Ave	D	4,917	A	5,648	A	5,648	A	No	No
2060020	White St	Flagler Ave	United St	D	8,525	B	9,907	B	9,907	B	No	No
2060030	White St	United St	Truman Ave	D	10,224	B	11,744	C	11,744	C	Yes	Yes
2060040	White St	Truman Ave	Southard St	D	8,314	B	10,699	B	10,722	B	No	No
2060050	White St	Southard St	Eaton St	D	6,671	B	7,663	B	7,686	B	No	No
2070010	First St	Flagler Ave	North Roosevelt	D	8,252	F	9,479	F	9,479	F	No	No
2080010	Bertha St	S Roosevelt Blv	Atlantic Blvd	D	11,438	C	13,139	D	13,139	D	Yes	Yes
2080020	Bertha St	Atlantic Blvd	Flagler Ave	D	7,359	F	8,465	F	8,465	F	No	No
2090010	Fifth St	Flagler Ave	N Roosevelt Blv	D	4,055	B	4,658	B	4,658	B	No	No
2100010	Kennedy Dr	Flagler Ave	Northside Dr	D	8,427	B	9,680	B	9,885	B	No	No
2100020	Kennedy Dr	Northside Dr	N Roosevelt Blv	D	8,587	D	9,979	D	10,184	D	No	No
2100030	Sigsbee Rd	N Roosevelt Blv	Island	D	6,269	D	7,201	D	7,201	D	No	No
2110010	Twentieth St	Flagler Ave	Duck Ave	D	936	B	960	B	960	B	No	No
2110020	Twentieth St	Duck Ave	Northside Dr	D	936	B	960	B	960	B	No	No