



AUGUST 2010

VILLAGE OF KEY BISCAIYNE

WATER, SEWER AND RECLAIMED WATER PROJECT

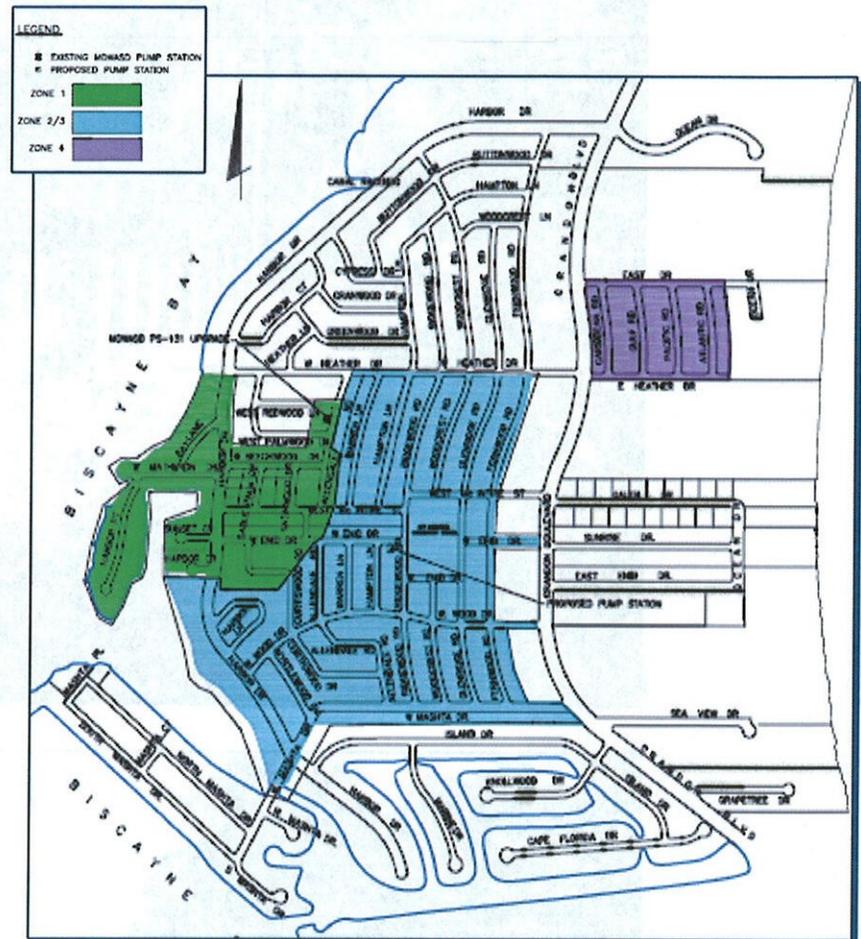
FINAL PROJECT REPORT

In June of 2007, the Village of Key Biscayne broke ground on a Village-wide effort to construct sanitary sewer systems in all areas dependent on septic tanks for their sewage disposal. Septic tank systems have been subject to chronic failure on Key Biscayne, and have been identified as a potential source of pollution to Biscayne Bay.

The Sewer Project involved the installation of 56,520 linear feet of sanitary sewer pipe, 165 sanitary sewer manholes, 2 new sewage pumping stations, and the upgrading of a third pumping station. The project, the last section of which was completed in June of 2010, provides approximately 600 single family homes with the ability to connect to the public sewer system. All areas of the Village are now either connected or have the capability of doing so. Within the newly sewered area, unless the home is sold or the existing septic tank fails, Miami-Dade County is allowing homeowners a 10-year period in which to hook up, but most are expected to do so well before then.

Part of the project also involved the replacement of old cement-asbestos water lines with new larger-diameter ductile iron pipes. In addition, the project included the installation of approximately 9,000 linear feet of reclaimed water purple pipe. This purple pipe system, when completed by Miami-Dade County, will provide highly treated reclaimed water to large commercial and institutional water users on the key for irrigation purposes.

The total cost of the project was \$18,743,476. This is well below the original budget of \$21,100,000 authorized by the Village Council. 82% of the project cost was paid for with Federal, State, County, and developer funds. The 18% remaining balance is being paid for by the Village with a low-interest 20-year loan from the State of Florida Revolving Loan Fund.





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Deeper sections of the sewer were constructed using steel sheet pile walls and divers.



High groundwater conditions was one of the many challenges posed by the construction.

"To provide a safe, quality community environment for all islanders through responsible government"



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Large equipment operating in narrow residential roads was another challenge, overhead wires added to the complexity.



Sewer manholes, some as deep as 16 feet were installed throughout the project area.

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Due to its narrowness, Harbor Pointe was closed to automobile traffic during construction. A golf cart shuttle service provided access.



Sewer installation around community school took place during summer of 2008, minimizing disruptions.

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Installation of last manhole in Zone 1, at the end of Harbor Pointe Drive.



Roadways within project area were reconstructed with new limerock base and two layers of asphalt.

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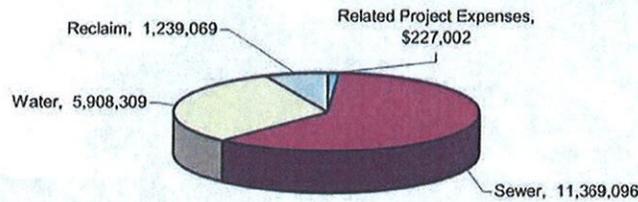
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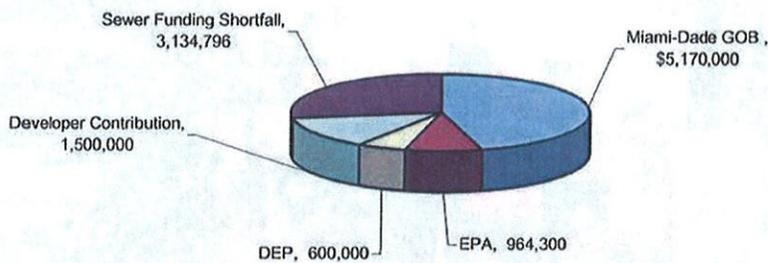
Project Cost Estimates	Construction	Soft	Liquidated Damages	Proj Cost
Water Main Replacement Estimate	\$ 4,971,658	\$ 936,651	\$ -	\$ 5,908,309
Zone 1 & 4	2,313,541	414,643	\$	2,728,184
Zone 2/3	2,658,117	522,008	\$	3,180,125
Sanitary Sewer System Estimate	9,800,481	\$ 1,568,615	\$ -	\$ 11,369,096
Zone 1 & 4	4,204,687	568,173	\$	4,772,861
Zone 2/3	5,595,794	700,442	\$	6,296,236
Interest Cost		300,000		
Related Project Expenses	392,002	\$ -	\$ (165,000)	\$ 227,002
Zone 1 & 4			(165,000)	(165,000)
Zone 2/3	392,002		\$	392,002
Village Funded Project Totals	15,164,141	2,505,266	(165,000)	17,504,407
Reclaim Water Project	975,771	263,298	-	1,239,069
	975,771	263,298	\$	1,239,069
Total Cost Estimates	16,139,912	2,768,564	(165,000)	\$ 18,743,476

Cost and Funding Sources

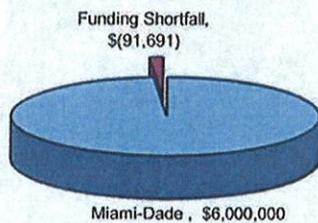
Total Project Cost and Funding Sources



Sewer Project Cost and Funding Sources \$11,369,096



Water Project Cost and Funding Sources \$5,908,309





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FINAL PROJECT REPORT

Chart Data					
Total Project		Sewer		Water	
Related Project Expenses	\$ 227,002	Miami-Dade GOB	\$ 5,170,000	Miami-Dade	\$ 6,000,000
Sewer	11,369,096	EPA	964,300	Funding Shortfall	\$ (91,691)
Water	5,908,309	DEP	600,000		
Reclaim	1,239,069	Developer Contribution	1,500,000		
		Sewer Funding Shortfall	3,134,796		
Total	\$ 18,743,476	Total	\$ 11,369,096	Total	\$ 5,908,309

WATER	
Water Project Cost	\$ 5,908,309
WASD Contribution	6,000,000
Water Funding Shortfall	\$ (91,691)

SEWER	
Sewer Project Cost	\$ 11,369,096
Interest Cost	-
Total Sewer Project Cost	\$ 11,369,096
Miami-Dade GOB	(5,170,000)
EPA	(964,300)
DEP Sewer	(600,000)
Developer Contribution	(1,500,000)
Sewer Funding Shortfall	\$ 3,134,796

RELATED PROJECT EXPENSES	
	\$ 227,002

WATER RECLAIM	
Total Reclaim Project Cost	\$ 1,239,069

Total Project Cost	\$ 18,743,476
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Total Village Commitment	
Sewer Funding Shortfall	3,134,796
Related Project Expenses	\$ 227,002
Total Village Commitment	3,361,798

Summary	
Original Authorized Budget	\$ 21,100,000
Actual Project Cost	\$ 18,743,476
Variance	\$ 2,356,524

