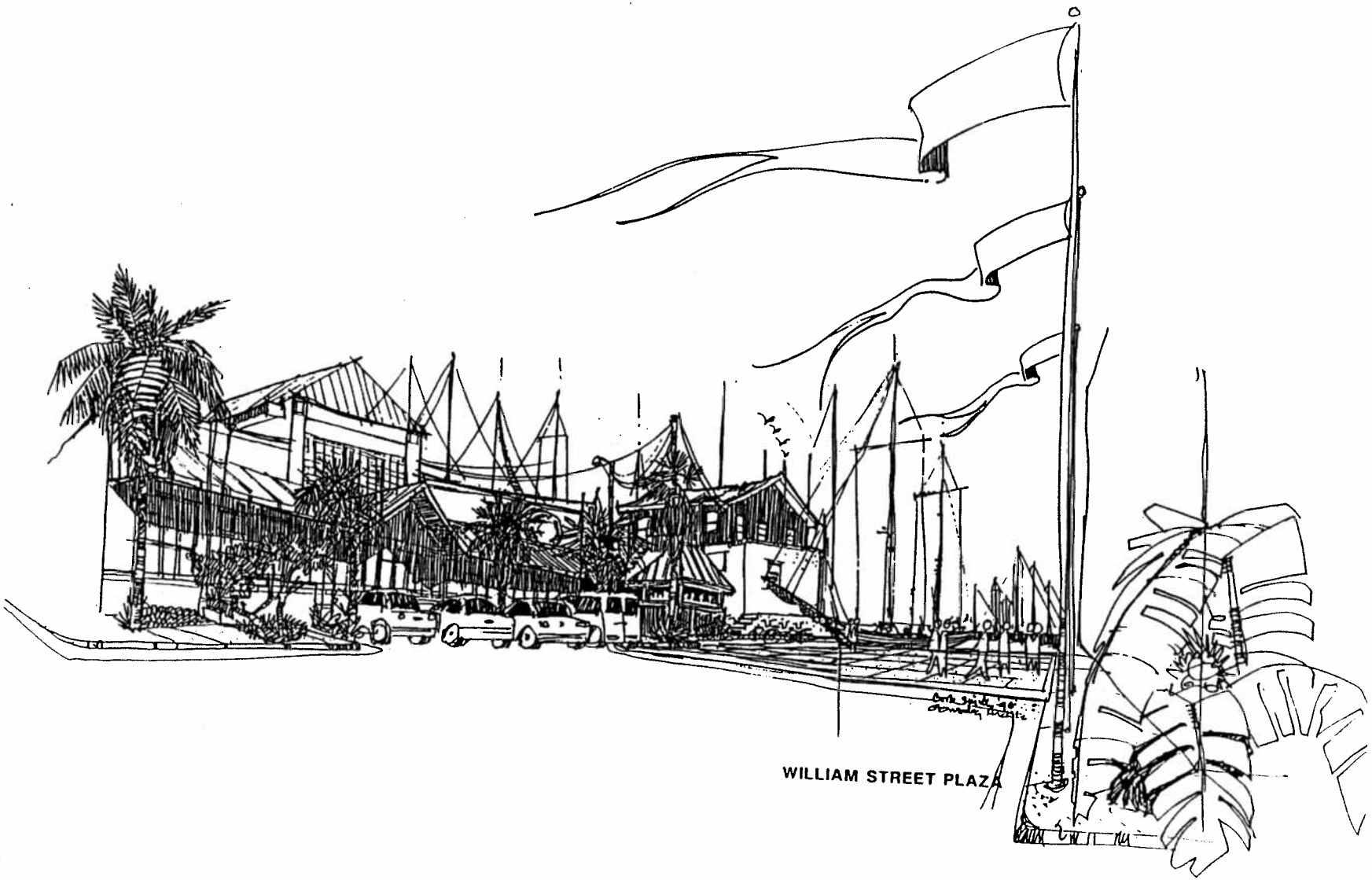
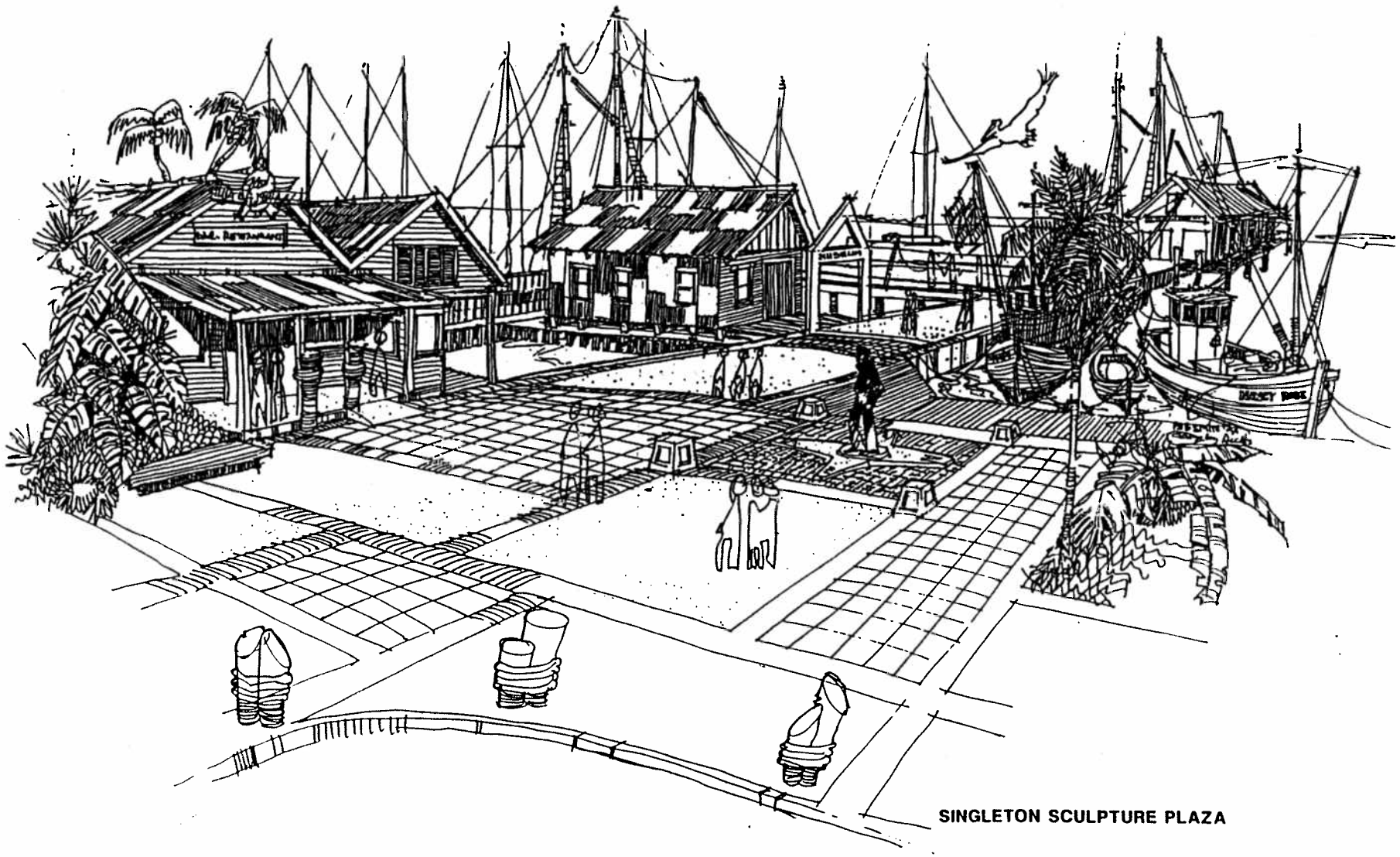


Key West Bight Master Plan

Community Impact Assessment Statement

Urban Design Details

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515



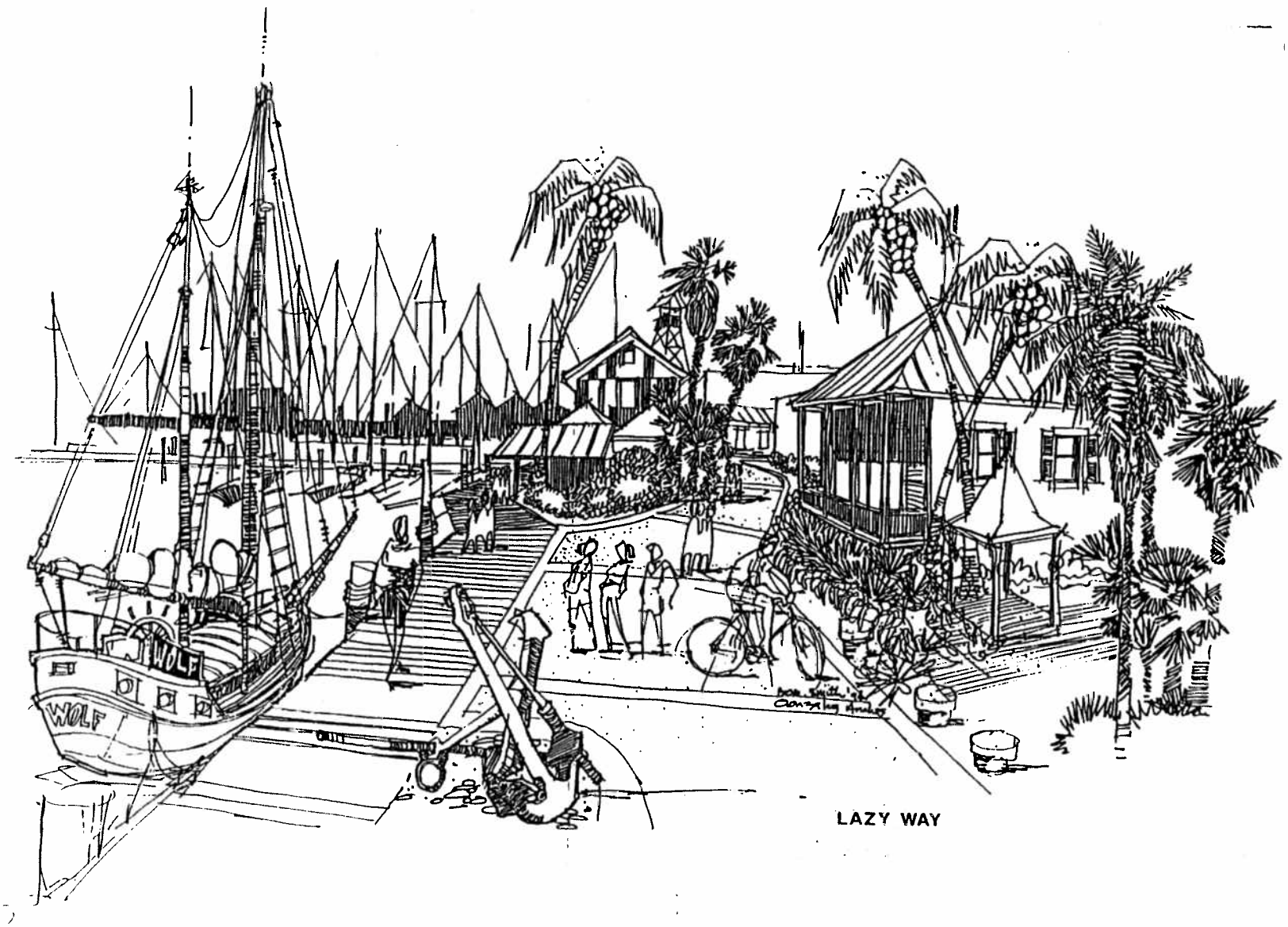
SINGLETON SCULPTURE PLAZA

Key West Bight Master Plan

Community Impact Assessment Statement

Urban Design Details

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515



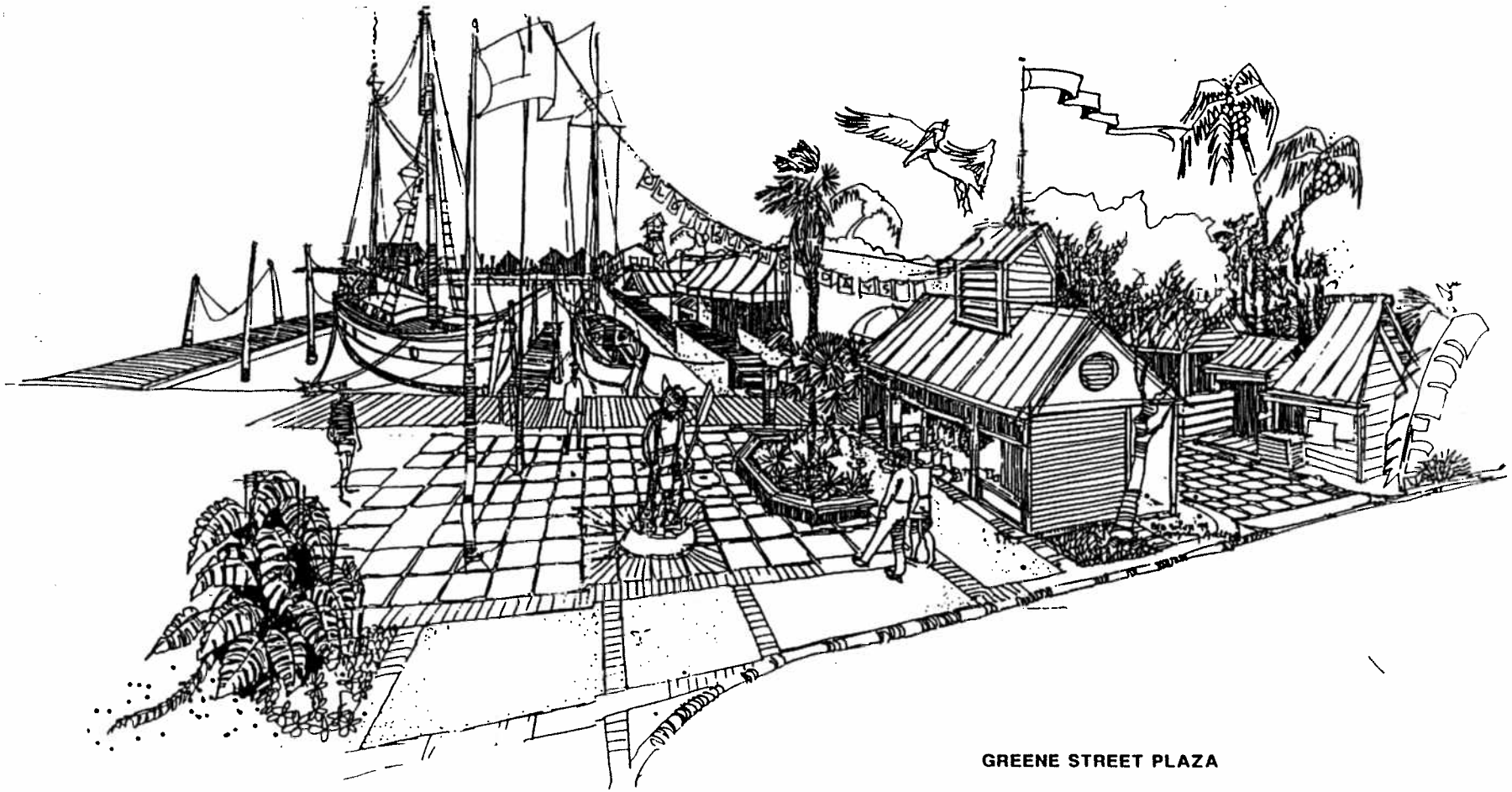
LAZY WAY

Key West Bight Master Plan

Community Impact Assessment Statement

Urban Design Details

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515



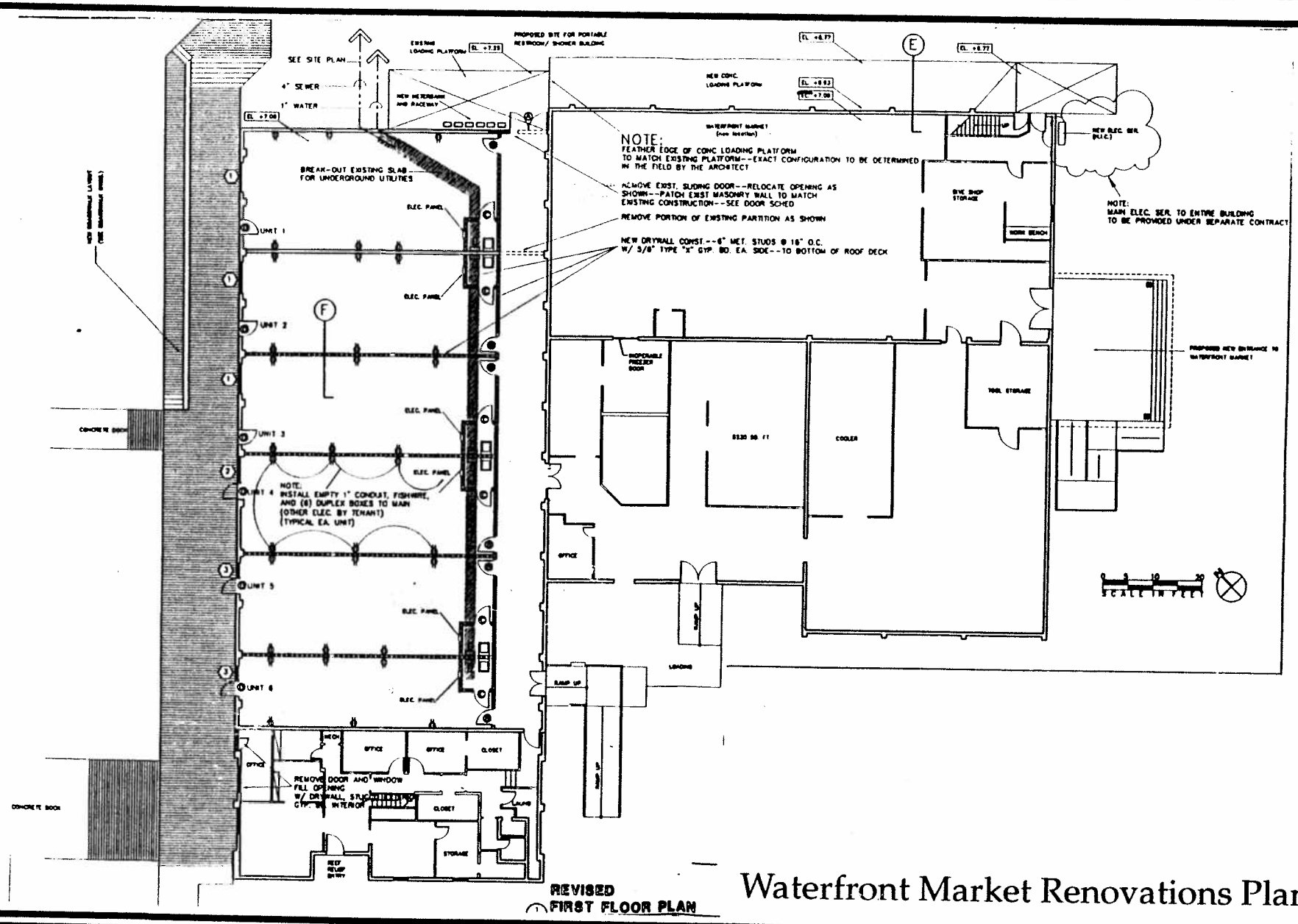
GREENE STREET PLAZA

Key West Bight Master Plan

Community Impact Assessment Statement

Urban Design Details

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515

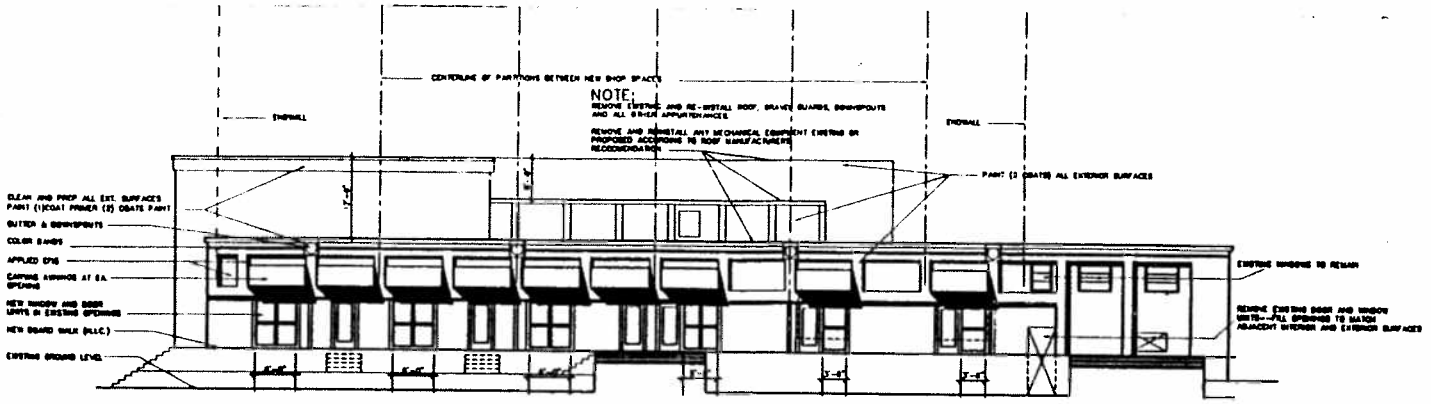


Waterfront Market Renovations Plan

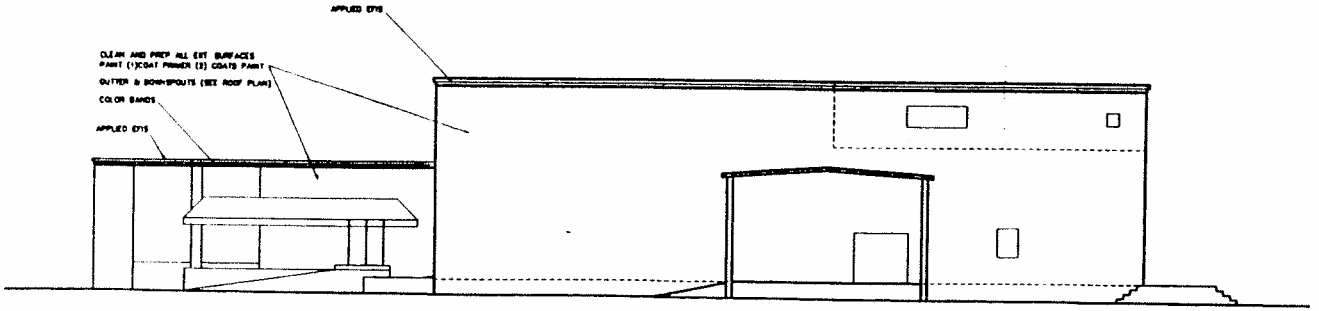
Key West Bight Master Plan

Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515



WEST ELEVATION



EAST ELEVATION

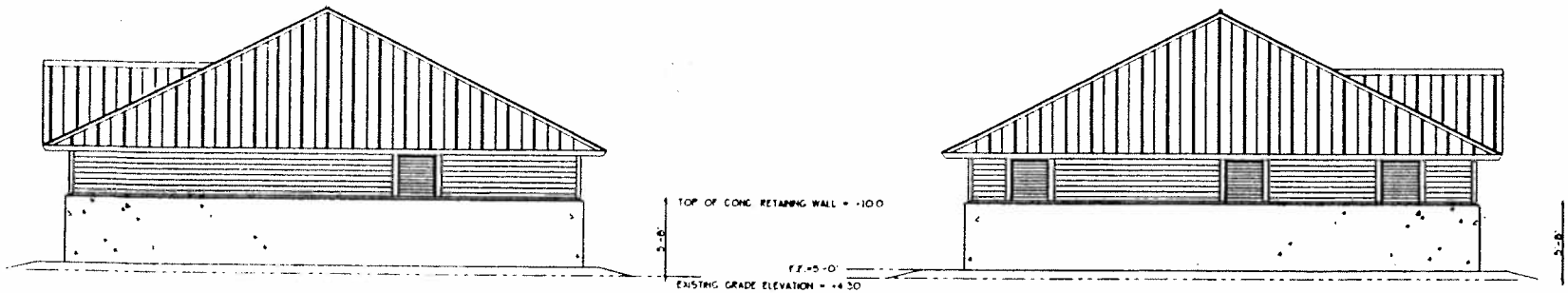
SCALE IN FEET

Waterfront Market Renovations Plan

Key West Bight Master Plan

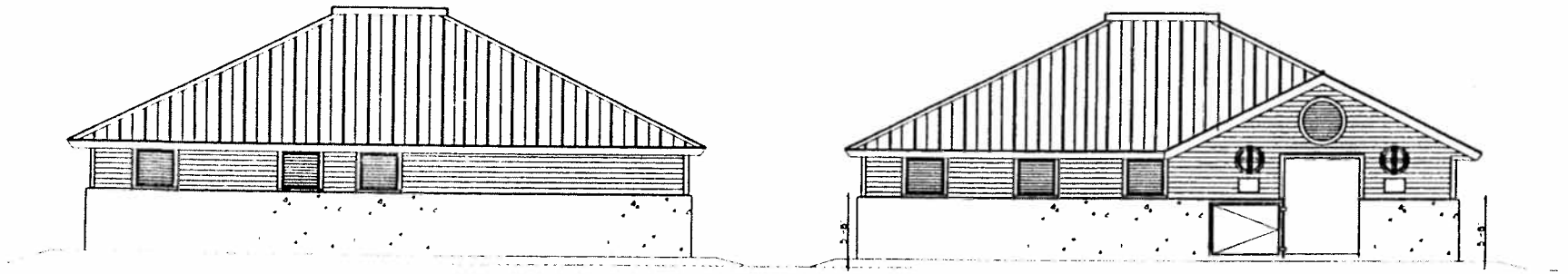
Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515



SOUTH ELEVATION

NORTH ELEVATION



EAST ELEVATION

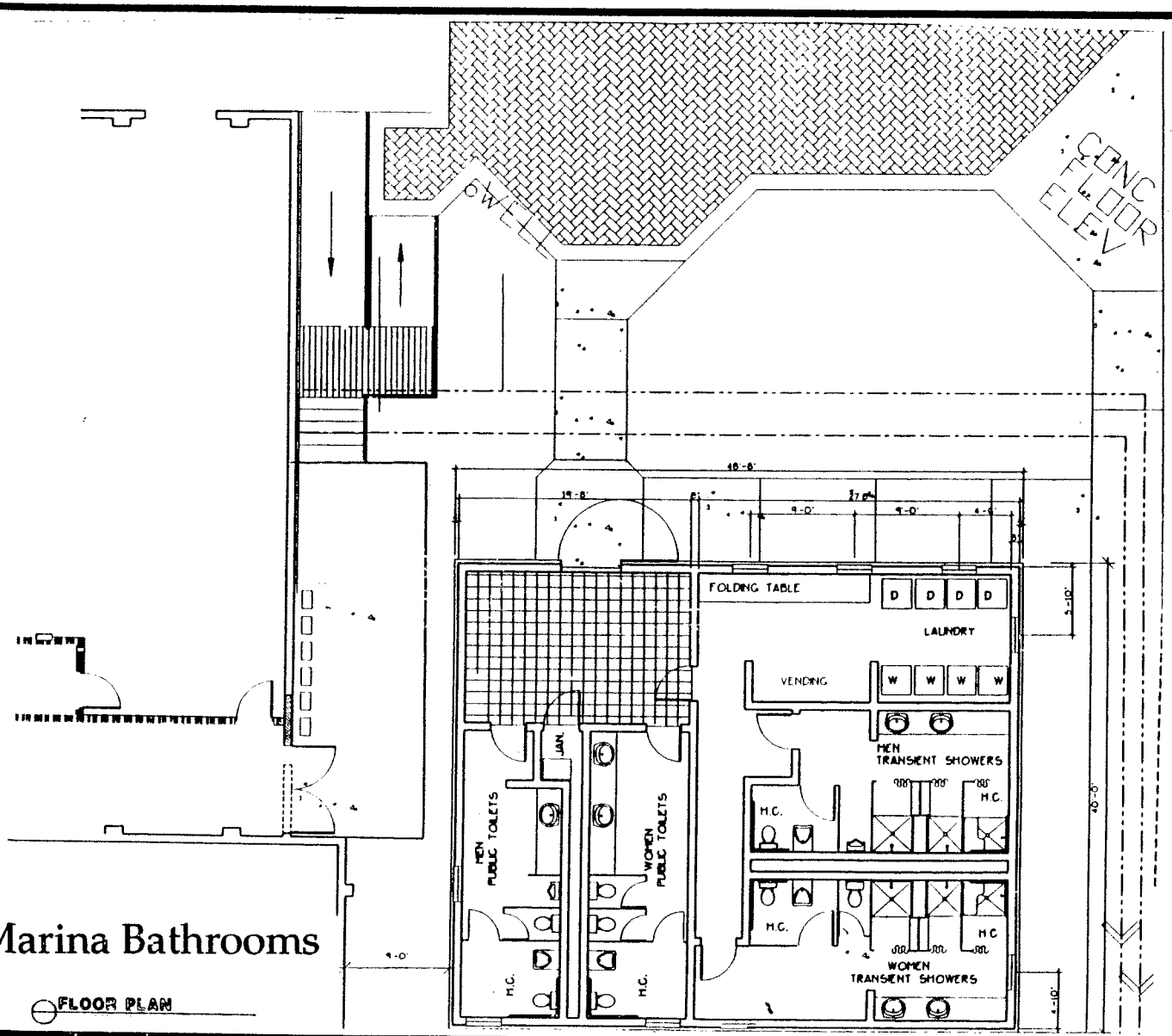
WEST ELEVATION

Public/Marina Bathrooms

Key West Bight Master Plan

Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515



Public/Marina Bathrooms

FLOOR PLAN

Key West Bight Master Plan

Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515

MARINA USE AND DOCKAGE

Maintenance and revitalization of the marina at Key West Bight is essential to the successful implementation of the goals of the Master Plan. Due to the fact that maintenance was long deferred on the docks, significant work must be done to all components of the water's edge of the project.

Completion of all programmed work depicted on the master plan will be carried out in at least two phases.

Phase (1) Will require approximately two years to complete, beginning with permitting is 1995 and will contain the following components:

- Completion of 1370 lineal FT. and 13261 SQ.FT. of new harbor walk stretching from Greene and Elizabeth Streets to the "Triangle" at Grinnell Street and Trumbo Road. The walk will vary in width, but will generally average 10 FT., and will be placed over both water and existing bulkheads.
- Repairs to existing docks to replace rotted timbers and failing hardware and to provide upgraded utilities - water, electricity and telephone.
- Completion of marina bathrooms with showers.
- Extension of existing dock C.
- Removal of existing dock B and A.
- Construction of new dock A.
- Repair and reconstruction of Historic Turtle Cannery and the Thompson Fish House.

Applications for the permitting of Phase (1) have already been approved by the Florida Department of Environmental Protection and Phase (2) permitting is under way.

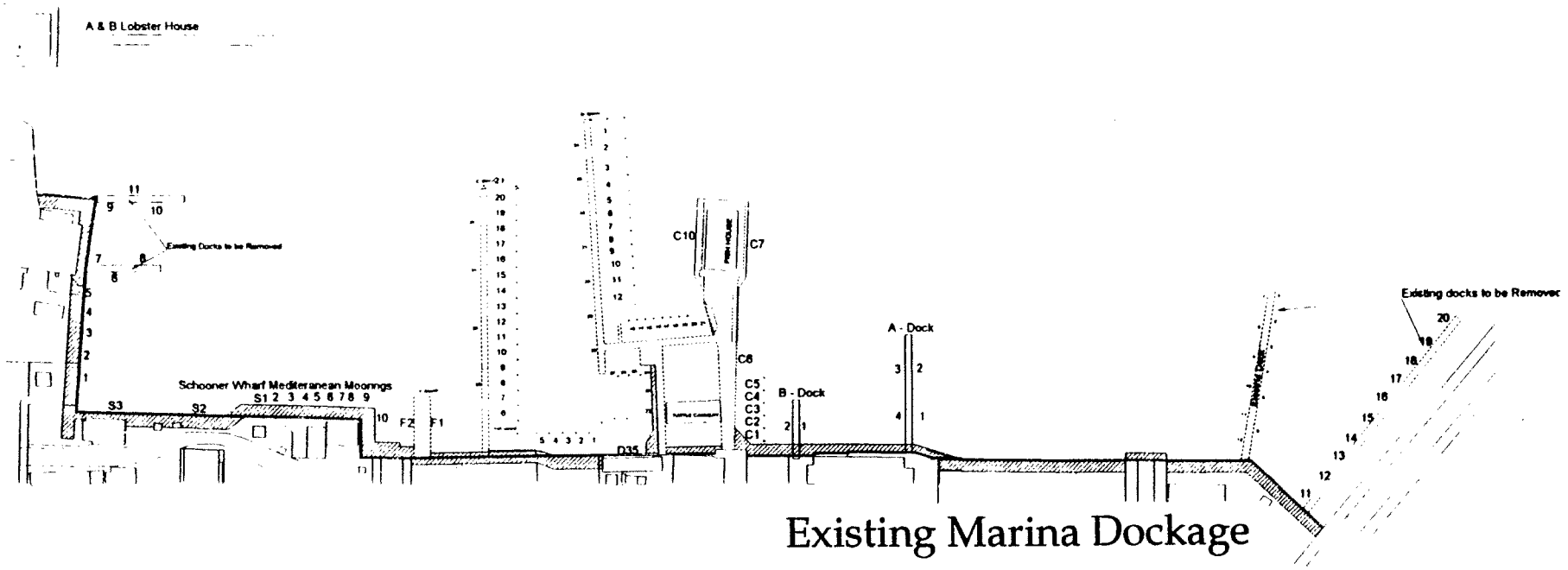
Phase (2) Construction will consist of the following components:

- Completion of new piers G, H1, H2 and H3.
- Completion of new piers T, and T2.

Completion of the T1 and T2 docks will depend upon the implementation of a public private cooperative project to provide the docking for larger vehicles currently not available at the Bight. The illustrations depict the existing dockage layout of the Bight and that proposed.

Appendix A contains pertinent excerpts from the narrative support of the FDEP permit for Phase (2) which describe in greater detail the improvements proposed.

Existing
Key West Bight Dockage Layout



Existing Marina Dockage

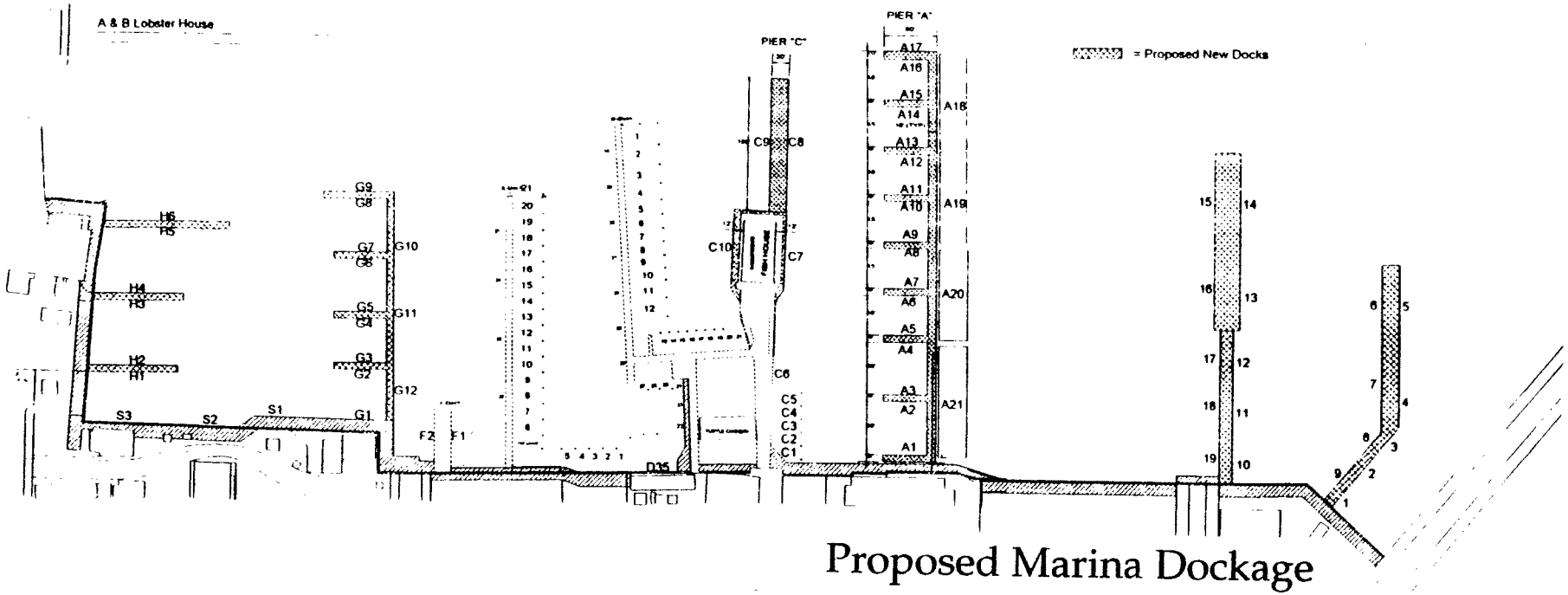
Key West Bight Master Plan

Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515

Proposed

Key West Bight Dockage Layout



Proposed Marina Dockage

Key West Bight Master Plan

Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515

KEY WEST BIGHT DOCKAGE

	Existing # of Slips		Proposed # of Slips	
Triangle	35		19	
A - Dock	3		21	
B - Dock	2		0	
C - Dock	8		10	
D - Dock	38		36	
E - Dock	30		27	
F - Dock	2		2	
Schooner Wharf	13		5	
Seaport Docks	11		0	
G - Docks	0		8	
H - Docks	0		6	
TOTAL	**142**		**136**	
Live Aboard Slips	25	18%	20	15%
Recreational Slips	80	57%	72	55%
Commercial Slips	32	25%	34	30%
	142		136	

This new mixture of docks will reduce the number of live aboards to at least the percentage shown above, and if the marketing of the Bight to larger recreational boats and commercial craft is successful, perhaps a reduction to 10% of the fleet mix can be achieved. Of course the slip mixture will constantly change depending upon the demand by the public for recreational boating and the feasibility of ferry service where much larger boats displace smaller ones.

ON GOING ASSOCIATED PROJECTS

Several privately funded projects and one significant public project are taking place on Bight property. These projects are either exempt from the requirements of a Community Impact Assessment Statement, or have been specifically exempted by the Key West City Commission. They are generally described here in order to set the context for the total impact of development of the property. Where impacts are known they have been stated in the appropriate section of this CIAS. These projects are separate and distinct from the public projects at the Bight which are exempt from the CIAS. These projects - the Caroline Street parking lot, drainage improvements, paving of other parking areas, landscaping, repair and replacement other utilities and normal building repair and maintenance do not require CIAS review.

The private projects are:

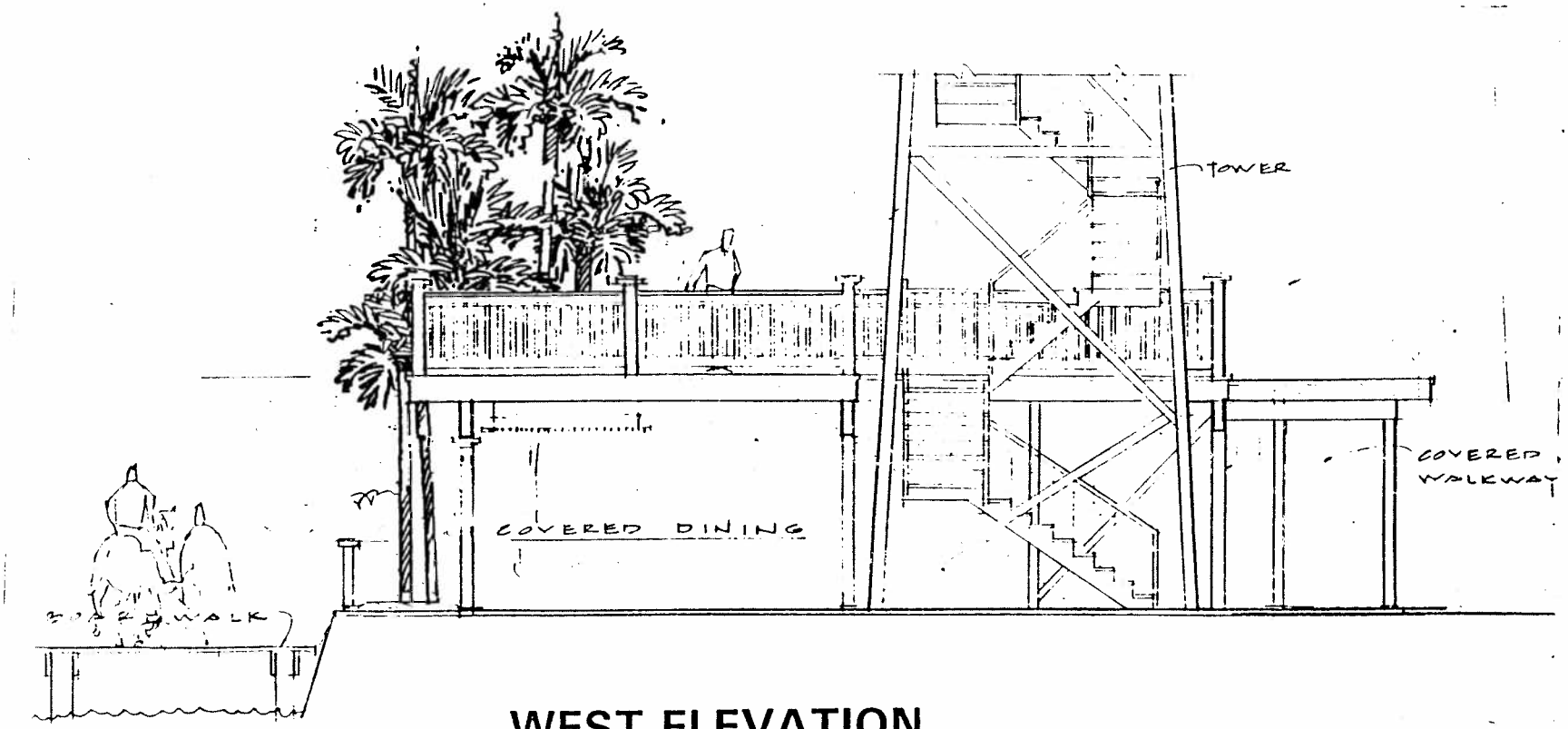
Relocation of Waterfront Market - This project involves the downsizing of the waterfront market, warehousing function and the relocation of market functions within the building in which it presently is situated. The floor plans for this project appear on pages —. The effect of this project have been accounted for in this CIAS.

PT's Addition - Twelve hundred (1200) square feet will be added to the lounge section of PT's to handle overflow during peak season.

Addition to Turtle Kraals - Turtle Kraals will add a 2422 SQ.FT. addition to the restaurant to provide for remodeled covered dining on the first floor and new second story covered dining in two locations. These additions are shown on pages 57 and 58.

The Caroline Street Parking Garage - The Caroline Street garage is presently under construction at the corner of Caroline and Grinnell Streets. This parking facility will accommodate up to 300 automobiles, and provides on street retail space. The garage will provide a "Park and Ride" function for those who would wish to ride public or private transit serving the facility. Signage directing traffic upon entering Key West to this location will provide this garage as an alternative to parking on the Street while visiting the Bight. This is consistent with the intended use of the Bight and Garage for two reasons:

(a) In order to build the garage with as large a capacity as is possible within the limited area of City ownership in this area, a portion of Bight property was allocated to the garage. The Bight Master Plan designated 80 parking spaces for the area adjacent to the garage and the Crab Shack restaurant. These 80 spaces were incorporated into the garage that will provide 300 spaces.



WEST ELEVATION

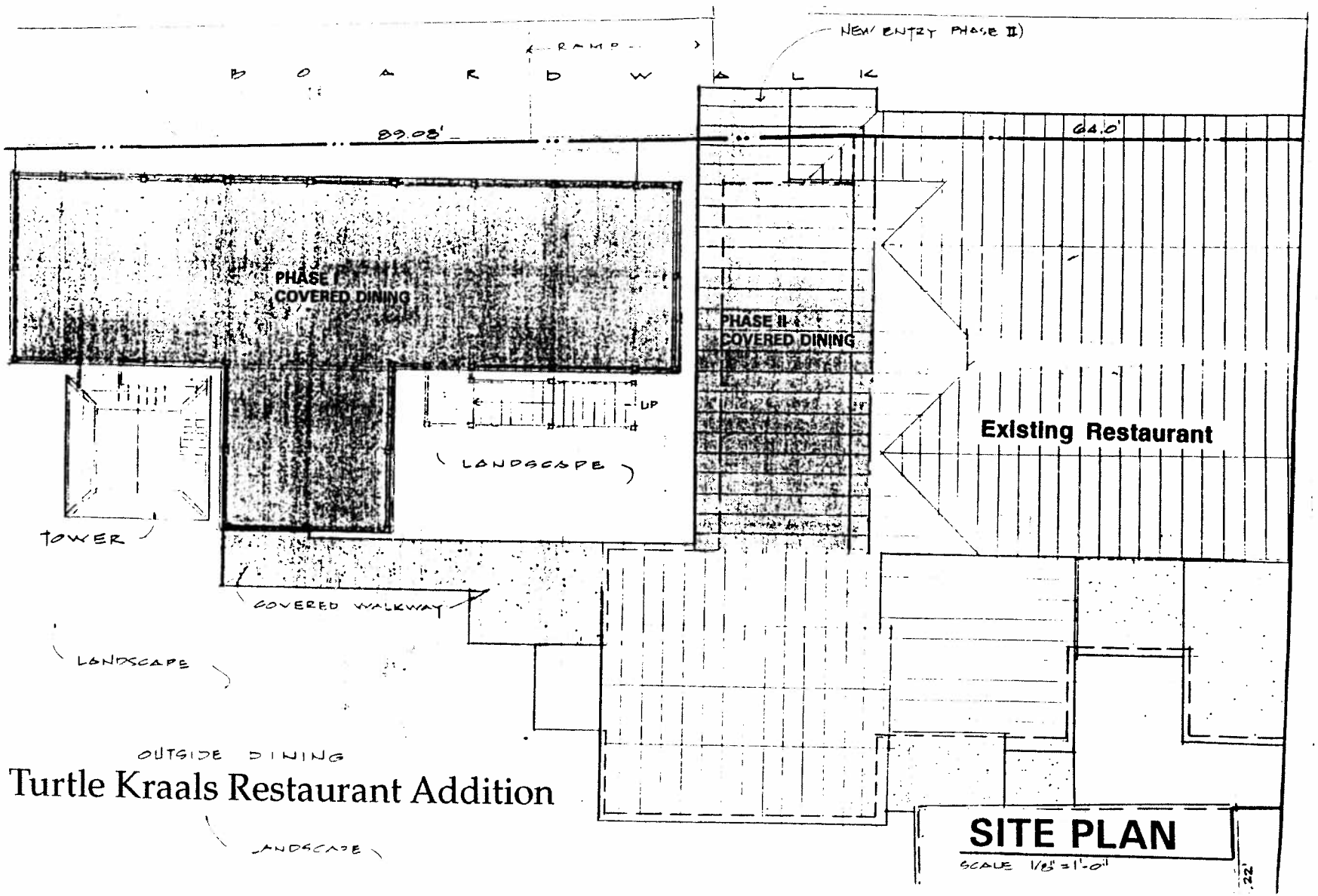
SCALE 1/4" = 1'-0"

Turtle Kraals Restaurant Addition

Key West Bight Master Plan

Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515



Key West Bight Master Plan

Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515

(b) Due to the location of the garage and Palm Avenue/Eaton Street, the garage will attract a percentage of those coming to this portion of the City to visit the Bight. The easy walk to all portions of the Bight, will make an attractive alternative to crowded unsecured on street parking.

PUBLIC FACILITIES

CIAS Requirement

1. Project Design

Identify aspects of the project design, which were incorporated to reduce public facilities costs. Describe building and siting specifications which were utilized to reduce hurricane and fire damage potential and to comply with federal flood insurance regulations.
(K.W. City Code Section 34.08 (b)(2))

The project is a major public project intended to preserve and enhance the existing waterfront ambiance and historic character of the Key West Bight. As such, certain public facilities improvements are a part of the design. Those include improvements to drainage, water and sewer lines, and landscaping public pier improvements. These improvements stabilized a deteriorating site and infrastructure, and will prevent the expenditure of more public funds at a later date to repair totally collapsed and dysfunctional systems.

In addition to the above basic approach to public facilities enhancement, the Master Plan will incorporate the following design features to further minimize public expenditures:

- Improved and safe emergency access will be provided by hard surface improvements to Margaret, Greene, Elizabeth, William and Grinnell, as well as non public right-of-way fire lanes and service entrances to all major portions of the site.
- New and remodeled buildings will be required to meet all existing Codes for sprinkler protection and emergency access points.
- In order to meet the Flood Plain Management Regulations of the Federal Emergency Management Agency, to preserve the historic character for buildings, and to minimize public expenditure, all new buildings when not elevated to meet parking requirements will be flood proofed. Whether elevated or flood proofed, all new buildings, or remodeled buildings exceeding remodeling costs equivalent to 50% of appraised value, will be designed to meet or exceed the more stringent wind loads of the Coastal Construction Building Code.
- New water lines and fire hydrants throughout the site will upgrade fire protection capabilities.

- New sewage pump out stations will be provided to service recreational and commercial water craft at the marina.
- Storage for fuel for boaters has been improved with the upgrading of the tank enclosures, containment systems and fuel delivery lines.
- Landscaping will be largely native, requiring little if any additional watering other than by rainfall.

2. Water Supply

CIAS Requirement

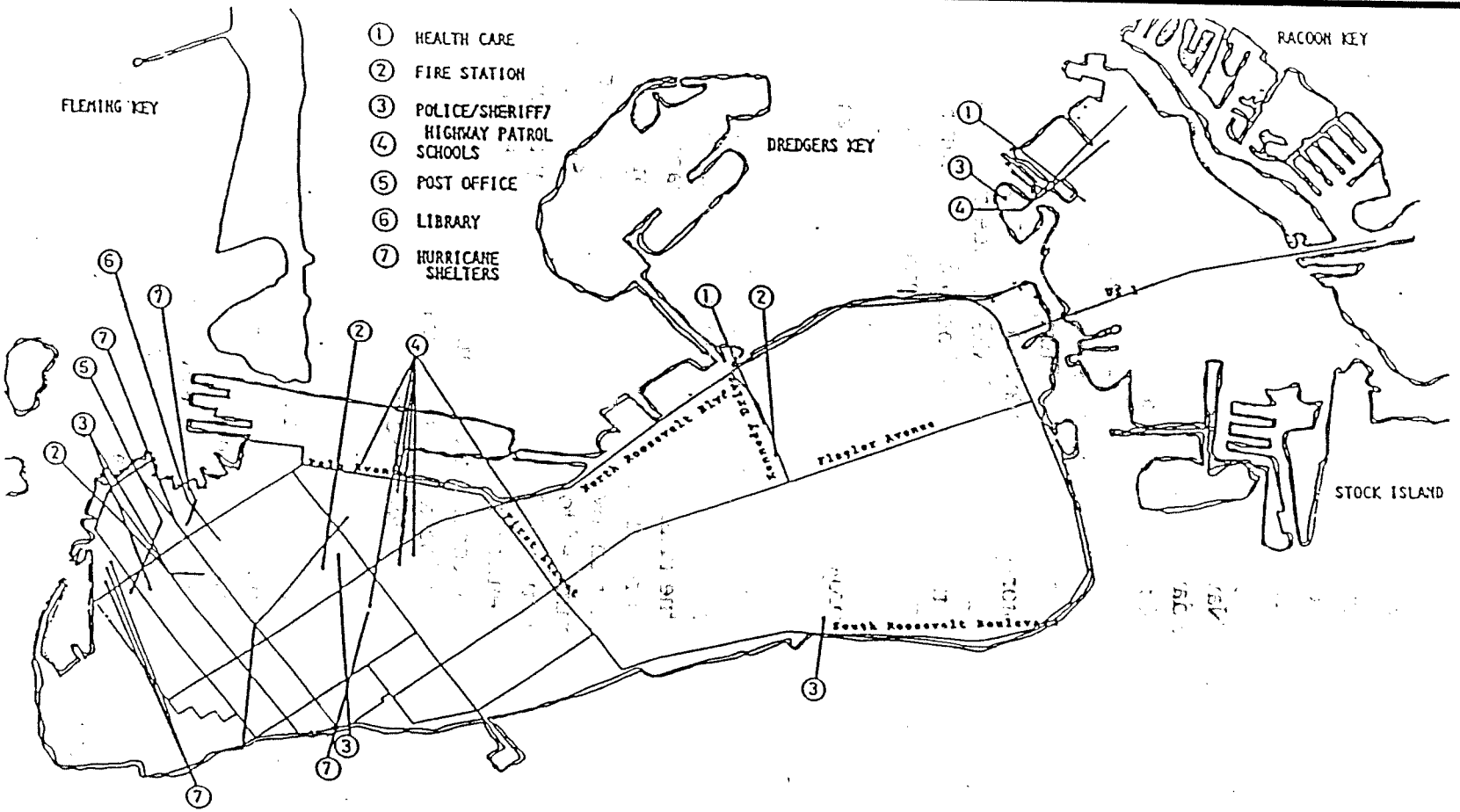
Identify project daily potable water demands and specify the consumption rates which have been assumed for the project.
(K.W. City Code Section 34.08 (C) (1) (a))

Florida Administrative Code provides estimated daily potable water demands for both commercial and residential development. Potable water demand in the code is equated to sewage flows, as potable water is used for toilet flushing hand washing, food preparation, cleaning etc. and is routed to the sewage disposal system. The table on the following page estimates the demand for all uses proposed for the Bight as depicted in the site plan. The ultimate demand may occur sometime after the year 2000.

The City of Key West is provided domestic water service by the Florida Keys Aqueduct Authority (FKAA), a political subdivision of the State of Florida, created by Special Legislation to provide domestic water service to all of the Florida Keys. FKAA owns and operates a well field and treatment facility at Florida City on the Mainland of Florida. Treated water is pumped through a transmission main from the Florida City Water Treatment Plant throughout the Florida Keys.

The transmission main discharges to distribution systems in each of the Keys before terminating at the storage tanks and pump stations that serve the Key West distribution systems.

Current well field capacity maximum daily flow is 22 million gallons per day (mgd). The annual average daily flow (AADF) pumped from the Florida City Water Treatment Plant into the FKAA water service area is 16.02. The remaining 5.98 mgd AADF was used by the balance of the Florida City WTP service area, which represents the remainder of Monroe County. The Florida Keys Aqueduct Authority (FKAA) currently has a consumptive use permit from the South Florida Water Management District (SFWMD) for a 14.0 mgd average flow, and they are in the process of modifying the permit to increase the withdrawal rate. In terms of the total future needs of the entire FKAA system, the Biscayne Aquifer is capable of providing the estimated 15.7 mgd. of projected total system-wide average daily water consumption.



Existing Public Facilities

Key West Bight Master Plan

Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515

The future annual average day needs of the FKAA Key West Area Water Distribution System needs are projected to be 5.13 mgd from the service area, exclusive of Navy use. Based on future needs without the Navy, the 5.13 mgd is equal to approximately 33 percent of the total projected average annual daily consumption of 15.7 mgd. The current Navy average annual water flow is about 1.0 mgd and based on the current projection of no increase in Navy personnel, the Navy average annual water flow should remain at about 1.0 mgd. When the 1.0 mgd of Navy flow is considered with the 5.13 mgd. the percentage of total system-wide average day consumption is approximately 39 percent. A maximum day consumption rate of 2.4 mgd is guaranteed by FKAA contract to the Navy, should the Navy require this much water. A total of 22 million gallons of storage serves the Key West system. The Key West Pump Station storage tanks provide both fire flow storage and equalization storage. The Stock Island Pump Station storage tanks provide the same, as well as additional storage for any planned or emergency outages, as described below. Although separated by 2 miles, the 5-MG storage tank near the Reverse Osmosis Plant is interconnected to the tanks at the Stock Island Pump Station and can supply water to those pumps. For those conditions in which water cannot be supplied to Key West, emergency water supply could be necessary due to transmission pipeline failure or major maintenance projects which would require water treatment plant or pipeline shutdowns.

The Stock Island Reverse Osmosis Water Treatment Plant is only used for emergencies because of the high energy costs. Because of the high preventative maintenance costs to maintain the Reverse Osmosis facility, the facility has been placed on "ready reserve" whereby it can be operated within 36 hours. The plant has an operating capacity of 2.7 mgd. Seawater is pumped into the plant from two 165 foot deep sea wells. After treatment by reverse osmosis, the water is pumped to the storage tanks for the Stock Island Pump Station. FKAA is also implementing a Contingency Plan whereby a plan has been developed, training is being implemented, tools and equipment are being purchased, and additional facilities are being constructed to quickly and efficiently mobilize FKAA work crews and contractors to locate and repair transmission main breaks that could occur and that would isolate the water source on the mainland from the water users throughout the Keys.

FKAA is also investigating, at Marathon, the feasibility of aquifer storage recovery (ASR) in the Keys. ASR is the underground storage of treated drinking water that is injected and recovered through the same well or wells and requires no retreatment other than disinfection. If ASR proves feasible in the Keys, large volumes of treated water will be stored underground, to be available for withdrawal during emergencies or during high demand periods. If ASR proves feasible in Marathon, the feasibility of ASR at Stock Island will then be investigated.

TABLE 4

KEY WEST BIGHT CIAS - POTABLE WATER DEMAND

Land Use	Size	Demand Factor	Demand in Gallons per Day
Restaurants	29350 S.F. 1427 Seats	60 gallons/per seat	88020
Lounges	1467 S.F. 185 Seats	20 gallons/per seat	3700
Professional Office	6400 S.F.	15 gallons/100 S.F.	960
Grocery			
• Day Sales & Green Goods	4000 S.F.	10 gallons/100 S.F.	400 gallons
• Deli/Bakery	500 S.F.	40 gallons/100 S.F.	200 gallons
Retail Speciality	30454 S.F. 40 bathrooms	200 gallons/bathroom	8000 gallons
Marine Repair Service	5975 S.F. 20 employees	15 gallons/employee	300 gallons
Warehouse/ Waterfront Market	5300 S.F.	Included in grocery above	
Marina			
• Live aboard	10	100 gallons/day	1000 gallons
• Recreational	90	50 gallons/day	4500 gallons
• Commercial Craft (961-1061 persons)	36	4 gallons/passenger	3844-4244 gallons
Landscaping		Assume	2000 gallons/per day
TOTALS			**112924-113324 gallons/per day**

NOTES:

1. While some Bight restaurants use single serving utensils and plates, and are open less than 16 hours per day, a conservative approach was used to estimate water demand over the phased build out of the project.

2. Seats in Restaurants/Lounges are estimated based on the following formula:
gross size x 75.0 % x 15 SQ. FT./Seat = no. of Seats

3. For retail speciality - All stores were assumed to have two bathrooms, even though the number of employees in some stores would allow only 1 bathroom. There are 16 retail stores identified by name or location in the Master Plan; assume an increase of 25% above this figure where retail space would be further subdivided with additional bathrooms.

4. For marina usage there is no listing for marina live aboard or recreational boats. Given the high variability of passengers for recreational and live aboard boats. Live aboards were assumed to be equivalent to a single family 1 bedroom home, and recreational boats equivalent to a transient recreational vehicle.

5. Landscaping is averaged at 1000 gallons per day with little usage during rainy season.

CIAS Requirement

Provide proof of coordination with the Florida Keys Aqueduct Authority. Assess the present and projected capacity of the water supply system and the ability of such system or provide adequate water for the proposed development.
(K.W. City Code Section 34.08 (c) (1) (-))

Please see Appendix D for copy of correspondence from the Florida Keys Aqueduct Authority. As noted in it's Jan 22 letter FKAA has programmed an upgrade project for water mains on Caroline, William and Margaret Streets for the summer of 1996. A similar upgrade on Greene Street has already been completed and with these improvements, the demands of the Bight as presently planned will be met.

CIAS Requirement

Describe measures taken to assure that water pressure and flow will be adequate for fire protection for the type of construction proposed.
(K.W. City Code Section 34.08 (c) (1) (c))

Phase (1) improvements to the Bight will upgrade on site water lines and fire hydrants to provide consistent water pressure throughout the Bight

3. Wastewater Management

CIAS Requirement

Provide projection of the average daily flows of wastewater generated by the development at the end of each development phase. Describe proposed treatment, quality of effluent and location of effluent and sludge disposal areas. Identify method and responsibilities for operation and maintenance of facilities.
(K.W. City Code Section 34.08 (c) (2) (a))

The average flows of waste water for the multiple uses at the Bight are equivalent to the potable water demand, with the exception of landscape irrigation @ 1000 gallons per day. Therefore, the total generated flows are 110924 to 111324 gallons per day.

The City's sanitary utility is under the general management of the Technical Services Director. The operation and maintenance of the pump stations and the wastewater treatment facility are performed under a contract operations agreement with OMI, Inc. OMI reports directly to the Utilities Director.

The City of Key West sanitary sewer system currently serves all parts of the City except three areas: The southeast quadrant surrounding the airport; a small area along North Roosevelt Boulevard and West of the the bridge to Sigsbee Park; and that part of the City on Stock Island. In these areas individual on-site septic systems or small package

The City's existing wastewater collection and transmission system currently consists of approximately 295,000 linear feet of gravity and pressure sewer pipe ranging in diameter from 8 to 30 inches. The collection system is divided into eight districts (A, B, C, D, DA, E, F, G) with a pump station located in each district. The waste flows by gravity, or is pumped from the northeast part of the island to pump station A on Amelia Street at the southwest point of the island. From there it is pumped approximately 10,000 feet across town through a 30 inch force main to the wastewater treatment plant on Fleming Key.

The plant has been in operation since February 1989. It is a secondary treatment facility and uses a complete mix, extended aeration, activated sludge process.

After treatment, the treated effluent is pumped approximately 10,000 feet back across town from the treatment plant through a 30 inch diameter force main where it is connected at pump station "A" to the existing 24 inch diameter outfall line and discharged into Hawk Channel and the Atlantic Ocean at a depth of approximately 20 feet.

In addition, there are five private pump stations (Key Plaza, Howard Johnsons, Inn at the Wharf, Blue Lagoon and Holiday Inn-Beach side) that discharge into the City's system; this excludes any pump stations on Navy property.

In response to the request for coordination the City's Utilities Director reports excess treatment capacity in the waste water treatment plant, and effluent pumping upgrades to be completed in the next 18 months.

4. Solid Waste Generation

CIAS Requirement

Identify projected average daily volume of solid waste generated by the development at the end of each phase. Indicate proposed methods of treatments and disposal.
(K.W. City Code Section 34.08 (c) (3) (a))

Based on figures supplied by the Planning Department and estimates provided by the County Solid Waste/Recycling Department the calculated solid waste generated by major use are the following:

TABLE 5

Land Use	Generation Factor	Land Use Size	Total Waste Week	% Recyclables
Office	0.05 lbs/week/Sq.Ft.	6400 S.F.	320 lbs	88% (282 lbs)
Retail	0.22 lbs/week/Sq.Ft.	30454 S.F.	6699 lbs	84% (5624 lbs)
Restaurant	28 lbs/week/Seat	1467 Seats	41076 lbs	55% (22592 lbs)
Grocery Warehouse	0.06 lbs/week/Sq.Ft.	9800 S.F.	588 lbs	75% (441 lbs)
Marine Repair	0.06 lbs/week/Sq.Ft.	5975 S.F.	359 lbs	85% (305 lbs)
Marina	10 lbs/week/boat	136 Boats	1360 lbs	70% (931 lbs)
TOTALS	-	-	**49252 lbs**	**30194 lbs**

NOTES:

A. Marina usage similar to single family home @ 5lbs/person/week

B. Recycling efficiencies will depend upon the availability of full curb side pick up throughout the development time frame. Commercial tenants pay for recycling at the Bight.

CIAS Requirement

Provide proof of coordination with Key West Public 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 services to the proposed development.
(K.W. City Code Section 34.08(1) (3) (b))

Please see appendix for response to inquiry regarding solid waste disposal.

Collection of solid waste is currently handled by BFI, Inc. and by individual waste generators and disposed of at the Key West landfill located on Stock Island and operated by the City as the Southernmost Waste to Energy Facility.

The current total City of Key West solid waste stream averages 4,796 tons per month or 57,552 tons per year of which approximately 75% is suitable for incineration. On the average, BFI, Inc. accounts for 57.8 percent, other haulers 27.1 percent, U.S. Navy 11.0 percent and City trucks 4.1 percent of the total waste stream.

The average overall waste generation rate for Key West for the period of June 1987 through May, 1988 was 8.8 lbs/capita/day, based on total population, including transient population and 10.5 lbs/capita/day, based only on permanent plus military population.

The City of Key West resource recovery facility, known as the Waste-to-Energy Facility, incinerates most burnable waste and generates electricity that is sold to City Electric System. The service area of this facility is all of the City of Key West and the portion of Monroe County west of the Seven Mile Bridge.

The facility has two mass-burn incinerator trains with capacities of 75 tons per day (TPD) each, for a total capacity of 150 TPD. The facility currently incinerates approximately 120 tons per day on average.

The landfill accepts both unburnable waste that cannot be recycled and ash from the resource facility. However, the existing landfill does not comply with Chapter 17-7, Florida Administrative Code, because it does not utilize a liner and, therefore will continue to operate under a constant order of the Department of Environmental Protection. Closure is now proceeding on schedule. The cities of Key West, Key Colony Beach and Layton, along with Monroe County, have formed a Joint Solid Waste Task Force to explore options for future waste disposal methods and sites. Closure of the existing Stock Island landfill is occurring in two phases, the first half began in 1991 and the second half began in 1993. The ash residue from the landfill site is transferred to the Chambers Landfill in Okeechobee for final disposal.

The 50402 pounds of daily solid waste generated by the development should not cause an overburden to the City's waste stream processing.

5. Transportation Impacts

CIAS Requirement

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 and peak hour traffic. Evaluate the capacity and provide recommendations to the existing network.
(K.W. City Code Section 34.08 (c) (4))

The effects of the full development of the Master Plan is portrayed in the traffic analysis completed by Tindale-Oliver and Associates, Inc., which is incorporated into this report as Appendix A.

In order to portray a fair and accurate assessment of traffic from the Bight projects which will be built over a longer time frame, other possible projects such as "Conch Harbor" (the privately funded marina and upland development project at the Bight), the possible relocation of Strunk Lumber, and others were analyzed in the traffic analysis as well.

In summary, the conclusions of the study are "....roadways within the study area will operate at a satisfactory condition with the addition of the Key West Bight Master Plan. However, two intersections are projected to have level of service deficiencies by the year 2000

Potential solutions to mitigate the level of service deficiencies at these two intersections are presented ...."

Specifically, the traffic analysis concludes the following, which should be reviewed in the context of the entire report. It should be noted that if any of the other proposed projects within the study area, Strunk Lumber Redevelopment, Conch Harbor, or Jabour Properties develop to a lesser intensity or density, then the impacts described would be less, and the possible mitigation not required, or required at a later date.

Further, should the improvements described below be needed, the costs of providing them may be shared by the developments adding traffic through the study period, as well as the public as a whole. The City is presently undertaking a City Wide Traffic Study which may identify appropriate methods to share and apply the proportionate costs of traffic improvements.

Overall, projected roadway level of service conditions within the study area for the year 2000 are generally good with Eaton projected to operate at level of service C. The intersection level of service analysis projected that with 2000 traffic volumes, all intersections will operate at LOS C or better, except for Eaton and Margaret, and Caroline and Grinnell. As stated earlier, the Eaton and Margaret intersection level of service problem is due to the southbound left turn movement from Margaret to Eaton. Installation of a traffic signal at this location may be warranted by the year 2000, it is recommended that the City not program funds for this improvement until a signal warrant analysis can be completed. Further, since the 1995 level of service is C, the warrant analysis should be done at a point in time when traffic conditions change or when a significant portion of the proposed development at the Key West Bight is completed.

The other level of service deficiency at Caroline and Margaret is due to the eastbound right turn movement from Caroline to Margaret. Construction of a right-turn lane on Caroline by the year 2000 results in a projected level of service C. The travel patterns within this study area will likely change when the new parking garage at Grinnell and Caroline is completed and operational. It is recommended that the City closely monitor traffic patterns after the garage is opened and when a significant portion of the proposed development of the Key West Bight is completed. If the need for a right-turn lane is still justified, then its construction should be planned.

6. Other Public Facilities

CIAS Requirements

Discuss provisions included in the proposed developments to minimize adverse effects upon the following facilities: Education, police, fire protection, recreation, electric power, health care and disaster preparedness.
(K.W. City Code Section 34.08 (c) (5))

Education

The Monroe County Board of Education recorded a student enrollment of approximately 9,200 students for the 1994-95 school year for Monroe County and estimated that its facilities can serve a total capacity of 9,399 students, leaving an available capacity of 200 students. Glynn Archer Elementary School for grades K-5 is within one (1) mile of the project on White Street, Key West. The facility capacity is 608. As of 3/95, enrollment was 494 with a remaining capacity of 114. Horace O'Bryant Junior High School, for grades 6-8 is within one (1) mile of the project on Leon Street, Key West. The facility capacity is 892. As of 3/95, enrollment was 849 with a remaining capacity of 43. The Sands School for exceptional students is within one (1) mile of the project. The facility capacity is 109. As of 3/95, the enrollment was 85 with a remaining capacity of 24. Key West High School is within two (2) miles of the project on Flagler Avenue, Key West, for grades 9-12. The facility capacity is 1,467. As of 3/95, enrollment was 1.068 with a remaining capacity of 399. Florida Keys Community College is within three (3) miles of the project on Junior College Road, Stock Island.

It is assumed that the majority of new employees will come from the existing Key West labor force and the project is expected to have a minimal impact on the Monroe County School System. The school system has surplus capacity at all levels. The project is considered real property and will contribute taxes to the school system, with the exception of exempted public areas, which account for approximately 33% of the appraisers "just" value.

Police

The Key West Police Department consists of 109 employees, 77 of whom are sworn officers. Patrol officers work in three 8-hour shifts. The department's progressive "community policing" philosophy includes foot and bicycle patrols supplementing the motorcycles and police cars, which are downsized to accommodate the island City's narrow streets. Its community policing unit is pro-active, rather than reactive, in response to crime, focusing on such crime prevention strategies as neighborhood crime watches, cleanups, employment assistance, and youth programs. The auxiliary program and the High School Law Enforcement Cadet Program involve citizens in many facets of the department's operations. A school resource officer teaching the D.A.R.E. curriculum, a narcotics squad and a DUI Task Force are among other special purpose units the Key West Police Department incorporates. The department works the Sheriff's Office and other area enforcement agencies and actively supports the highly successful new "Crime stoppers" network.

The project will be well lit and property lines will be landscaped to deter unauthorized entry onto non-public areas.

In the Key West Police Departments response to the request for coordination identified the need to provide 24 hour security for the Bight and its improvements. The number of sworn police officers and their cost is not estimated by the department.

To mitigate undetermined costs for City Police services, the Bight may require individual large tenants to provide their own security personnel, as well as security systems in all new and renovated buildings, In addition, the design of the Master Plan is such that areas where undesirable elements have congregated or slept at certain points have largely been eliminated. Additional security personnel will be added consistent with the revenue produced by new tenants and construction.

It appears from records of and conversations with Bight management personnel, that the number of incidents requiring police assistance are fewer in number than similar establishments on Duval Street and other high intensity tourist zones in the City.

Fire Protection

The Key West Bight will be serviced by Station No. 2 located at 425 Angela Street and Station No. 3 located at the corner of Grinnell Street and Virginia Street. Station No. 2 currently maintains and operates a pumper with a capacity of 1500 gpm with a 750 gallon tank and a ladder/pumper with a 75 ft. aerial and a 400 gallon tank. Station No. 3 operates a pumper with a capacity of 1000 gpm with a 750 gallon tank. The development is designed to allow good vehicular access to all parts of the site. If suggested by the Fire Marshall that it is important that access to dock/pier entrances and exits and fire department connections be provided. The improvements contained in Phase (1) of the Master Plan will provide the upgraded docks and piers, together with new and upgraded water lines, pressure fire lines and hydrants together with specified fire lanes and fire wells. This on site improvement together with the main lines in Greene, Caroline, Margaret, and William Streets programmed for the summer of 1996 will provide sufficient fire flow for the entire Master Plan.

The Fire Marshall also suggests that responsibility for fire code improvements to all commercial buildings be clearly defined. The Bight management or new tenants who upgrade or construct new buildings must meet requirements of adapted fire code, when threshold improvements occur. Bight management assumes the direction of this policy to all new improvements.

Recreation

The Key West Bight area and Master Plan is not identified as a recreational area per — in the City Comprehensive Plan, nor is it programmed as one in the Capital Facilities Element of the Plan. However, as the Master Plan will result in an upgraded public marina and spaces for recreational boaters, and given that the "entertainment" offered by the boardwalk, shops and restaurants can be considered commercial recreation the project will provide broader "recreational" pursuits for visitors.

The Comprehensive Plan does not identify any recreational deficiencies in the community through the planning period, and the Key West Bight Master Plan will not negatively affect that situation.

Electric Power

City Electric System (CES) currently provides service to the site. No problems have been previously identified which would prevent CES from expanding service to the proposed development. CES has a "Double Contingency Policy" in effect locally since 1978 which means that local production should meet the peak system demand even with two normal load units out of service. Several alternatives for increasing the system capability are currently under consideration. CES is now connected to, and is part of, the new state grid electric system.

All the new buildings are designed to take advantage of passive energy techniques such as shading and natural ventilation. Buildings will be well insulated and fluorescent lighting will be the predominant lighting source. Windows and openings in direct sunlight will be shaded by awnings or structure. Landscaping will shade buildings and grounds, thereby reducing heat gain. All structures will comply with Chapter 553 Florida Statutes, "The Florida Thermal Energy Code."

Health Care

Key West is serviced by one healthcare system with two hospitals. Lower Florida Keys Health System (Florida Keys Memorial Hospital) on Stock Island is a 120-bed public facility approximately 15 minutes from the Key West Bight. Lower Florida Keys Health System (dePoo Hospital) on Kennedy Avenue is a 49 bed public facility less than 10 minutes away on Kennedy Drive. A merger of the two hospitals was recently implemented; however, no substantive changes in health care delivery should result which would affect this project. The site design provides unobstructed vehicle access for emergency medical service by local ambulance service. The Key West Bight Master Plan will have a minimal impact on healthcare services.

7. Disaster Preparedness

The major natural disaster potential for Key West is from seasonal hurricanes. Except for a small portion of Old Town, all of Key West is below the statistical 100 year flood level .

All new structures will be designed to meet the minimal floor elevation as required by the Federal Emergency Management Agency or will be flood proofed as is consistent with remodeling budgets, or historic preservation needs. The Bight Master Plan area lies within three flood zones, VE-10 (velocity zone) near the water's edge, and AE-9 and AE-7 (accumulation zone) further landward. The constraints on construction and remodeling within each zone are different. The map on the following page is an excerpt from the Federal Flood Plain Management Flood Insurance Rate Maps adapted by the City that shows the location of the Bight in relation to the isopleths indicating Flood Zones.

Many of the structures at the Bight pre date the Federal Institute of Flood Insurance Rate Maps (1974) and are eligible for improvements at existing level under certain limited circumstances.

The Comprehensive Plan defines the Coastal High Hazard Area (CHHA) as including all areas within the City which lie within FEMA velocity zones. In the July 1993 Comprehensive Plan, the City identified only one public infrastructure project to be completed in the CHAA, the restoration of the White Street Pier. At that time no definite reconstruction plans had been identified for the Bight, and in fact, the City had not completed the acquisition and planning for the Bight.

Since the adoption of the Comprehensive Plan the Master Plan for the Bight has been approved by the City, the Management Board established, Phase (1) construction plans approved by the City and the Florida Department of Environmental Protection, in which critical repairs to the infrastructure, utilities, and docks were approved and now in the biding process.

These critical infrastructure improvements within the CHHA are being made in order to stabilize and protect public investment in the Bight as an integrated mixed use project.

The historic properties are diverse in both age, character and importance.

Of the structures at the Bight only two are listed on the National Historic Register - The Turtle Kraals Cannery and The Thompson Fish House. The other existing structures - The Ice Plant, Seaport Buildings, Lazy Way Shops, Schooner Wharf Bar and Building, Waterfront Market and Building, Turtle Kraals Restaurant, Half Shell Raw Bar, Dive Center Building, Piano Shop, Gallery Building, and Triangle Buildings are either of current origin or recently and extensively remodeled Commercial Fishing Industry buildings which have little individual historic significance.
As a collective representation of the primary use of the use of the Bight as a shrimping and fishing commercial harbor from the 1950's through the late 1970's only glimpses of that once vital part of Key West's economy remain. These can be found in the rough and jumble mixture of buildings on pea rock lots, an odd assembly of piers and boats.

As a result of the significant change in the Bight and surrounding areas since the 1960's. The Turtle Kraals Cannery and Thompson Fish House have become even more important. In May of 1995, the City applied for grants to restore and repair these two structures so that they could act as the centerpieces to the preservation and renewal of the Historic Seaport theme envisioned by the Bight Master Plan.

Excerpts from the grant application presented below describe the importance of these structures within the Bight.

"The Key West Bight is the island's historic working waterfront, having hosted sponging, fishing, turtling, and shrimping activities over the years since the late 18th Century. The Thompson Fish House, Turtle Cannery and related Turtle Kraals (pens) comprise the historic core of this unique maritime resource.

The Thompson Fish House, constructed prior to 1926, is a 1 1/2 story 36' x 72' concrete building with gable roof which will be rehabilitated for a boat-building shop, ship supply store, and the office of the harbor-master. Its exterior will be restored to be consistent with historic documentation provided under previous grant-assisted projects for National Register nomination and construction documents.

The Turtle Cannery building, constructed prior to 1929, is a one-story 21' x 50' wood-framed, gable-roofed structure with wood and metal cladding which will be dismantled and reconstructed according to historic documentation provided under previous grant-assisted projects. A 14' x 25' non-contributing addition on the east end will not be reconstructed, leaving the original east entrance accessible. A maritime history museum is proposed as the intended use, with interpretive education exhibits explaining the evolution of the various maritime trades that have been located at the Bight over the years. Although the economic viability of such trades has long since waned, the historical context of these trades provides authenticity in creating awareness and appreciation for maritime history.

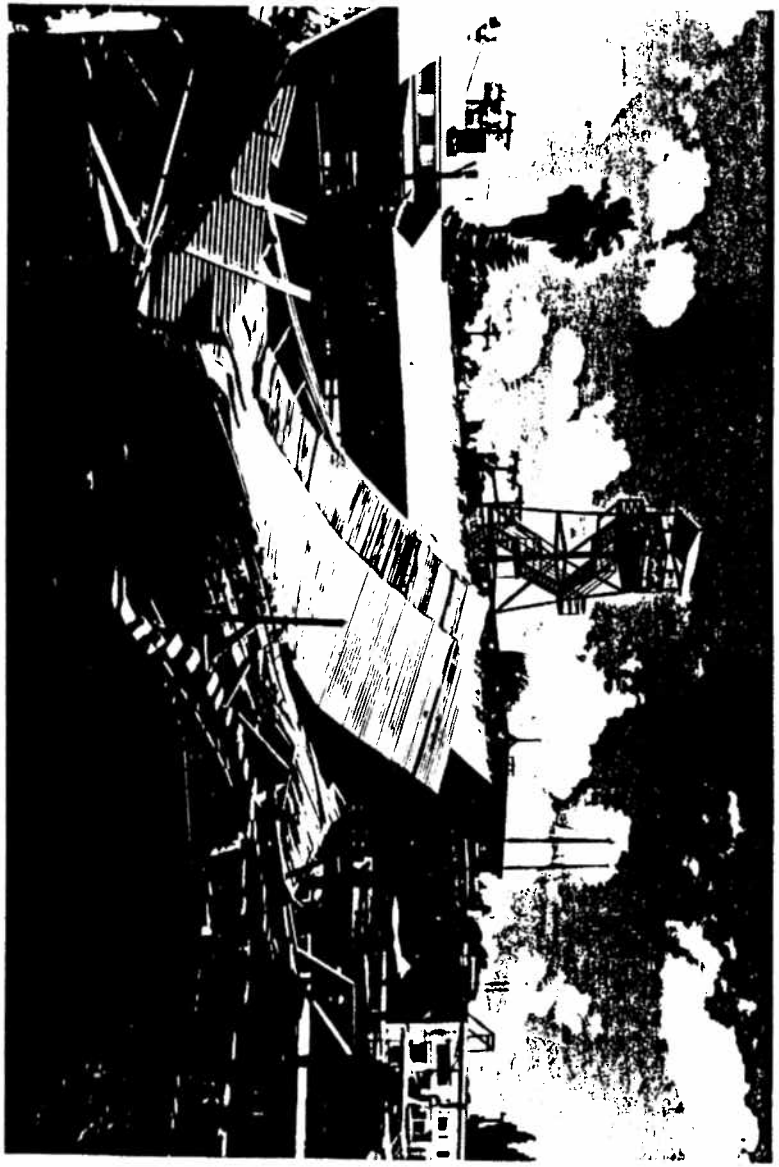
Concrete members which define and enclose the Turtle Kraals (pens) in which the turtles were kept will be stabilized in order to prevent further displacement or loss of this historic element of the complex.

The structures were individually listed on the National Register on June 23, 1994.

The Thompson Fish House, Turtle Cannery, and Kraals have a long association with the maritime industries in Key West and the Keys. Commercial fishing and turtling flourished throughout the 19th and into the 20th centuries, until the discovery of "Pink Gold" in 1949 brought the shrimping industry to Key West. Regulations imposed on turtling in 1971 brought an end to that industry, but fishing and shrimping continued on a reduced scale.

Thompson Enterprises developed and managed extensive facilities between 1910 and 1951 with sponging, turtling, fishing and ice manufacturing, under the leadership of Norberg Thompson, who also served Key West as Mayor and Monroe County as Chairman of the County Commission.

The Fish House, Turtle Cannery, and Turtle Kraals each retain their original character to a substantial degree, despite the advanced deterioration of the Cannery and defects in the concrete walls of the Fish House, and provide in their water setting a unique representation of a working waterfront in the 1920's. "The structures are significant in local state history for their value as industrial facilities uniquely suited to the maritime activities they accommodated."



Turtle Kraals

Thompson Fish House

Key West Bight Master Plan Historic Structures at the Bight

Community Impact Assessment Statement

The Craig Company
PO Box 372
Key West, FL 33040
305/294-1515

CIAS Requirement

If the project is located within either of the historical preservation districts, include a review of the project impact upon historic resources by the Old Town Restoration Commission.
(K.W. City Code Section 34.08 (e) (2))

The City of Key West Historic Architectural Review commission performs reviews on proposed development within the City's historic district. As each phase of the Master Plan moves from the general land planning phase to the specific construction proposal phase, each of these individual projects will be submitted to the HARC for approval.

11. Economic Resources

CIAS Requirement

Provide an analysis of the estimated average Ad Valorem Tax yield from the proposed project during development. Indicate assumptions and standards utilized including, but not limited to, assessed value, exemption millage rate.
(K.W. City Code Section 34.08 (f)(1))

The table on the following page illustrates the current assessed value of the parcels of the Bight on which leased buildings are located. The table also indicates tax assessments and exemptions.

At present for last tax year, existing assessed value of land buildings was $12879718 Total tax liability for all parcels is $158,283 The taxes are paid by the City, and all tenants share in this responsibility by paying their proportionate share by common area maintenance charges.

TABLE 6

KEY WEST BIGHT CIAS
EXISTING APPRAISED VALUE AND AD VALOREM TAXATION ESTIMATES

Real Estate ID Number	Description	Assessed Value	Exemptions	Taxable Value	Tax Liability Estimate
1. 72082-003800	Key West Seaport Parcel "E"	$3452311	$1070216	$2382095	$42609
2. 72082-003900	Lazy Way Parcel "F"	$1128279	$ 11282	$1116997	$19980
3. 72082-004000	Triangle Parcel "C"	$ 812814	$ 138178	$ 674636	$12067
4.72082-004200	Waterfront to Caroline Street Parcel "A"	$2421419	$ 677997	$1743422	$31185
5. 72082-004300	Area between Market & Turtle Kraals to Caroline St. Parcel "A"	$ 764021	$ 397290	$ 366731	$ 6559
6. 72082-004400	Turtle Kraals to Caroline Street	$1569029	$ 549160	$1019869	$18242
7. 72082-004500	Half Shell to Caroline St. Parcel "B"	$2058970	$ 947126	$1111844	$19888
8. 72082-004600	Crab Shack Parcel D-1	$ 389503	$ 109060	$ 280443	$50164
9. 72082-003800	Easement parcel for Southard Market and Paul Tripp, Inc.	$ 283372	$ 130351	$ 153021	$ 2737
TOTALS		**$12,879,718**	**$4,030,668**	**$8,849,058**	**$158,283**

NOTES:

1. Tax year ending 1995.

2. Millage Rate 17.8875

3. The County Appraiser, the Key WEst BIght management Board and the City Manager in JUne 1994 agreed to the exemptions shown above. The exemptions apply to common and public areas.

TABLE 7

KEY WEST BIGHT CIAS
ESTIMATE OF ADDITIONAL PROJECT VALUE AT FULL BUILD OUT

Phase (1) Improvements Project	Public Cost	Private Cost
• Caroline St. Parking lot	$ 532,779	
• Utility & Drainage Improvements	$ 694,910	
• Public and Marine Bathrooms	$ 553,850	
• Waterfront & Marketplace	$ 271,900	
• Landscape, Lighting and Signage	$ 186,180	
• Public Plazas	$ 314,870	
• Harbor Walk	$ 509,650	
• Marina Improvements	$1,152,820	
• Repair and Reconstruction of Thompson Fish House and Turtle Cannery	$ 400,000	
• BO's Fish Wagon		$ 71,500
• PT's Addition		$144,000
• Half Shell Raw Bar Addition		$ 61,440
• Crab Shack Addition		$ 30,840
• Turtle Kraals Addition		$290,640
• Schooner Wharf Addition		$ 58,080
SUBTOTALS	**$4,616,959**	**$656,500**

TABLE 8

KEY WEST BIGHT CIAS
ESTIMATE OF ADDITIONAL PROJECT VALUE AT FULL BUILD OUT

Phase (2) Improvements Project	Public Cost	Private Cost
• Trolley & Gift Shop		$ 180,000
• Market Building		$ 300,000
• Margaret Street		$ 210,000
• Land's End		$ 150,000
• Greene Street		$1,305,000
• Lazy Way		$ 60,000
• Marine Repair @ Triangle		$ 284,375
• Proposed Seaport Restaurant		$ 770,000
• Seaport Adaptive Reuse Restaurant		$1,260,000
• T1 Dock @ Triangle		$ 441,050
• T2 Dock @ Triangle		$ 310,920
• New G Dock	$ 222,300	
• New H1 Dock	$ 95,550	
• New H2 Dock	$ 66,000	
• New H3 Dock	$ 66,000	
SUBTOTALS	**$ 449,850**	**$5,271,345**
GRAND TOTALS	**$5,066,809**	**$5,927,845**
• CONTINGENCY @ 20%	$1,013,361	$1,185,569
GRAND TOTAL W/CONTINGENCY	**$6,080,170**	**$7,113,414**
TOTAL ALL COSTS **$13,193,584**		

The construction value added by all the projects of the Master Plan will be substantial. Some improvements have been completed, and all others are either in the design and permitting stage, or will be designed in the future. Listed in the attached table are the improvements by phase, displayed by category and whether public or private.

Based upon these values, assuming the existing assessed value of land and buildings, together with exemption remaining stable at existing levels, at the current millage rate of 17,8875, per $1000 of appraised value total annual property taxes would be:

• 1995 TOTAL ASSESSED VALUE	$12879718
• LESS 1995 TOTAL EXEMPTIONS	$ 4030668
SUBTOTAL	**$ 8849050**
• TOTAL VALUE OF ALL IMPROVEMENTS AT MASTER PLAN BUILD OUT	$13193584
EXCEPTIONS	**$4,030,668**
• MILLAGE RATE 17.8875	
• TOTAL ON TAX REVENUE IN 1995 DOLLARS ON MASTER PLAN VALUE	$ 163,892

NOTES:

1. Source of Estimates - The Wilson, Miller Master Plan Cost Opinion: 1995-1996 Key West Bight Management Board: Phase (1) Improvements actual costs or bid estimates; grant applications; and professional opinion of author.

2. A private project is one that although taking place at the Bight which is public property, will utilize private funding or financing for those projects.

3. BO's Fish Wagon - Estimate assumed an improvement cost of $65.00 sq.ft. For 1100 sq.ft. total.

4. Additions to Half Shell Raw Bar, Crab Shack and Turtle Kraals assumed to be 120 sq.ft. without kitchen equipment.

5. Retail Speciality improvements were estimated @ $150 SQ.FT. assuming tenant finish, with the exception of the retail space within the Waterfront Market converted to retail space, where remodeling costs are assumed in public costs above and tenant finish for leasehold is estimated at $50 sq.ft

6. Marine Repair Building - construction costs estimated @ $175 sq.ft.

7. Restaurant improvement estimated @ $200 sq.ft. except for adaptive reuse of Seaport Building estimated @ $175 sq.ft.

This analysis does not project forward tax rates to the point in time in which improvements will be made. Such estimates can be misleading, as the tax rates set each year by the City are subject to many factors beyond the scope of this one project. Also the rate of build out for private projects beyond Phase (1) is highly speculative.

CIAS Requirement

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 of Key West.
(K.W. City Code Section 34.08(F)(2))

Based on the assumption that labor costs account for on average in Key West 52% of each construction dollar spent (hard costs) the total combined construction cost of $13,193,084, indicates the following ratio of expenditures:

Labor	Materials	Totals
$6,864,000	$6,336,000	$13,200,000

Of these amounts it is estimated that 75% would be expenditure within the City. This amount is variable and is dependent on whether contractors chosen are local or not.

CIAS Requirement

For non-residential developments, project the [illegible]mber of non-construction permanent employees using appropriate cl[illegible]ons)
(K.W. City cod[illegible]

The number [illegible]he full development of the Key West Bight Master Plan [illegible]n off site employment will increase due to some jobs be[illegible]ns for cleaning, security, advertising, public relations, gra[illegible]nance.

The existing [illegible] two broad general types with multiple sub categories:

- Publ[illegible] West Bight Management Board
- Tena[illegible]

The existing City employees by general job description are:

- Administration 3
- Maintenance/Landscaping 3
- Marina Operations 4
- Parking 3

The total personnel services budgeted for these personnel services in 1995/96 is $402,859. With the full development of the Bight and additional 1.5 full time equivalent staff will be hired bringing the estimated personnel budget in the 1999/2000 budget year to $453,421 inclusive of salaries and benefits.

The addition of new businesses at the Bight creates the following estimate numbers and types of new jobs:

Restaurants/Lounges

Job Type	**Number**	**Salary Level** (wages & tips)	**Total**
• Managers	5	$40,000 Ea.	$ 160,000
• Asst. Managers	12	$30,000 Ea.	$ 360,000
• Waitpersons	86	$18,000 Ea.	$1,548000
• Chefs	17	$40,000 Ea.	$ 680,000
• Cooks	35	$25,000 Ea.	$ 875,000
• Bus People	34	$14,000 Ea.	$ 646,000
• Support Cleaners	21	$14,000 Ea.	$ 294,000
• Bartenders	11	$20,000 Ea.	$ 220,000
Total Personnel	**231**		
Estimated Total Salary of all Personnel Approximately			**$4,783,000**

There is a high variability on a number of employees within any given restaurant and depends upon the number of seats, whether a full liquor license is available, whether one, two or three meals are served, and serving hours. At the Bight, existing restaurants serve lunch and dinner, and vary tremendously in size from B.O's Fish wagon to The Turtle Kraals. Based on analysis of other restaurants in the City and the size of the existing restaurants at the Bight, the following typical restaurant of 150 seats was assumed as the template for the future restaurants at the Bight.