

**KEY MARCO  
COMMUNITY DEVELOPMENT DISTRICT**

**ENGINEER'S REPORT**

**PREPARED FOR:**

**BOARD OF SUPERVISORS  
KEY MARCO COMMUNITY DEVELOPMENT DISTRICT**

**JAMES REINDERS, CHAIRMAN  
DES FARRELL, VICE CHAIRMAN  
THOMAS OWENS, TREASURER  
RAYMOND HARRIS, ASSISTANT SECRETARY  
ROBERT STAKICH, ASSISTANT SECRETARY**

**ENGINEER:**

**WILSON, MILLER, BARTON & PEEK, INC.  
3200 BAILEY LANE @ AIRPORT ROAD  
NAPLES, FLORIDA 33942**

**FINANCIAL ADVISOR:**

**FISHKIND AND ASSOCIATES  
2424 RESEARCH PARKWAY, SUITE 275  
ORLANDO, FLORIDA 32826**

**JULY 30, 1992**

# WILSON, MILLER, BARTON & PEEK, INC.

Engineers, Planners, Surveyors, Landscape Architects, Environmental Consultants & Construction Managers  
Wilson Professional Center, Suite 200, 3200 Bailey Lane at Airport Road, Naples, Florida 33942 • (813) 649-4040 Fax (813) 643-5716

July 30, 1992

Mr. Gary Moyer  
Key Marco Community Development District  
10300 N.W. 11th Manor  
Coral Springs, FL 33071

Subject: Key Marco Community Development District  
Engineer's Report

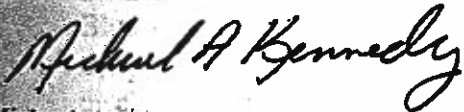
Dear Mr. Moyer:

Enclosed is a summary report of the proposed Key Marco Community Development District facilities and preliminary Opinion of Probable Costs associated with facilities to be constructed by the District.

If you have any questions, please call.

Sincerely,

WILSON, MILLER, BARTON & PEEK, INC.



Michael A. Kennedy, P.E.

7/30/92-01730003.bky  
Naples  
(813) 649-4040  
Fax (813) 643-5716

Fort Myers  
(813) 939-1020  
Fax (813) 939-7479

Sarasota  
(813) 371-3690  
Fax (813) 377-9852

Lakeland  
(813) 648-1477  
Fax (813) 644-0835

## TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
1.0	Introduction	1
2.0	District Boundary and Properties Served	1
3.0	General Description of the Project	1
4.0	Proposed Improvements and Associated Construction Costs	2

## LIST OF TABLES

<u>NO.</u>	<u>TITLE</u>
1	Property Summary
2	Summary of District Facilities and Costs
3	District Facilities and Preliminary Opinion of Probable Costs
4	Acquisition Costs

## LIST OF EXHIBITS

<u>NO.</u>	<u>TITLE</u>
1	Site Plan

## APPENDIX

<u>NO.</u>	<u>TITLE</u>
A	Key Marco Community Development District Financing Plan and Assessment Roll

## **1.0 INTRODUCTION**

Key Marco is a 174 acre planned community development located east of Marco Island in Collier County. The project is part of a larger area defined in a Settlement Agreement between the Deltona Corporation and federal, state and county authorities and various conservation groups. The Settlement Agreement provides for development of areas defined in the Agreement of which Horr's Island (Key Marco) is a part. The limits of the community are shown in Exhibit 1. The Key Marco Community Development District (District) has been established within the development to provide construction and quality long term care for the development facilities. It is the purpose of this report to provide a brief description of the proposed development, capital improvements within the District and associated costs of these improvements.

## **2.0 DISTRICT BOUNDARY AND PROPERTIES SERVED**

The District is bounded on the north by SR 92, on the south by Caxambas Pass, on the west by Barfield Bay and on the east by Blue Hill Creek (see Exhibit 1). Table 1 summarizes the properties within District boundaries.

## **3.0 GENERAL DESCRIPTION OF THE PROJECT**

Key Marco is located east of Marco Island. The terrain is rolling with elevations within the District ranging from elevation 3 to 38 NGVD. The community is served by entry from SR 92. A roadway will be constructed on the mainland to a bridge which will cross Blue Hill Creek. The roadway network will then continue throughout the remainder of the project. The project water management system will consist of roadside swales with discharge to surrounding tidal waters.

Water will be provided by the Collier County Water-Sewer District through a bulk service agreement with Southern States Utilities. An 8 inch main currently runs along SR 92 and will be the source of both potable water and fire protection. The water system within Key Marco will be interconnected throughout the project to provide adequate potable water and fire service.

Sewer service will be provided by the District through a bulk service agreement with Southern States Utilities. Two master pump stations and a low pressure pump system will be constructed throughout the project to serve individual residents and amenity areas. The master pump station by SR 92 will then pump to an existing 8 inch force main located along SR 92 which then runs to the wastewater treatment plant located on Marco Island.

2

#### 4.0 PROPOSED IMPROVEMENTS AND ASSOCIATED CONSTRUCTION COSTS

Improvements by the District will consist of a water management system, road (including drainage, landscaping and lighting), water, sewer and irrigation facilities, and a bridge. Of these facilities, the District will own and operate/maintain the management system, irrigation system, sewer system, roadways, bridge, and landscape portions of the roadway system. The potable water system will be dedicated to Collier County and owned and operated by Collier County Water-Sewer District. These facilities and associated costs have been summarized in Tables 2, 3 and 4.

#### 5.0 ASSESSMENT METHODOLOGY

##### 5.1 Capital Project Summary

A list of District capital projects (the "Project") and their estimated construction costs is shown in Tables 2 and 3. The total costs of the Projects including financing costs, are summarized in Appendix A "Key Marco Community Development District Financing Plan and Assessment Roll" prepared by Fish and Associates, Inc. Each of these Projects falls under the categories of allowed and authorized District activities as defined in Section 190, Florida Statutes and costs associated with each is reasonable.

##### 5.2 Methodology

According to Chapter 170.01(2), special assessments may be levied only for purposes enumerated in this section and shall be levied only on benefitted property at a rate of assessment based on the special benefits accruing to such property from such improvements when the improvements funded by the special assessment provide a special benefit, one which is different or peculiar in type or degree from the general benefits provided to the community as a whole. As Key Marco is an island and the proposed improvements will solely benefit the properties of Key Marco, all associated costs of the improvements will be assessed to the lots within the District.

The community as a whole can be defined as the properties within the Key Marco Community Development District. Each of the properties benefits from the improvements constructed by District in a general way by generation of a better quality of life in the community. Other "special or peculiar" benefits are also gained by District constructed improvements. Among these special benefits specifically accrued to properties within Key Marco Community Development District include added use and enjoyment of the property, enhanced value of local

and increase in market value of the property. The improvements clearly provide each of these benefits. The land is currently undeveloped and isolated as an island. The bridge, roadways, water, sewer and water management will provide access, easier travel, and the potential for home construction not otherwise available in the current state of the property.

Several methodologies are typically utilized for special benefit assessment purposes. These include acreage basis, front footage, and equalized assessments. Key Marco is unique in that it is an island community accessible only by bridge with a single residential use category, that being single family homes. The proposed infrastructure to serve the development consists of four categories, these being water, sewer, roadway/bridges and water management. From a roadway/ bridge aspect, a single family home typically generates eight to ten trips per day. Previous traffic analysis has indicated this is a typical rate and is not dependent on lot or home size. From a water aspect, water pipe sizes are typically dependent upon fire flow requirements, not domestic use. Fire protection will be equally provided for all lots within the District. From a sewer aspect, again Key Marco is rather unique in that a grinder pump/pressure system will be utilized instead of a gravity system. All lots will be served by grinder pumps which will pump into a piping system. The design of the lines is dependent (statistically wise) on how many of the individual pumps are on at any given time, not particularly on the size of the lot or house. From a water management view, again Key Marco is unique in that the water management system consists mainly of roadside swales which will take in road drainage and then discharge to surrounding waters. No lakes are proposed and runoff from individual lots will simply flow to the surrounding waters. Therefore, the lot or home size does not affect the benefit received by each homeowner.

In summary the front footage and acreage methodology were investigated for Key Marco, however due to the layout, methods of service for infrastructure and general uniqueness of the community, the fairest, most equitable method is to assess each homesite equally because the special and peculiar benefits to each parcel of property are equal. In our opinion, the special and peculiar benefits are equal regardless of size and location of the property because of the unique nature of the project as described above. Therefore, the burden to pay the special assessment is most reasonably apportioned and is fair when it is done on an equal basis.

**TABLE 1**  
**PROPERTY SUMMARY**

<u>PROPERTY DESCRIPTION</u>	<u>ACREAGE</u>
Development Area	103.8 (134 S.F. Lots)
Native Park	43.2
Other (i.e. roads, easements, etc.)	<u>26.9</u>
<b>TOTAL</b>	<b>173.9</b>

**TABLE 2**  
**SUMMARY OF DISTRICT FACILITIES AND COSTS**

<u>Description</u>	<u>Costs</u>
Utilities	\$ 2,468,406
Water Management	\$ 2,817,847
Roads, Bridge and Street Lights	<u>\$ 7,393,747</u>
<b>TOTAL</b>	<b>\$12,680,000</b>

**TABLE 3****DISTRICT FACILITIES AND  
PRELIMINARY OPINION OF PROBABLE COSTS**

<u>Description</u>	<u>Costs</u>
Water	\$ 1,070,000
Sanitary System	\$ 460,000
Drainage	\$ 505,000
Roadway Irrigation	\$ 375,000
Fireline Meters Irrigation	\$ 120,000
Bridge	\$ 2,063,000
Earthwork	\$ 1,400,000
Paving & Roadway	\$ 1,420,000
Tree Transplant	\$ 275,000
Landscape Road	\$ 300,000
Street Lights	\$ 150,000
Bridge Statement	\$ 100,000
Front Entry Statement	\$ 355,000
Guardrail	\$ 60,000
Seeding Bridge Surcharge	\$ 15,000
Clearing/Grubbing	\$ 30,000
Silt Screen & Fence	\$ 40,000
Retaining Walls	\$ 50,000
Mitigation	\$ 32,000
Independent contractor fees, profit, overhead and miscellaneous development costs	\$ 750,000
Consultants	<u>\$ 525,000</u>
<b>SUB-TOTAL</b>	<b>\$10,095,000</b>
<b>Contingency/Allowance for Other Development</b>	<b><u>\$ 585,000</u></b>
<b>SUB-TOTAL</b>	<b>\$10,680,000</b>
<b>Acquisition</b>	<b><u>\$ 2,000,000</u></b>
<b>GRAND TOTAL</b>	<b>\$12,680,000</b>



TABLE 4

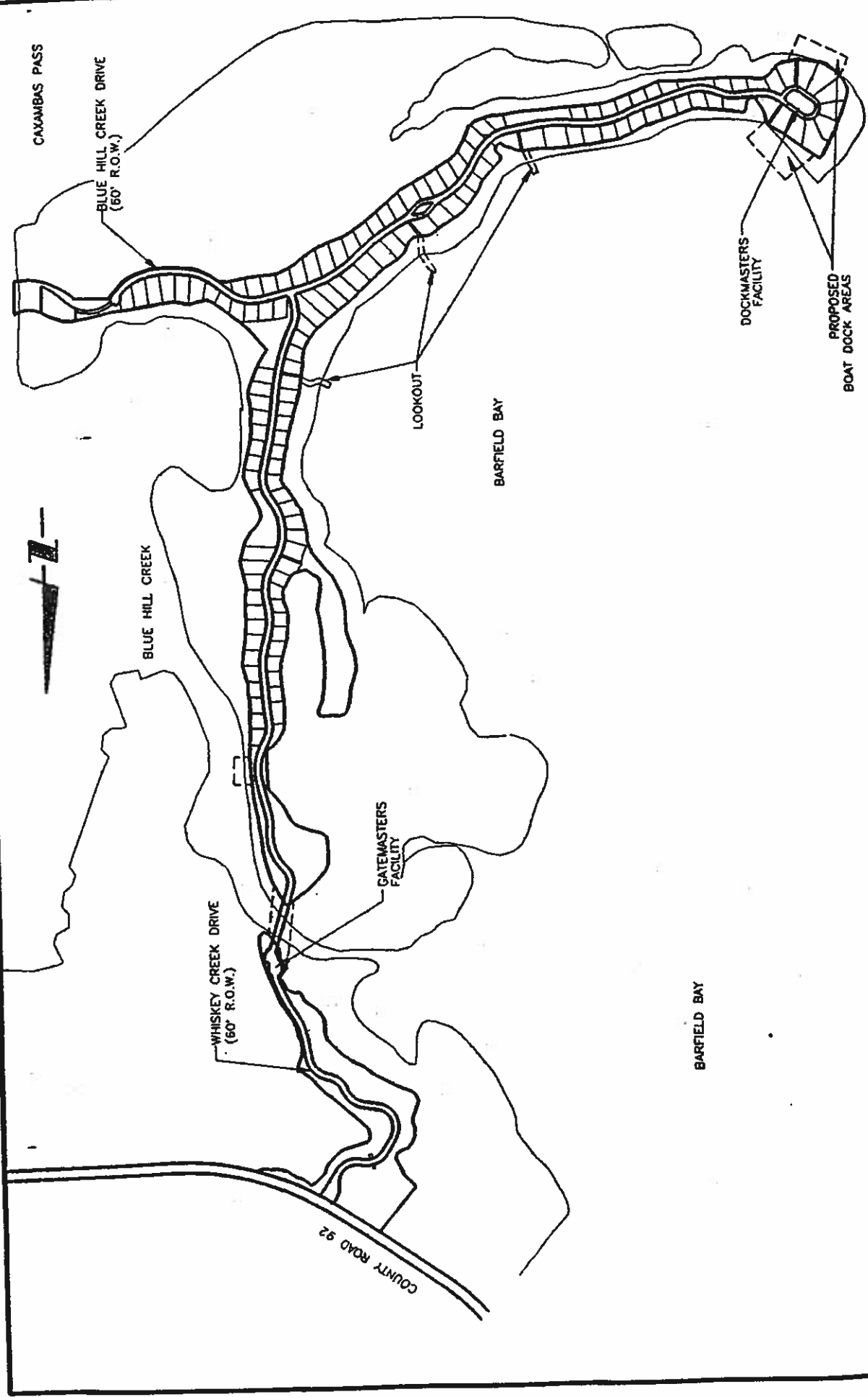
## ESTIMATED ACQUISITION COSTS SUMMARY

	UTILITIES	WATER MANAGEMENT	ROADS & STREET LIGHTS	ACCESS, BRIDGE
J. Vensel, Land Planner			\$2,382.94	
FL Engineering, Quad Sheet			\$6.27	
Collier Co., Misc. Permits: Eng./Utilities/ Tree Clearing			\$28,485.23	
D.E.R., Utility Permit	\$46.54			
S.F.W.M.D., Permit/Drainage		\$1,512.69		
U. FLA, Archeological Study			\$117,292.16	
Turfmaster/ Archeological			\$26,938.09	
Naples Rental, Equip./ Archeological Dig			\$1,754.73	
Marco Welding, Equip./ Archeological Dig			\$893.65	
William Marquarte/ Archaeologist			\$224.30	
Charles Courtney, Vegetation Survey, Snail Survey, R.U.E.,			\$42,874.30	

	UTILITIES	WATER MANAGEMENT	ROADS & STREET LIGHTS	ACCESS, BRIDGE
Bosworth Aerial Aerials/topo/ bdry/R.U.E. tree Exhibits, Roadway, Bridge			\$13,330.34	
Jeff Hassell/ Street Light, Bridge Light			\$6,842.04	
Smith Aerials, Archaeological,			\$2,037.90	
View Finders/Roadway Arch.			\$930.89	
L.W.S.M./street light engineers			\$3,041.68	
Turfmaster/ Fencing roadways, turtle relocation, clearing r/w, tree relocation dildo pachus, etc. from R.U.E. areas topo survey lines, clear test bores, etc.			\$236,204.07	
Coloret, Whitesands, naples Lumber LWSM, Hyatt Sprinkler, Certified Slings, front entry road, tree relocation, etc.			\$4,438.39	

	UTILITIES	WATER MANAGEMENT	ROADS & STREET LIGHTS	ACCESS, BRIDGE
Dames & Moore, Environmental Impact Study			\$2,401.70	
Dr. Bruce Hansen, Vegetative Consultant			\$279.00	
Ronto Mgr./Chuck Courtney Vegetative, Turtle Survey			\$341.64	
Dr. Wunderlin Tree/Vegetation Consultant			\$279.26	
Turfmaster/Clear Fence in R.U.E. Area for Roadway			\$5,899.05	
Thomas Chancey/Tree Consultant			\$423.55	
Hertz, Matulay, Naples rental Equip./Silt Screen for Protective Fence		\$12,307.86		
Law Engineering Soil Borings, Geotechnical Research on Roadways, Bridge, Surcharge Area, etc.				\$119,897.04
Jenkins & Charland Structural Bridge Designer				\$72,863.80

	<b>UTILITIES</b>	<b>WATER MANAGEMENT</b>	<b>ROADS &amp; STREET LIGHTS</b>	<b>ACCESS, BRIDGE</b>
Cascading Waters, Marco Welding, Turfinmaster, N/R Assoc., Vic's Landscaping, Water Wizard, Weeks & Herr, Whitesands Constr. - front entry				\$1,809.65
Deltona Utilities/ developers Agreement system capacity charge	\$125,670.17			
Ruden, Barnett et al	\$17,195.00	\$17,195.00	\$85,974.00	\$51,585.00
Wilson, Miller, Barton & Peek, Inc. Engineering, Surveying, Environmental Consultant, Fees	\$224,244.00	\$124,581.00	\$403,640.00	\$244,177.00
<b>TOTALS</b>	<b>\$367,155.71</b>	<b>\$155,596.55</b>	<b>\$986,915.33</b>	<b>\$490,332.41</b>
<b>GRAND TOTAL</b>	<b>\$2,000,000</b>			



PROJECT: HORR'S ISLAND  
SITE PLAN  
EXHIBIT 1

WILSON, MILLER, BARTON & PIZKE, INC.  
ENGINEERS, ARCHITECTS, PLANNERS  
1000 PINE STREET, SUITE 200  
ANN ARBOR, MICHIGAN 48106  
TEL: (313) 761-1100

NO.	DATE	DESCRIPTION
1	10/15/88	PRELIMINARY
2	11/15/88	REVISED
3	12/15/88	REVISED
4	01/15/89	REVISED
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7	04/15/89	REVISED
8	05/15/89	REVISED
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BARFIELD BAY

COUNTY ROAD 92

