

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for increase in
wastewater rates in Monroe County
by KW Resort Utilities, Corp.

Docket No. 070293-SI

COMMISSION
CLERK

08 OCT 23 PM 2:50

RECEIVED-FPSC

**KW RESORT UTILITIES, CORP'S
LATE FILED EXHIBIT #44**

KW Resort Utilities, Corp. ("KWRU") hereby files this Late File Exhibit #44.

Certain customers of the utility came forward and testified at the Service Hearing in Key West. KWRU was provided with this chance to respond to that customer testimony (Tr. 511). The testimony of each customer is hereafter addressed. Subjects addressed by more than one customer are addressed collectively for the purposes of simplicity and brevity.

Some customers gave testimony which was supportive of the utility. KWRU has no response to this testimony, *per se*, other than to note the fact that the testimony is in the record.

Respectfully submitted this 23rd day of
October, 2008, by:

COM _____
ECR _____
GCL _____
OPC _____
RCP _____
SSC _____
SGA _____
ADM _____
CLK _____



JOHN L. WHARTON
F. MARSHALL DETERDING
Rose, Sundstrom & Bentley, LLP
2548 Blirstone Pines Drive

Tallahassee, Florida 32301
Counsel for KW Resort Utilities Corp.
850-877-6555
850-656-4029 FAX

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished to the following via hand delivery this 23rd day of October, 2008:

Steve Burgess, Esquire
Office of Public Counsel
c/o The Florida Legislature
111 West Madison Street, Room 812
Tallahassee, Florida 32399-1400
burgess.steve@leg.state.fl.us

Ralph Jaeger, Esquire
Office of General Counsel
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850
rjaeger@psc.state.fl.us


JOHN L. WHARTON

KWRESORT\070293-SU\late filed exhibit #44

EXHIBIT #44
RESPONSE TO CUSTOMER CONCERNS

DIANE BERALDSEN

Testimony. Ms. Beraldsen touched upon several non-specific concerns, but she specifically mentioned certain legal expenses which she was concerned might be paid for in KWRU's rates; the fact that a grand jury had "found the Key West Resort . . . guilty of mismanagement and disservice to the citizens"; and her belief that the utility would charge less money if it operated "the way it should". Ms. Beraldsen indicated that some of her information had come from newspaper stories and the meeting between customers and OPC. She indicated a concern about a possible connection between the failure of the golf course to pay water bills and the affect on her sewer bill, and that some "good ole boy(s)" were getting a good deal. She also raised an issue regarding the payment of cell phone bills for Mr. Smith's children by the utility. She indicated she got this information from a newspaper article.

KWRU Response. Some of this information is addressed in the testimony in the case and in the briefs. Mr. Willis indicated on the record at the time of the testimony that all parties had agreed that miscellaneous non-utility telephone expenses should not be included in the expenses of the utility company and that this included the costs addressed. Mr. Willis pointed out that this meant that there had been no previous

charge to customers of these particular costs.

The Monroe County Board of Commissioners looked at this project with a fine tooth comb. In 2004, the Monroe County Board of Commissioners authorized a study and spent \$150,000 on an engineering report conducted by URS Engineering Corp. to evaluate the South Stock Island Vacuum sewer expansion. URS looked at all possible connection scenarios for the property owners and concluded in their report that the most cost effective way for private properties to connect to central sewers was to install internal vacuum systems on their property instead of installing a gravity system on their property and flowing via gravity to the right of way. URS concluded that the vacuum system that KWRU installed was the most cost effective means of connection for the large users.

The URS audit also concluded that the KWRU vacuum collection system was installed as designed and contracted with Monroe County. The Monroe County Board of Commissioners voted unanimously, 5-0, to accept the findings of the URS South Stock Island wastewater system engineering audit.

See Attachments 1, 2, and 3.

As to Ms. Beraldsen's reference to a controversy involving Key West Resort, KWRU has never agreed to pay for private property owners' connection costs. KWRU has never agreed to take any homeowner's pipe to the main and connect it for the

homeowner. KWRU provided infrastructure adjacent to each property line, in the right of way, in a manner which exceeded the requirements of the Monroe County Ordinances. For every establishment with an estimated sewerage flow exceeding 1,000 gpd, a sewer line, a force main, or lift station exists in a public easement that abuts the property of the establishment or is within 50 feet of the property line.

Section 381.0065, Florida Statutes, requires that if there is an available publicly-owned or investor-owned sewerage system, residential consumers are required to connect. Monroe County by ordinance requires that residential connection to the wastewater system within 30 days of connection notification.

URS, Monroe County Code Enforcement, and the Monroe County Engineering Department have all inspected the available infrastructure provided in the right of way immediately adjacent to all properties and have over and over again deemed that sewer is available to all properties in South Stock Island except a contingency list which amounts to only ten units out of the 1500 units that the system was intended to serve. The ten units which are not served are the Oropeza warehouse (1 ERC); Key West Oxygen (2 ERCs); El Mar Trailer Park (3 ERCs); and the Metro Self Storage (4 ERCs). It has also been deemed by the Special Magistrate of Monroe County that service is available to all properties except these four properties (representing 10 ERCs).

See Attachment 4 for county correspondence and the map which depicts the four properties.

As to Ms. Beraldsen's contention that she was offended by the attendance of Mr. Smith and a few others at the public meeting which occurred at a local church, KWRU has never used aggressive tactics and never had any intention of intimidating anyone by attending this customer meeting. Mr. Smith wanted a chance to briefly address his customers and explain KWRU's reason for its rate increase because there was so much misinformation in the press and around Stock Island about the matter. Mr. Smith, the employees who run the sewer plant, and the administrative office staff were present at the meeting to answer questions any customers might have. Mr. Burgess was very professional, but asked Mr. Smith and the employees to leave. Mr. Smith asked if he could briefly make a statement. Mr. Burgess said ok. Mr. Smith took the floor for 10 minutes introducing all of the utility workers and explained to the customers the escalating costs of running a treatment plant at AWT levels in Monroe County. He thanked everyone and then asked if anyone had any questions. With no questions, KWRU left amicably.

As to Ms. Beraldsen's comments regarding the finding of the grand jury, KWRU was found not guilty of any wrongdoing in the Grand Jury report. See pages 15 through 17 of the attached document in which the Grand Jury states that the County

Engineer was incompetent in performing his duties and that the County Administrator and the County Commission, who were ultimately responsible, were also negligent in their respective duties. A \$150,000 engineering audit commissioned by the BOCC in 2004 (with URS) found the construction of the South Stock Island wastewater system to be installed as contracted and able to handle the present wastewater needs now and through a 20 year horizon and the most cost effective system available.

See Attachment 5.

Ms. Beraldsen is apparently insinuating, by her comments regarding the way KWRU is operated, that questionable business practices are being conducted by family members, without any supporting evidence.

The facts are this: Keys Environmental Inc. (KEI) has successfully operated KWRU's wastewater treatment plant, collection, and reuse systems since 2003. KEI operated KWRU's system during the long and tenuous mandated AWT upgrade and has successfully connected 1000 new customers to KWRU's system since 2003. Attached is a proposal from U.S. Water Services Corporation, the only wastewater operations company in Monroe County that was interested in operating KWRU's plant or any other plant in the Keys. In an apple to apples comparison, not only was US Water more expensive, but their monthly fee did not include an onsite supervisor to oversee all of KWRU's ongoing plant upgrades and did not oversee or inspect new

customer connections. Not having a supervisor on site to manage employees, manage the new connections which were state mandated, and oversee construction upgrades would be a total disservice to KWRU's customers. US Water's proposal included supplies, costs for chemicals, residual management, emergency call outs and every other scope of KWRU's projects would be additionally billed with an appropriate mark-up allowance for overhead and profit margin (just like KEI). This is an excellent example of how a benefit can be derived from a small family business.

See Attachments 6 and 26.

As to Ms. Beraldsen's contention that certain KWRU subcontracts have ended up costing the customer more money, and that there has been a "padding" of the cost of materials, since 1998 KWRU has contracted with 3 different waste water operation companies (Davis Water Analysis, Synagro, and KEI) to operate its facility. It is commonplace in the wastewater industry to pay up to 35% mark-up. This was the case with the US Water's proposal which included supplies, costs for chemicals, residual management, emergency call outs and all other projects deemed outside the scope of the operation contract would be additionally billed with an appropriate mark-up allowance for overhead and profit margin (just like KEI). All of KEI's bills are not marked up by 30% as Ms. Beraldsen claims. Large capital items are direct billed through KWRU at no additional charge to anyone. All of our previous operating

companies (including KEI and the US Water proposal) indicated over the years that if KWRU wanted to eliminate these mark-ups, the monthly management fee would have to increase significantly to cover their fixed cost of doing business (most of which are payroll expenses).

See Attachment 6.

As to Ms. Beraldsen's comments that the golf course receives some "special deal" from the utility, Key West Golf Club absolutely pays for everything it receives from KWRU, contrary to the unsubstantiated claim. In the test year, Key West Golf Club, which is owned by Gwenn Smith, paid KWRU more than \$60,000 (6% of KWRU's total income) for sewer service and effluent water. All rates are charged and collected in accordance with KWRU's approved PSC tariff.

As to Ms. Beraldsen's insinuation that subcontracts cost more money, KWRU evaluates and bids out all of its expenses for its operations and for its capital projects diligently. Some of the work the KWRU needs to complete can be completed more cost effectively by hiring a subcontractor and sometimes other work can, quite frankly, be accomplished more effectively by other related parties. All work evaluated at KWRU is determined by cost effectiveness and by its best value to its customers.

In addition to the comments hereinabove regarding the cell phone issues which was raised by Ms. Beraldsen, the three cell phones that Mr. Smith pays for are for his

adult children who are each 10% owners of KRWU totaling 30% ownership. Mr. Smith elects not to pay his children a salary since they are not involved on a daily basis but elects to pay for the children/owners' cell phone, so they can all stay in contact and discuss utility business as needed.

As to Ms. Beraldsen's comments that KWRU's wastewater is "not up to par" and that its treatment method is "controversial", Ms. Beraldsen does not have any proof to back up this totally false statement about KWRU's quality of treatment. KWRU takes great pride in "doing the right thing" in all areas of its operation and is proud of treatment standards it accomplishes. Mr. Steve Johnson of the Florida Department of Environmental Protection testified that KWRU treatment standards are in compliance with Florida's rules and regulations and that KWRU operates within its DEP permit.

Ms. Beraldsen contended that there was a "controversy" at a County Commission meeting. Attached are the minutes from a January 2003 Monroe County Commission meeting in which the board granted conceptual approval to extend the contract between Monroe County and KW Resort Utilities to provide an engineering/survey for the Rockland, Big Coppitt wastewater project.

See Attachment 7.

At Monroe County's request, KWRU in June of 2003 presented a proposal to complete sewers for the Big Coppitt, Rockland and Geiger Key area. See attached

proposal in which KWRU submitted a proposal to sewer the Big Coppitt area. KWRU's proposal, if accepted, would have only cost the Monroe County residents \$16,700,000. Due to all of the politically motivated misinformation which was being spread around at that time, a few homeowners did not want to hear anything from KWRU and did not want to entertain any offers from KWRU. Today the sewers are under construction by the Florida Keys Aqueduct Authority ("FKAA") at an estimated cost of completion of \$47,000,000. It was surprising and alarming to KWRU that after the FKAA committed to ensure the most cost effective wastewater service would be installed, the FKAA went ahead with their plans and ignored KWRU's proposal. The project will be completed by the FKAA in approximately 18 months from now for an additional \$30,000,000. KWRU, along with its \$30,000,000 capital savings, also included in the attached proposal a flat rate of \$35.89 per homeowner. The FKAA is proposing rates in excess of \$80.00 per month for this area. This is a striking example of how the special interests of homeowners (and commission candidate Wigington) have misconstrued information and have cost the taxpayers of Monroe County an extra 30 million dollars in Big Coppitt alone.

See Attachment 8.

As to Ms. Beraldsen's contention that if there was a greater understanding as to the burden and expense of hooking up, the "more expensive method" would not have

been chosen, KWRU designed its comprehensive vacuum system mindful of the interest of the entire community as a whole. The URS \$150,000 study confirmed that in all but one case, the property owners with sewerage flows in excess 1000 gpd would benefit financially if they installed a vacuum system on their property rather than installing an internal gravity system. Many of the large users were led to believe that it would be more cost effective to run lines to the right of way via a gravity system. What they were not told is that manholes are required in a gravity system. The manholes would cause the cost to escalate. Inherent to gravity systems, installing pipes at a deeper depth will also cost more. When it came time for the larger user to write a check and install a collection system on its property (after they finally hired engineers and evaluated both internal gravity systems and internal vacuum systems) the property owners came to the realization that installing vacuum system on their property was clearly the best option financially. See attached URS study, page 44 of 73, in which URS discusses option 1A.

See Attachment 7.

GLEN OWENS

Testimony. Mr. Owens testified about his involvement with a “M-10 Coalition” which was formed in 2005 and which had some familiarity with the sewer system on Stock Island. He testified about the experience of the Coalition with the FKAA and

said that his group “shutter(s) to think where we would be today if the County Commission had gained control of wastewater in the Keys and forced upon us the same type of system they forced on the residents of Stock Island”.

KWRU Response. Mr. Owens’ comments did not seem to address any of the issues in this proceeding, nor to be specific to KWRU.

As to Mr. Owens' implication that KWRU had somehow charged additional fees or administrative costs which were not proper. Attached is a letter from Troy Rendell of the PSC, dated March 21, 2003. The contract that was approved by the PSC is also attached. The letter states that the PSC was satisfied that KWRU’s agreement has met the concerns brought up by area developers, future customers and the Commission staff. Any fees paid to any companies are clearly in this PSC approved developer agreement and all fees are at or below market value.

See Attachment 9.

KIM WIGINGTON

Testimony. Ms. Wigington, a candidate for the County Commission and a long-time critic of KWRU, made numerous statements and presented certain documents, which are too voluminous to summarize here.

KWRU Response. As to Ms. Wigington's remarks that the plans that were vetted differed from what was constructed by the utility and the burden was shifted to the

property owners, in 2004 the Monroe County Board of Commissioners authorized a study and spent \$150,000 on an engineering report conducted by URS to evaluate the South Stock Island Vacuum sewer expansion. URS looked at all possible connection scenarios for the property owners and concluded in its report that the most cost effective way for private properties to connect to central sewers was to install internal vacuum systems on their property instead of installing a gravity system on their property and flowing via gravity to the right of way. URS concluded that the vacuum system that KWRU installed was the most cost effective means of connection for its users.

The URS audit also concluded that the KWRU vacuum collection system was installed as designed and contracted with Monroe County. The Monroe County Board of Commissioners voted unanimously, 5-0, to accept the findings of the URS South Stock Island waste water system engineering audit.

See Attachments 1, 2 and 3.

Ms. Wigington's inference that the state attorney concluded the "as built" records do not match what was observed as constructed in the field and that customers have been forced to pay for infrastructure in the public right-of-way is incorrect. The engineering audit commissioned by the Monroe County BOCC with URS found the construction of the South Stock Island wastewater system was installed as contracted

with Monroe County. Furthermore, the report concluded that the vacuum system that KWRU installed was the most cost effective means of connection for the large users.

See Attachment 1 (Page 15 of 22 paragraph (1)).

Ms. Wigington stated that "property owners have complained numerous times to authorities of questionable business practices including excessive fees paid to different family members and companies."

Attachment 9 is a letter from Troy Rendell of the PSC, dated March 21, 2003. The contract that was approved by the PSC is also attached. The letter states that the PSC was satisfied that KWRU's agreement has met the concerns brought up by area developers, future customers and the Commission staff. Any fees paid to any companies are clearly in this PSC approved developer agreement and all fees are at or below market value.

Ms. Wigington stated that "there have been complaints of the use of unregistered corporation names." KW Resort Utilities Corp. is an active, for profit corporation, with its articles being filed on December 18, 1984. The document number is H34618. This information can be corroborated on the Secretary of State's website. There have been a couple of incidents where the wrong name has appeared without any intention of misrepresentation. See attached examples of where name has been unintentionally incorrect. (Copy of check from Monroe County to KWRU, original business card of

Doug Carter, and in the PSC approved contract.)

See Attachment 10.

Ms Wigington stated “there have been concerns of properties on South Stock Island being purchased by the utility and its members during contract negotiations”.

This is not true. All properties that Ms. Wigington refers to were purchased well after the contract negotiations of 2001 and 2002 for the Stock Island Vacuum sewer system with Monroe County. No inside information about “where and when sewers were going to be installed” was used to purchase these properties. See attached warranty deeds that Ms. Wigington referred to. None of these properties were purchased until the summer of 2004; one year after the installation of the vacuum system was complete. One of these warranty deeds between the Carters and the Allens was not even in KWRU’s service territory.

See Attachment 11.

Ms. Wigington stated that there are “property owners with no availability of service”. For every establishment with an estimated sewerage flow exceeding 1,000 gpd, a sewer line, force main, or lift station exists in a public easement that abuts the property of the establishment or is within 50 feet of the property line. KWRU’s lines are immediately adjacent to property lines, not 50 feet away, except for the ten ERCs that were simply an oversight and intended to be installed with the South Stock Island

contingency fund.

For further response to this contention, please see KWRU's response to customer Beraldsen and Attachment 2.

Ms. Wigington's statement that "low income customers were targeted for code enforcement action" is simply not true and is taken totally out of context. All customers were "targeted" by KWRU to receive notice and to try to get all to comply with the ordinance and law requiring interconnection for the good of the environment and all customers. Months after noticing had begun, KWRU was receiving numerous phone calls from concerned unconnected future customers that their connection grant money was going to expire since their landlords and/or condominium associations were stalling the connection process.

See attached e-mail, March 24, 2005, from KWRU's spokesperson to Monroe County Code Enforcement (Rhonda Norman), Mark Bell, Director of the Community Development and Special Programs Office, and the Monroe County Administrator in which KWRU simply reminded all parties that there were Community Development / Block Ship Grants that were expiring in October 2005. By that letter, the utility was trying to assist those low-income customers by insuring that they did not lose their subsidy for the required connection charges.

See Attachment 12.

Ms. Wigington commented upon “heavy handed customer service by using sheriff deputies to deliver 30 day connection notices when service was not available”. The expansion of the South Stock Island vacuum collection system was completed by KWRU in 2003 on schedule and ahead of budget. In 2004, an engineering audit of the KWRU newly installed South Stock Island wastewater system was commissioned by Monroe County. URS conducted the study and presented its results to the Monroe County Board of Commissioners on November 29, 2004. The URS audit concluded that the KWRU vacuum collection system was installed as designed and contracted with Monroe County. The Monroe County Board of Commissioners voted unanimously, 5-0, to accept the findings of the URS South Stock Island wastewater system engineering audit and directed the county administrator to proceed to have everyone connected in the most expeditious way, directing the County Attorney to coordinate with Code Enforcement, and authorizing the use of the special Masters from the Division of Administrative Hearings in the State of Florida.

A meeting was scheduled for Tuesday February 8th, 2005 at the Monroe County Administrator’s office to discuss the South Stock Island sewer connection process. In attendance were KWRU (Doug Carter, Chris Johnson, Ed Castle and William Barry), the Monroe County Attorney’s Office (Pedro Mercado), Director of Monroe County Code Enforcement (Rhonda Norman), and the Director of Monroe

County Health Department (Dr. Susan May). See attached connection coordination agenda and attendees.

See Attachment 13.

For this meeting, the Monroe County Administrator requested that KWRU bring proof of service for the 30 day mandatory letter for connection to its central sewer system so code enforcement could enforce the county's own sewer ordinance. KWRU copied all of its certified mailing records and certified signature cards that were returned and provided these documents to the county to reconcile so code enforcement and the county attorney could determine which property had proper service. Copies that were presented to the administrator were from a certified mailing conducted by KWRU in July 2003 to all of the unconnected property owners in Stock Island and condominium associations per Monroe County. In addition to KWRU's certified letters of July 2003, Nabors, Giblin, and Nickerson P.A., on behalf of Monroe County, sent out the Consent and Acknowledgement Agreement and another 30-day notice to all of the unconnected properties in South Stock Island in April of 2004.

After reconciling all of the certified letter records provided by KWRU, Nancy Dowling, Sr. Code Enforcement Inspector for Monroe County, generated a list of non-noticed properties and sent it to KWRU. All unconnected properties had good service except for 28 properties that were considered "not served." Per code enforcement, the

reasons for non-notice of proper service were: some of the un-served properties were vacant, new property owner's now occupying property, other properties were owned by corporations instead of individuals, and some property owners simply refused to sign for the certified letters. In March 2005, Monroe County Code enforcement notified KWRU that the "individual" property owners of Harbor Shores and the "individual" property owners of Oceanside Condominiums needed to be noticed as individuals instead of previously being noticed as an association. KWRU then sent out certified letters to all of the individuals of the two associations on the county's list (at the county's request) to complete proper service. Code enforcement hearings then began in the summer of 2005.

On March 20, 2006 Karen Bass, Liaison to the Special Magistrate for Monroe County Code Enforcement, sent a letter to KWRU stating that the Special Magistrate still needed proper service for 17 Harbor Shores' individuals who again did not sign for their certified 30 day connection notices. To make sure that complete proper legal service was achieved to these "tough to get a hold of" property owners, KWRU double checked with Monroe County Code Enforcement and the County Attorney's office and they both confirmed that proper service may be achieved by hiring a private process service or using the Monroe County Sheriff's office. See attached letter from the Special Magistrate with a copy to the Monroe County Attorney and a correspondence

from the Director of Monroe County Code Enforcement which refute that heavy-handed tactics were used by using the sheriff to serve these last notices.

See Attachment 14.

Ms. Wigington was not served twice or harassed as her comments insinuated. Ms. Wigington signed for her unit #38 but avoided signing for her 2nd unit, #39, for months. That is why KWRU had to send the sheriff and private process servers. Ms. Wigington, and a few of the neighbors she convinced to do so, were intentionally avoiding the connection notice.

See Attachment 15.

Ms. Wigington stated “it is not surprising that other communities have demanded that this utility not be allowed to expand its utility to its neighborhood”. Attached are the minutes from a January 2003 Monroe County Commission meeting in which the board granted conceptual approval to extend the contract between Monroe County and KW Resort Utilities to provide an engineering survey for the Rockland, Big Coppitt wastewater project.

See Attachments 7 and 26.

For a more thorough discussion on this point, see the discussion of this proposal in KWRU's response to customer Beraldsen.

Ms. Wigington contended that there are people who are not connected to the

system who have paid their capacity reservation fees, and who have put infrastructure on their property and paid the utility fees but who are unable to connect to the collection system.

KWRU's lines are immediately adjacent to all property lines, not 50 feet away, except for the ten ERCs that were simply oversight and intended to be installed with the South Stock Island contingency fund. Some property owners may have paid the county their capacity reservation fees through the county's assessment program prior to connection but again there are only four properties in the vacuum service area that code enforcement deemed un-served. All remaining properties have sewer service available per the County and URS. See attached map of the four un-served properties.

See Attachments 4, 23.

Ms. Wigington stated that some customers have had to pay for infrastructure in the public right of way. There were several who have paid a great deal for infrastructure, as much as \$150,000, for infrastructure in the public right-of-way. Then they turn the asset over to the utility and they still have to pay a percentage of what they paid for construction to the utility or one of the utility family members that gets paid separately.

When Boyd's Campground steadfastly moved towards connecting their existing campground package plant to KWRU's system, per the county ordinance, they hired an

engineer and the engineer gave them two options. Option #1 was to construct a new internal vacuum on their property and connect to the vacuum sewer line immediately in the right of way adjacent to their property. Option #2 was to rehabilitate their existing gravity system to Monroe County code and connect to a force main 400 feet away. Boyd's decided to rehab their failing system and when they were complete and connected to KWRU they decided to turn the lift station and force main located in the right of way over to the utility because they did not want the maintenance responsibility. All fees paid to anyone during this process were in accordance with KWRU's PSC approved tariff.

Ms. Wigington testified that it is unclear where this utility ends and the family members and their companies begin. At times the fees to the family members appear to be hidden or indirect, and the required monthly maintenance contracts with an in-law are paid separately from the monthly bills paid to the utility. Fees were paid to one family member during hookup supposedly as an engineer, believed to be an engineer, including the inspection of an engineer's work.

All fees that KWRU receives or charges are strictly in accordance with its PSC approved tariff. KWRU does not or never has had any "required monthly maintenance contracts with in-laws." Once again Ms. Wigington has no back up or proof for her allegations.

Ms. Wigington testified that "our contractors" told KWRU that the testing was excessive and vindictive and based on personal relationships. Costs were driven up to those who complained, especially to those who complained to the Public Service Commission.

This statement is absurd. Ms. Wigington is once again making allegations with no back up. KWRU has never acted in a vindictive manner with any of its customers and there is zero evidence supporting these horrible allegations. KWRU requires that all private collection systems "only" meet the Monroe County building code and any private system must also have current FDEP collection permits. Testing requirements are outlined in paragraph 5 of the attached PSC, approved developer's agreement and testing should not be a surprise to anyone who actually read the agreement.

See Attachment 9.

Ms. Wigington stated that fees were paid to one family member during hookup "supposedly" as an engineer . . . Fees paid during hook up were for the periodic testing and inspection services by KWRU's service company of record and these fees are clearly outlined in the PSC approved developer's agreement (paragraph 6: rates, fees and charges).

GEORGE NEUGENT

Testimony. Mr. Neugent, a Monroe County Commissioner, stated that he was

there to educate himself further on what was taking place. He stated his interests were to make sure that the residents got a fair shake, and stated that the cost of the service should be whatever fell out from the appropriate cost of providing the service. He pointed out that, in his opinion, the FKAA provided a very high level of service.

KWRU Response. Commissioner Nuegent's comments were not utility specific and given the fact that he repeatedly stated that he was at the hearing just to be educated. It is notable that in response to a question from PSC Commissioner Argenziano, Mr. Nuegent affirmed that the County did ask the utility to send out the notices for non-compliance of the mandatory connection ordinance and stated that Monroe County "certainly enforce(s) our ordinances that require hooking up to wastewater treatment".

Mr. Neugent's inference that the FKAA provides a superior product, in terms of "appropriate infrastructure" and costs, does not square with the facts. KWRU's appropriate infrastructure was confirmed by the URS report. In the URS report it was also concluded that KWRU's available infrastructure was the most cost effective means of connection for the property owners.

KWRU's level of service mirrors FKAA when comparing infrastructure. The location of KWRU's appropriate infrastructure is identical to the infrastructure that is provided by the FKAA, adjacent to the property line located in the right of way, except

as follows.

For reasons unknown to KWRU, the FKAA installed (and the County paid) \$2.1 million dollars (40 estates), "one extra mile" as Neugent states, for infrastructure on private property in Shark Key. Maybe this is the bubba deal everyone is talking about. This equates to \$50,000 per house in this one subdivision alone. In Marathon, the FKAA installed sewer lines into Ocean Isle Fish Camp spending another million dollars. This camp is also a condo association like Ms. Wigington's Harbor Shores. When the government paid for these two private infrastructures, many of the property owners in Stock Island felt they deserved more and pointed at KWRU for not meeting that expectation.

With regard to Mr. Neugent's testimony regarding Hurricane Hole, when KWRU was in the planning stages of the South Stock Island vacuum project, Hurricane Hole Marina did not exist as it does today. During the design period all that existed at Hurricane Hole was a soda machine and a couple of sheds. See attached building permit issue dates from Monroe County that illustrates this time line. Neither KWRU nor the County had any idea that the expansion of this parcel was on the horizon.

See Attachments 16 and 26.

GORDON BONDESEN

Testimony. Mr. Bondesen complained about the performance of the County Commission and set forth his understanding that the PSC had to be there because the County Commission had not done their job. Mr. Bondesen's testimony was primarily concerned with whether KWRU could have rendered services to the Big Coppitt area and expressed the concern that when he said he wanted to come to a board meeting, a utility spokesman left him with the impression that he could not. Mr. Bondesen felt he had no avenue to make his concerns known to KWRU, and repeatedly expressed his frustration with local government.

KWRU Response. Mr. Bondesen seemed to be unaware of the regulations that allow any customers to express any appropriate concerns to the PSC. Additionally, although there is no requirement that the utility do so in any rule, statute, or ordinance, Mr. Smith reflected upon Mr. Bondesen's testimony and testified that he would have one board meeting open to his customers annually in the future, so that the customers would have an additional avenue to express any concerns they had about the utility's ongoing operations. Mr. Smith made this decision despite the fact that there is no requirement (as PSC counsel affirmed at the hearing) that the utility do so nor does the Commission have the authority to compel the utility to do so. Mr. Bondesen expressed (at the end of the discussion between himself and the Commissioners) that

he was glad to know that there was a process whereby the PSC would look into the concerns of customers. Chairman Carter made sure that the Commissioners were aware of the toll free number whereby customers could contact the PSC, and this seemed to satisfy Mr. Bondesen's concerns.

As to Mr. Bondesen concerns regarding the sewer project on Big Coppitt, *The Key West Citizen* newspaper and Mr. Bondesen, who is a radio host, can take credit for the Big Coppitt sewers. Mr. Bondesen and his M-10 Coalition are one of the reasons for the FKAA is spending more than \$30,000,000 extra in Big Coppitt alone.

For a more thorough discussion on this point, see the discussion of this proposal in KWRU's response to customer Beraldsen.

BRENDA CONROY

Testimony. Ms. Conroy made a brief statement about the length of time it took her to hook up to the system and referenced a litigation over a "buffer tank".

KWRU Response. As to Ms. Conroy's statement regarding that she and neighbors had been told they might lose their homes, it should be noted that in 2000 KWRU never had any intention of extending its sewer lines to Harbor Shores where Ms. Conroy lives nor were any plans in the works. These comments are very harsh statements without any back up or proof whatsoever. KWRU never threatened anyone that they would lose their homes.

Ms. Conroy again infers that KWRU used intimidation and engaged in a "hard battle". This is simply not true. Harbor Shores wanted a free buffer tank. Monroe County providing a buffer tank grossly exceeded all Florida Statutes and Monroe County ordinances. It was not anything that KWRU left out of its construction project. See attached email letter from Monroe County Engineering and where the Monroe County Board of County Commissioners approved this gift to Harbor Shores.

See Attachment 17 and 18.

DIANA FLENARD MOORE

Testimony. Ms. Moore referenced a situation at Harbor Shores condominium. She also referenced litigation between the utility and Harbor Shores.

KWRU Response. As to Ms. Moore's inferences regarding intimidation and retaliation "of both political and financial nature", this talk could not be further from the truth. KWRU has always welcomed its customers to come and ask any questions that they may have. Ms. Moore does a great service to the community by being the Director of the Monroe County Association for Retarded Citizens. Mr. Smith, his other business, and other employees have a great deal of respect for Ms. Moore and her work and have spent more than \$20,000 over the last 10 years with purchasing Christmas items. So "trying to intimidate Ms. Moore" is not what KWRU has been doing and never will. Unfortunately, Ms. Moore has been flooded with bad information over the

years. Once again, none of these allegations has any supporting evidence.

As to Ms. Moore's inference that a contract was written to an entity that did not exist and that a lawyer had to be hired to get a reasonable contract, attached are two contracts that were submitted to Harbor Shores and to their attorney. If one compares these two contracts (that the attorney successfully negotiated) there are not any differences or changes. The \$30,000 was not to get a reasonable contract, unless the PSC approved contract that was sent to Harbor Shores is considered unreasonable.

Also attached is a proposal which KWRU presented to Harbor Shores to connect their entire 70 units to KWRU's system for only \$116,700 or \$1,667.15 per house. This proposal covered all work needed on public and private property. This proposal also includes any and all repairs to bring Harbor Shores' collection system to utility standards including all testing and inspections. This \$1,666 connection is 1/3 of the \$5,000 that it normally costs to connect a house in Monroe County. KWRU tried to help Harbor Shores but Ms. Wigington and Harbor Shores had different agendas.

See Attachments 19, 20, and 21.

Regarding Ms. Moore's comments about having to go into the pro shop to sign a contract and the advice she received from a lawyer, KWRU is not sure why her attorney advised her to bring two copies. KWRU's administrative office is located at the Key West Golf Club and is open from 7 am to 7 pm, 365 days per year. KWRU

does not see what "other issues" she is talking about.

As to Ms. Moore's comments about another gentleman telling her "you have the pipes there" but that KWRU said that the facilities to hook up were not present, during the design phases of the SSI Vacuum project Weiler Engineering met with Ernie Dion who owns El Mar RV Park. At this design meeting, Mr. Dion indicated that he was going to put eight modular units on his property because his zoning was RV / Residential. Since the flows from eight homes exceed the 1000 gallons per day there was no need to install a valve pit in the right of way with a gravity feed per the county ordinance. Once the vacuum system was installed completely, Mr. Dion decided he wanted to be in the RV business and said "where is my gravity feed, I need a valve pit in the right of way." KWRU is ready, able, and willing to install a valve pit , but it is waiting on Monroe County for the go ahead. See attachments were KWRU shows that they bid out this work many times and had many communications with the county administrator, the county attorney, and bids with estimates to complete this contingency work. KWRU is still waiting on the county before any installation for the four un-served properties can occur.

See Attachment 22.

References by Ms. Moore to the fact that if anyone did not pay their "monthly fee" that the whole condominium could be shut down is simply wrong. There are no

back up or details for this comment. All fees charged and collected are in accordance with KWRU's PSC tariff. Harbor Shores did not pay one year in advance for anything to KWRU.

Ms. Moore states that she is on the board and she spent a lot of time watching it get done. And she states "we were under the gun to get it done or we would have lost our grant". This statement is proof that the residents heard that the grants were running out and were going to expire. Ms. Wigington tried to interpret this as targeting the low income.

This statement is simply not true and taken totally out of context. All customers were "targeted" by KWRU to receive notice and to try to obtain compliance with the ordinance and law requiring interconnection for the good of the environment and all customers. Months after noticing had begun KWRU was receiving numerous phone calls from concerned unconnected future customers that their connection grant money was going to expire since their landlords and/or condominium associations were stalling the connection process.

JOHN JONES

Testimony. Mr. Jones addressed the "buffer tank" issue and the resulting litigation. He expressed frustration that it was his understanding that his neighborhood didn't have the facilities necessary to hook up to the system even though they have

paid connection fees.

KWRU Response. As to Mr. Jones' testimony regarding the controversy on the buffer tank, his statements are simply not true. Harbor Shores definitely needed a buffer tank to handle their flow. Mr. Jones, and a select few other customer (who all testified at the Service Hearing) thought that they deserved a free buffer tank for Harbor Shores. Monroe County providing a buffer tank grossly exceeded all Florida Statutes and Monroe County ordinances. It was not anything that KWRU left out of its construction project. See attached email letter from Monroe County Engineering and where the Monroe County Board of County Commissioners approved this gift to Harbor Shores. The attached proposal included the dual buffer tank was offered to Harbor Shores prior to them hiring their wonderful attorney.

See Attachment 23.

As to Mr. Jones' testimony regarding whether or not the utility indicated it did not have the facilities to hook him up, see the discussion on the point in KWRU's response to customer Moore.

See Attachment 22.

Mr. Jones' statement regarding their concern about losing their grant actually backs up KWRU's position that time was running out on the grants KWRU was not targeting low income customers. All customers were "targeted" by KWRU to get

notice and to try to get all to comply with the ordinance and law requiring interconnection for the good of the environment and all customers. Months after noticing had begun KWRU was receiving numerous phone calls from concerned unconnected future customers that their connection grant money was going to expire since their landlords and/or condominium associations were stalling the connection process.

STEVE WIGINGTON

Testimony. Mr. Wigington, Mrs. Wigington's husband, made a brief non-specific statement. In response to a question from Commissioner Argenziano, Mr. Wigington stated he believed there had been "excessive" or "duplicate" charges, but did not give much information to support his belief.

KWRU Response. Mr. Wigington states that (as previously mentioned) people were led to believe that they would pay a flat fee; that a certain amount would get them a package; and that "extra charges" other than this upfront charge began to occur to family members for oversight for more testing for things that did not seem appropriate or necessary to the average person who was led to believe initially that this was just a one-shot deal.

All fees charged to anyone are agreed to in the PSC approved developer agreement, KWRU's tariff, and are consistent with the PSC rules and regulations.

KWRU never led anyone to believe that they would pay one fee and all of a sudden be connected to its system. Mr. Wigington has not provided any documents that back up this comment. Customers must pay their own cost to connect to the available system in the right of way.

KWRU's appropriate infrastructure was confirmed by the URS report. In the URS report it was also concluded that KWRU's available infrastructure was the most cost effective means of connection for the property owners.

As to Mr. Wigington's statement that "it should be simple and easy", it is simple and easy. KWRU presented a proposal to Harbor Shores to connect their entire 70 units to KWRU's system for only \$116,700 or \$1,667.15 per house. See further discussion of this issue in the KWRU response to customer Moore.

See Attachment 26.

R.L. BLAZEVIC

Testimony. Mr. Blazevic was concerned that there was a different wastewater system in the city than there was on Stock Island. He stated that he had never gotten a good answer as to why the county sewage system is operating in the city. Mr. Blazevic was not a customer of the utility.

KWRU Response. As to Mr. Blazevic's statement of amazement that there were different treatments and different jurisdictions between Stock Island and the city, and

that there are different laws covering the City of Key West and covering the county, KWRU charges all of its customers in accordance with its PSC approved contract and within the scope of its PSC Tariff. North Stock Island customers (400 golf club homes, Key West Golf Club sewer and effluent sales and the Monroe County Detention Center) are major contributors to KWRU's total income to help operate its plant with over \$25,000 per month for service.

NANCY HILLMAN

Testimony. Ms. Hillman referenced many experiences she had with the utility dating back to 1984. In her 20-plus years of experience with the utility, she did reference several matters such as a misunderstanding over whether a bill had been paid, the fact that the utility is a monopoly, the fact that the utility has put things in mailboxes which she believes is illegal, and that she doesn't see any improvement to warrant a \$51 a month bill.

KWRU Response. As to Ms. Hillman's references to increases every August of .50, every year since Mr. Smith has owned KWRU the company presented annually to the PSC a request for price index which keeps utility rates in line with inflation.

Ms. Hillman referenced numerous concerns she had with the utility that occurred several years ago. Mr. Smith did not own KWRU at the time of these issues. Attached is Ms. Hillman's billing history which shows all payments she has made have been

posted to her account accurately and on time.

See Attachments 25 and 26.

AL HILLMAN

Testimony. Mr. Hillman stated that he was there to back up and agree with his wife's concerns, and said that the biggest problem had been with the billing situation. He expressed unhappiness with having a hook up fee after being a customer of the utility for 20 years but eventually conceded that the utility had addressed his concerns in that no hook up fee was paid. He also talked about how during storm events certain lift stations clog up and the streets flood frequently "from the manholes". He indicated that service at the utility had gotten a little better and expressed his concerns about misbillings, double-billings and the like.

KWRU Response. The customer acknowledged that the hook up fee issue was, at most, a misunderstanding and that he never ended up paying any redundant hook up fees.

As to Mr. Hillman's comments that he had a problem with the "billing situation", and a reference to a controversy he had regarding two trailers and a hook-up fee, Mr. Smith was not the owner when the issue with two trailers came up. See attached billing statement to reflect that all of Mr. Hillman's payments since Mr. Smith have been posted accurately and on time.

See Attachment 25.

Mr. Hillman inferred that every rain the lift stations always are clogged up, that the streets flood frequently from the manholes, that he still has a gravity system, that a lot of water that backs up and comes up on the street. This statement is completely false. Steve Johnson of the DEP testified the KWRU is operating its system in compliance in the rules of the DEP. If this were true, every resident who lives in this area would call the police, the newspaper, and the DEP.

See Attachment 26.

KWRU operations company Keys Environmental Inc. finds this statement very confusing and factually unfounded. Since 2002, KEI has been operating the system and there are no records of sewer problems reported by Mr. Hillman or his wife, whom reside at H31 Miriam Street. Statement of fact, Mr. Hillman's property is situated at the high side of the collection system. Knowing this, let us assume that Mr. Hillman's assertion that the lift stations are always clogged up were true. If this were the case then because it is a fact that Mr. Hillman is on the high side of the gravity system, it follows that approximately 400 properties (on the low side of the gravity system) would be affected before Mr. Hillman would be. Again, if this were occurring this would be obvious. Further, for as long as KWRU has been operating the utility, personnel have made a daily visit (365 days a year) to the lift station that is less than

300 feet from Mr. Hillman's property. This daily visit insures that what Mr. Hillman is alleging does not happen. In events of power outage, the utility does maintain generators to keep lift stations operational when line power goes down. In fact, in April 2005, KWRU/Keys Environmental was featured in a national civil engineering trade publication (CE NEWS) that highlighted the utility's field operations in regards to providing generator power to lift stations on the force main system. In conclusion, Keys Environmental and KWRU can not find any evidence (customer call logs, operations meeting minutes, etc) that supports the testimony of Mr. Hillman.

Knowing that Mr. Hillman's property and surrounding area were salt ponds and marsh until the dredging project filled it in with the dredged materials from the adjacent channels and also knowing that currently this property and area is very low (relative to sea level) and does not have a functional storm drain system, it has long been said that the ocean itself is the storm drain system for this part of the island. The only logical conclusion that KWRU/KEI can draw is that Mr. Hillman is seeing water on the streets after rainfall and he is attributing this to the utility sewer system or more specifically "lift stations clogging up". When, in fact, what he is seeing is rain water in a low lying area of Stock Island that is not served by a storm drain system.

HARRY GOODE

Testimony. Mr. Goode expressed concerns that the utility had given out

notification to everyone who wasn't hooked up to the system and indicated that, at least with regard to him, the notice was given erroneously since he was already hooked up. He also expressed his concern that any raise in rates should be tied to the cost of living.

KWRU Response. The customer indicated that the misunderstanding about the hook up fee didn't result in the payment of any duplicative charges.

JEFF ALLEN

Testimony. Mr. Allen testified that he did not a problem with the rate increase, and that he understood costs were rising everywhere. He acknowledged that the costs for KWRU were probably rising and he wondered whether if other companies were providing service to KWRU's customers, the rates would be significantly more.

KWRU Response. Mr. Allen is correct. The customers would pay higher rates if they were receiving service from any of the comparable utilities in the Florida Keys.

See Attachment 26.

Attachments

1. URS As Built Report
2. URS Report Final Part I
3. URS Report Final Part II
4. All Four Unserved Properties
5. Grand Jury
6. US Water Proposal
7. Big Coppitt
8. Big Coppitt Letters
9. Rendell Letter
10. Corporate Name
11. Deeds
12. Grant email
13. Agenda
14. Bass Letter
15. Certified Letters
16. Hurricane Hole Permits
17. Harbor Buffer Tank
18. Harbor Shores Buffer

19. Harbor Connect
20. Harbor Shore Final Agreement
21. Original Harbor Proposal Agreement
22. Contingency Item Letters
23. Contingency Properties
24. Harbor Shores Proposal
25. Hillman Statement
26. Florida Keys Wastewater Rates

Attachment 1

To Troy Rendell

SOUTH STOCK ISLAND

NEW WASTEWATER COLLECTION SYSTEM
REVIEW OF DESIGN PROCESS AND
AS-BUILT FACILITIES

Prepared for:

Monroe County Board of Commissioners

Prepared by:

URS Corporation - Tampa, Florida

1.0 INTRODUCTION

URS Corporation (URS) was contracted by Monroe County to conduct an independent engineering evaluation of the recently installed vacuum wastewater collection system in the southern portion of Stock Island, Florida. This review was initiated to address concerns raised by the community regarding the fees that may be assessed by the operating utility, and additional costs to connect to the new system. URS review activities were completed in accordance with our letter proposal to the County dated September 16, 2003.

This report provides a summary of URS' field and office review activities and presents key technical findings and observations related to the design and installation of the subject sewer system. The summary information provided in this report is based on a field inspection of the sewer system, available project documents provided by the County, and through direct communication with project principals.

Review activities completed by URS were directed to answer the following basic questions:

Is the constructed wastewater collection system consistent with recommendations contained in the 1999 *Sanitary Wastewater Master Plan Update (Master Plan Update)* for Monroe County, as adopted by the Board of County Commissioners (BOCC) in 2000?

Do the As-Built drawings of the completed system, dated September 2003, reflect the design approach depicted in the construction Bid Set drawings dated May 30, 2003? Do the As-Built drawings accurately depict the observed field conditions?

Was the constructed system modified from the anticipated design when the BOCC entered into its Capacity Reservation and Infrastructure Contract with KW Resort Utilities (the Utility) on July 31, 2002? If the system was modified, could these changes result in adverse financial impacts to future individual users of the system?

Major
Points
of
Review

1.1 Project Background

The existing sanitary wastewater collection system and associated treatment plant that primarily serve the northern portion of Stock Island was purchased by KW Resort Utilities (the Utility) in 1997. This existing collection system conveys wastewater via both gravity sewers and pumping/force main facilities to the wastewater treatment plant, which is centrally located on the island. In addition, a series of smaller package wastewater treatment plants were used at several

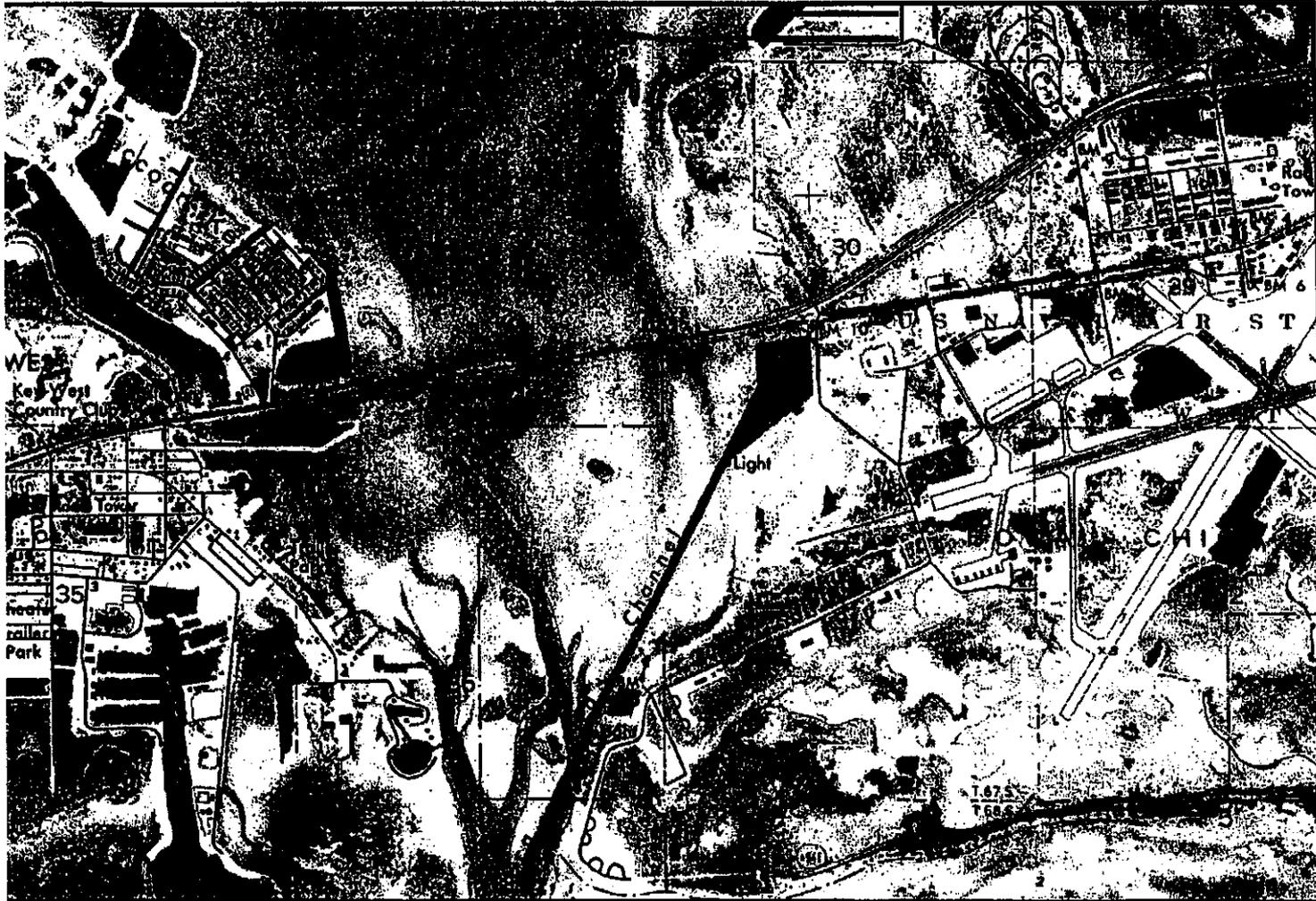
Subsequent to the sale of the system to the Utility, the southern portion of Stock Island remained largely unsewered, and individual residents and commercial establishments relied upon septic tanks with drainfields or cesspits for the disposal of wastewater. County-wide evaluations identified southern Stock Island as a critical area, or "hot spot" in Monroe County that represented a significant source of pollutant loading to the environmentally-sensitive local water resources. As a result, conceptual planning for and implementation of a centralized sewer system for southern Stock Island was initiated.

The *Master Plan Update* for Monroe County was prepared by the engineering firm CH2MHill in 1999, and was adopted by Monroe County in June 2000. Separately, the Utility commissioned the Weiler Engineering Corporation of Port Charlotte, Florida (the Engineer) to prepare an engineering planning document under its auspices, titled the *Comprehensive Engineering Report for KW Resort Utilities Wastewater Treatment Plant (Engineering Report)*. The Engineers' report was finalized in 1999. Both plans addressed the need to provide centralized sewer service in densely populated areas and concluded that vacuum collection systems were the preferred approach. This conclusion was based on the favorable level of installation and operation costs, as well as their operational simplicity. In the *Master Plan Update*, CH2MHill also indicated that vacuum collection systems be augmented with low pressure and conventional force main systems on a case-by-case basis to effectively address variable local conditions.

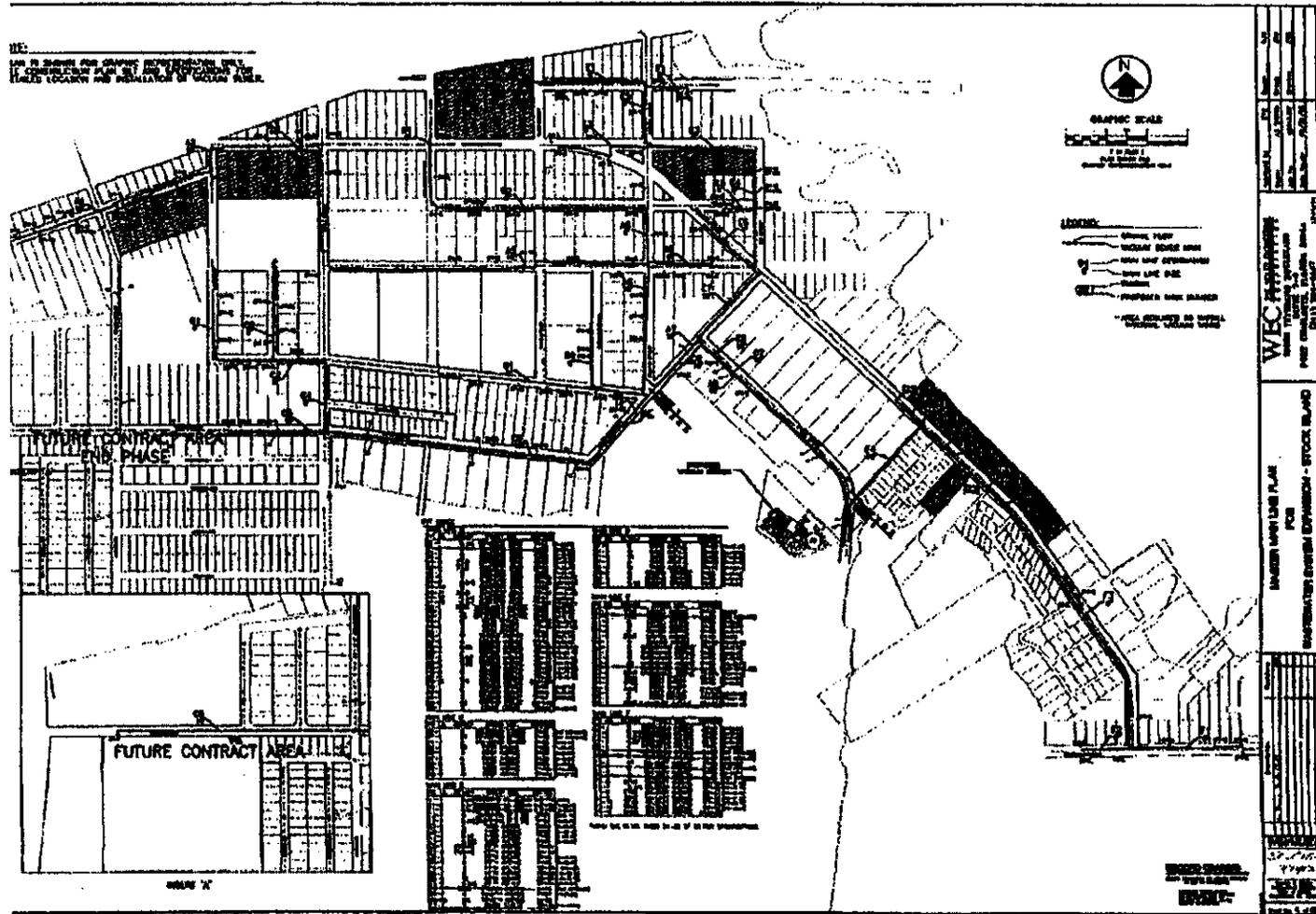
In October 2001, the Utility and the Engineer outlined an approach to complete a design of a centralized vacuum sewer system for southern Stock Island. In December 2001, the Board of County Commissioners (BOCC) reviewed the proposed design approach and approved the expenditure of \$199,300 for the Utility to develop a detailed system design. The design work began in January 2002 and system permit applications were filed by the Utility with the Florida Department of Environmental Protection (FDEP) in March 2002. At the conclusion of design activities in May 2002, the Utility solicited bids from contractors to construct the system. Bids were received on June 27, 2002. The Utility negotiated a final contract price with E.T. MacKenzie of Florida, Inc. of Sarasota, Florida (the Contractor).

Subsequently, the BOCC approved the proposed expansion of the wastewater collection system to include the unsewered residential and commercial portion of southern Stock Island by entering into a Capacity Reservation and Infrastructure Contract with the Utility during its meeting on July 31, 2002. This contract provided funds to the Utility in an amount not to exceed \$4,606,000 to construct the system expansion in exchange for which the Utility provided capacity at its wastewater treatment plant equal to 1,500 Equivalent Dwelling Units (EDUs). Figures 1 and 2

**FIGURE 1
PROJECT LOCATION MAP
STOCK ISLAND WASTEWATER VACUUM COLLECTION SYSTEM**



**FIGURE 2
SEWER SYSTEM CONFIGURATION AND LAYOUT
STOCK ISLAND WASTEWATER VACUUM COLLECTION SYSTEM**



1.2 Review Goals

Based on review of the available documentation and discussions with project principals, the intent of the project was to provide a central sewer system, which could be readily, and cost effectively accessed by the majority of the remaining unsewered residential and commercial users in the service area. Review activities completed by URS included three discreet tasks:

- (1) Complete a field inspection of the installed system comparing both the original *design drawings and the record (i.e., as-built) drawings* prepared by the Utility's engineer,
- (2) Review field data, relevant planning and design documents, correspondence, and construction activity records provided by the County and the Engineer,
- (3) Prepare a technical report summarizing key findings of the design process and as-built drawing review.

1.3 Report Organization

This report is organized into the following four sections:

- Introduction
- Document Review and Field Inspection
- Findings
- Summary of Findings and Other Considerations

Section 1 provides the foregoing project background, and the URS scope of work and related goals for the review. Section 2 describes the process used to conduct the review pertaining to the system engineering planning, design, and construction processes that URS developed based on the collective review of the project chronology, as well as interviews with County personnel, the Engineer, and others as documented herein.. Section 3 identifies the key issues of the project, provides a discussion of each issue, and lists key findings of the review process. Section 4 summarizes the key findings, and presents several observations related to the project that the County may wish to evaluate further.

2.0 DOCUMENT REVIEW AND FIELD INSPECTION

The project evaluation consisted of reviewing available documents, conducting a field inspection of the collection system, and meeting with project principals. Each of these activities is summarized in the following subsections.

2.1 Document Review

URS initiated the evaluation of the new vacuum collection sewer system on September 18, 2003, attending an initial meeting with County staff at the Monroe County Administration Office in Key West. Documents related to the project were obtained for review. These included planning documents, design, construction, and record drawings of the vacuum collection system, the Reimbursement and the Capacity Reservation contracts between the County and the Utility, correspondence between the Utility, Engineer, County, and others associated with the project, Contractor and Engineer pay applications, county codes and ordinances related to wastewater collection and disposal, and other miscellaneous documents of relevance. A complete list of all documents received and reviewed as part of the evaluation process is given in Attachment A.

The document review allowed URS to evaluate potential differences in the sewer system design layout among the different sets of design drawings prepared by the Engineer. URS also confirmed the organizational relationships among the parties associated with the project. Figure 3 depicts the project organization and presents the values of the referenced contracts.

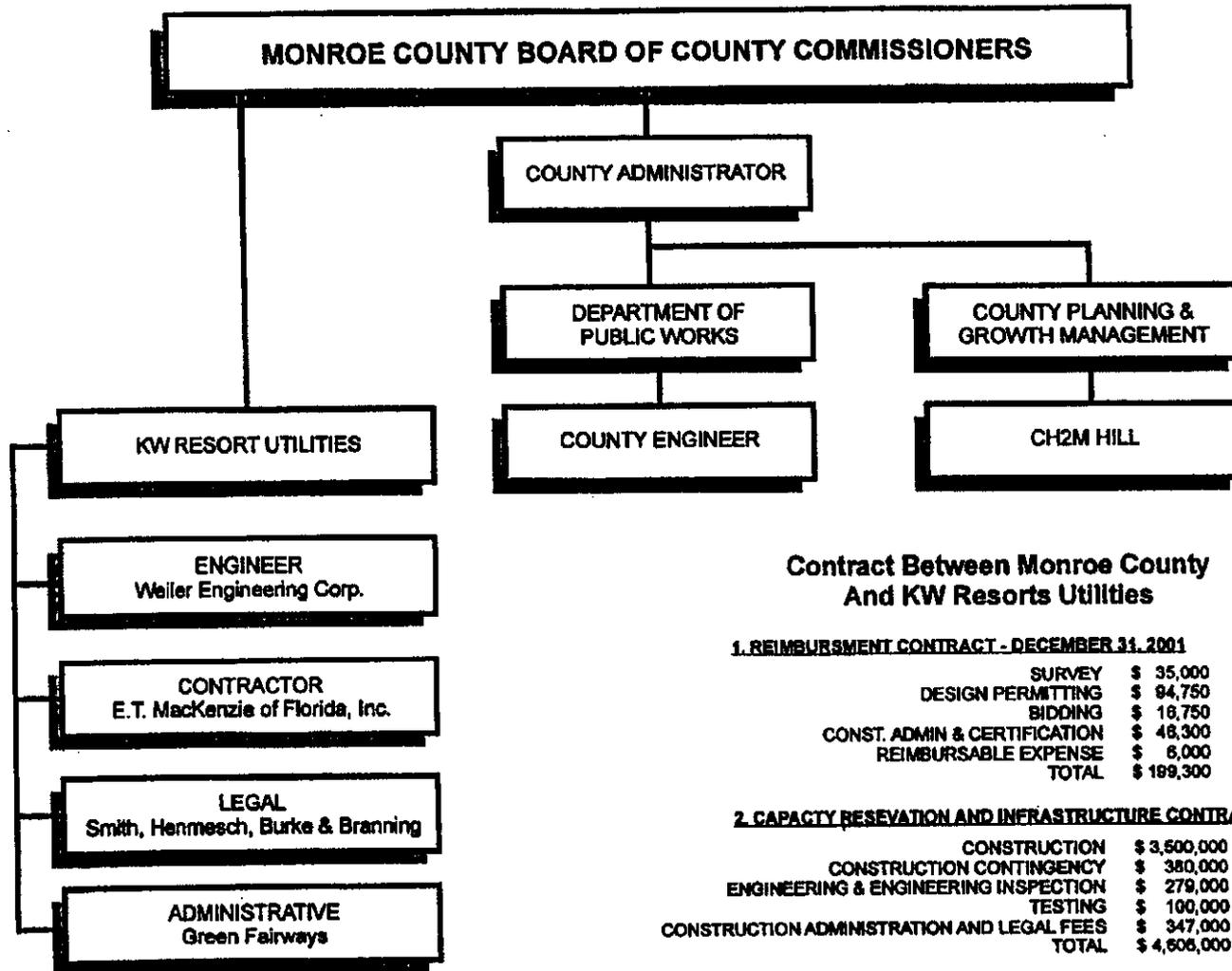
Finally, URS used the available documentation to reconstruct a chronological timeline of the project from the time of conceptual planning in 1998 through the completion of construction activities. Figure 4 shows the project timeline based on review of available documents.

2.2 Field Inspections

URS conducted two field inspections (September 19 and September 25, 2003) to verify as-built conditions of the new vacuum collection system. System components inspected included:

- (1) The vacuum pump station and wastewater transfer system located at the Utility's Wastewater Treatment Plant,
- (2) All buffer tanks,

**FIGURE 3
PROJECT ORGANIZATIONAL RELATIONSHIPS & CONTRACT SUMMARY
STOCK ISLAND WASTEWATER VACUUM COLLECTION SYSTEM**



**Contract Between Monroe County
And KW Resorts Utilities**

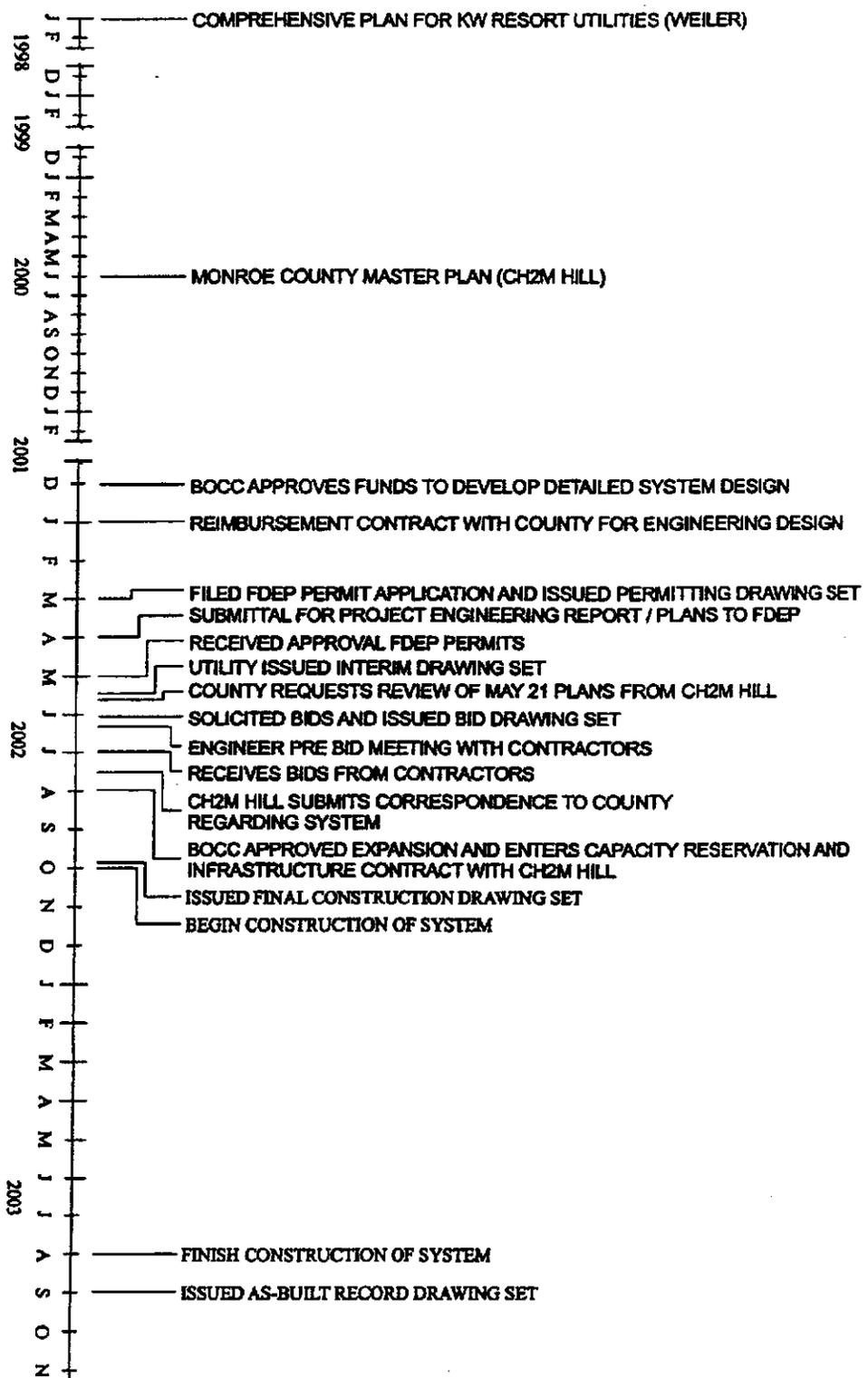
1. REIMBURSEMENT CONTRACT - DECEMBER 31, 2001

SURVEY	\$ 35,000
DESIGN PERMITTING	\$ 94,750
BIDDING	\$ 16,750
CONST. ADMIN & CERTIFICATION	\$ 48,300
REIMBURSABLE EXPENSE	\$ 6,000
TOTAL	\$ 199,300

2. CAPACITY RESEVATION AND INFRASTRUCTURE CONTRACT

CONSTRUCTION	\$ 3,500,000
CONSTRUCTION CONTINGENCY	\$ 380,000
ENGINEERING & ENGINEERING INSPECTION	\$ 279,000
TESTING	\$ 100,000
CONSTRUCTION ADMINISTRATION AND LEGAL FEES	\$ 347,000
TOTAL	\$ 4,606,000

FIGURE 4
PROJECT TIMELINE
STOCK ISLAND WASTEWATER VACUUM COLLECTION SYSTEM



The buffer tanks and valve pits were inspected by removing the lid of each unit and confirming that the underground components had been installed.

In addition to the various system components inspected, URS field verified the relative location of the primary vacuum mains to the degree possible. Certain portions of the vacuum main alignments could not be directly field verified since the County has since re-paved some of the roads where the project was constructed. However, the presence of the system's vacuum mains in and along the re-paved roads was confirmed by visually identifying the presence of manhole lids associated with the various vacuum valve pits along the main routes.

2.3 Meetings and Interviews

URS conducted a series of meetings and/or interviews with individuals associated with the project, including County staff and the Engineer. In addition, interviews were conducted with a vendor-representative of the vacuum sewer equipment manufacturer, Airvac, and with CH2MHill personnel. The purpose of these meetings was to develop a clear understanding of the project and the chronology of events during its implementation.

Additionally, the Engineer's site representative identified himself to the URS representative during the field inspections and further described the process that occurred during the final design of the system. This individual also provided assistance in locating and accessing the buried vacuum mains and service stub-outs.

Finally, URS submitted a list of project-specific questions to the Engineer on October 4, 2003 to obtain additional clarification about the design process. The Engineer prepared and submitted a formal response to the questions on October 9, 2003. A copy of the letter to the Engineer, and their responses is included in Attachment B.

3.0 FINDINGS

Based on the information review, field inspections, and interviews with project principals, URS has developed technical findings related to the design and construction of the new collection system to address the three basic questions identified in Section 1. The following three subsections present the issue, a summary discussion of the information related to each specific issue, and the associated major findings.

3.1 System Design Approach

Issue

Is the constructed wastewater collection system consistent with recommendations contained in the 1999 *Master Plan Update* for Monroe County, as adopted by the Board of County Commissioners (BOCC) in 2000?

Discussion

The Utility's Engineer conducted an initial evaluation of the wastewater collection system requirements by estimating anticipated wastewater flow rates and their point of connection in south Stock Island, as summarized in the 1998 Weiler Engineering, Inc. *Comprehensive Engineering Report*. A similar evaluation was completed in the 1999 CH2MHill *Master Plan Update*. The two reports cited different units of wastewater measurement for individual points-of-connection. The 1998 Engineer's report cited "equivalent residential connections" (ERCs), with a published value of 207 gpd for each ERC. The 1999 CH2MHill report cited "equivalent dwelling units" (EDUs), with a published value of 167 gpd for each EDU. Moreover, the reports cited different counts for the EDUs and ERCs at the anticipated build-out conditions, thus resulting in different wastewater flow rate estimates for the existing and future build-out conditions. Specifically, the 1998 *Comprehensive Engineering Report* indicated a total ERC count at full build-out of 1,880. The 1999 *Master Plan Update* identified that 960 sewered EDUs and 982 unsewered EDUs were present in the subject service area. Project-related correspondence has further indicated an EDU count of 1,775.

A subsequent March 2002 *Updated Capacity Analysis Report* prepared by the Engineer for project permitting purposes indicated a total ERC build-out count for the service area of 2,093. However, the proposed collection system design as presented by the Engineer, also in March 2002, indicated that capacity for an additional 1,500 EDUs would be provided to accommodate

The proposed value of 1,500 additional EDUs was apparently computed by the Utility based on available treatment capacity at the wastewater treatment plant. The current permitted treatment plant capacity of 499,000 gpd, and the current average daily flow rate entering the plant is measured to be approximately 250,000 gpd. Thus, the 1,500 EDU count presented in the Capacity Reservation Contract was taken to be the current excess capacity of 249,000 gpd divided by the published EDU flow rate of 167 gpd, i.e.,

$$\begin{aligned}
 \text{Equivalent Plant Reserve Capacity} &= \frac{\text{Current Excess Capacity}}{\text{Master Plant EDU Rate}} \\
 &= \frac{249,000 \text{ gpd}}{167 \text{ gpd}} \\
 &= 1,500 \text{ EDUs}
 \end{aligned}$$

Resolution of the reason for differences between the use of ERCs and EDUs in the different engineering planning documents and their estimated values cited therein could not be achieved given the available documents reviewed. Moreover, the new vacuum collection system has a physical design limitation for connection of buffer tanks. Specifically, according to the system manufacturer, the number of buffer tanks that can be installed on any given vacuum main is limited to approximately 25% of the total number of connections (i.e., the number of valve pits and buffer tanks combined). This physical limitation may potentially affect future connections of buffer tanks for flows exceeding 1000 gpd, such as from mobile home parks and condominium complexes.

Findings

Key findings related to the system design approach are:

- ✱ (1) The constructed wastewater vacuum collection system is consistent with recommendations described in the referenced *Master Plan Update* with respect to this preferred type of sewer system.
- (2) Discrepancies exist between the County's *Master Plan Update* document and the Utility's *Engineering Report* with respect to a definitive planning value for either ERCs or EDUs present in the south Stock Island service area. There apparently is no clearly established value for planning future system expansion that will include the remaining unsewered areas, and for determining what impacts may result to

3.2 As-Built Conditions

Issue

Do the As-Built drawings of the completed system, dated September 2003, reflect the design approach depicted in the construction Bid Set drawings, dated May 30, 2003? Do the As-Built drawings accurately depict the observed field conditions?

Discussion

In order to evaluate potential differences among the various design plan sets received for review, URS completed a detailed comparison. Table 1 lists the five plan sets that were reviewed:

Table 1 – Plan Sets Reviewed

Plan Set No.	Date	Description
1	March 2002 ⁽¹⁾	<u>Preliminary Design Plans</u> – Submitted to FDEP to secure construction permit.
2	May 21, 2002 ⁽²⁾	<u>Interim Design Plans</u> – Date-stamped by the Engineer, and received by the County on May 21, 2002. The County requested a review from CH2MHill on May 24, 2002. Comments from CH2MHill were received by the County on July 5, 2002.
3	May 30, 2002	<u>Final Design/Construction Plans (Bid Set)</u> – Used for contractor bidding. <u>The County was verbally advised by the Utility that these plans were similar to the May 21, 2002 set.</u> The BOCC adopted these plans during the July 31, 2002 BOCC meeting.
4	September 30, 2002	<u>Construction Set</u> – Nearly identical to the May 30 th set. These plans also referred to in project correspondence as the “October 2002 Construction Set.”
5	September 12, 2003	<u>Record Drawings (As-Built Drawings)</u> – Submitted by the Engineer to certify the project complete and to represent the system as installed, showing deviations from the Bid Set dated May 30, 2002.

Notes:

For each set of drawings, URS conducted a take-off quantity analysis of the principal components that comprise the system (i.e., vacuum valve pits, buffer tanks, and vacuum pipelines). In addition, changes to the physical configuration of the system were noted and documented including relocation of service stub-outs among others. Contractor Pay Applications submitted to the County through the Utility were also reviewed to compare against the quantity take-off results for the major system components shown in the As-Built drawings, for which payment was requested.

Table 2 summarizes the number of the vacuum valve pit and buffer tank quantities indicated among the five drawing sets. Table 3 presents a summary comparison of the quantities of the sewer lines and vacuum valve pits and buffer tanks from the As-Built Drawings, the approved Contractor Pay Applications, and a final quantity tabulation provided by the engineer on October 9, 2003.

Table 2 -- Comparison of Vacuum Sewer Tank Inventory Comparison

Type	Conditioning Set 9/20/2002	Utility Set 1/15/2003	Final Bid Set May 30, 2002	Final Construction Set Sept 30, 2002	As-Built Set Sept 12, 2003	Engineer Final Tabulation
Valve Pits						
Type A1	0	6	9	9	23	--
Type A	40	11	30	30	15	40
Type B	24	20	32	32	31	30
Total	64	37	71	71	69	70
Buffer Tanks						
Type C	11	17	15	15	13	13
Type E	0	11	0	0	0	0
Type G	0	0	0	0	0	0
Type I	0	1	0	0	0	0
Total	11	29	15	15	13	13
Dual Buffer Tanks						
Type D	0	4	0	0	0	0
Type F	0	6	0	0	0	0
Type H	0	3	0	0	0	0
Type J	0	1	0	0	0	0
Total	0	14	0	0	0	0
Vacuum Stub-Outs						
STUB	0	2	16	16	16	--

Table 3 – Comparison of System Component Quantities

10" PVC Vacuum Sewer ⁽⁴⁾	13,130	13,100	13,665
8" PVC Vacuum Sewer ⁽⁴⁾	4,317	4,508	4,709
6" PVC Vacuum Sewer ⁽⁴⁾	4,959	4,926	5,434
4" PVC Vacuum Sewer ⁽⁴⁾	627	266	844
Valve Pit Type A	15	10	40
Valve Pit Type A1	23	12	--
Valve Pit Type B	31	25	30
Valve Pit Type C	13	13	13

Notes:

- (1) Dated September 12, 2003.
- (2) Summary through Pay Application No. 10.
- (3) Engineer's final tabulated quantities from Engineer's Field Notes, provided October 9, 2003.
- (4) All sewer lengths indicated in linear feet installed.

As shown on Table 2, the quantities listed in the table are consistent for the vacuum valve pits and buffer tanks for all drawing sets, except the May 21, 2002 set. This drawing set, identified by the Engineer as an interim design development set, shows a total of 37 valve pits, 29 buffer tanks, and 14 dual-buffer tanks. This is in contrast to the contractor Bid Set dated May 30, 2002, which shows 71 valve pits, 15 buffer tanks, and no dual-buffer tanks. The As-Built drawings dated September 12, 2003 show relatively comparable numbers to the contractor Bid Set, with 69 valve pits, 13 buffer tanks, and no dual-buffer tanks.

Table 3 indicates significant discrepancies between the quantities for all cost items shown in the As-Built Drawings, the Pay Applications, and Final Engineer Tabulations, except for the buffer tanks. According to the Engineer, the Contractor is currently preparing a final Pay Application that is intended to reconcile the quantities between the As-Built conditions and their final quantity tabulation.

There are minor discrepancies between the location and alignment of vacuum system components that enter the wastewater treatment plant site, including the four, 10-inch vacuum mains, and the influent tank and building. These are considered to be insignificant, though the As-Built drawings should be revised to accurately depict the actual equipment arrangement at the plant site.

Regarding miscellaneous field observations of the installed system components, URS noted that flowable fill was used in some trenches as backfill material prior to pavement restoration. By placing flowable fill into the trenches, the Contractor did not provide a proper granular material to bed, haunch, and crown the pipe for proper protection in accordance with the design drawings in certain locations. Where flowable fill was placed directly around the pipe, a pipe break occurred during the URS field inspection. This construction technique could cause similar problems elsewhere in the system. Due to the limited nature of the field inspections conducted by URS, the extent of this construction practice could not be fully evaluated.

Finally, URS observed some manholes that were not set at or slightly above grade, as designed. The Contractor was required to sawcut the pavement around some of the manholes so that they could be accessed for servicing.

Findings

- (1) The review revealed that there is general agreement between the project construction drawings (Bid Set and Final Construction Set) and the As-Built drawings for major system components. In other words, the constructed wastewater collection system is consistent with the May 30, 2002 plans as adopted by the BOCC on July 31, 2002.
- (2) Until the final Pay Application is received from the Contractor and reviewed, the significant discrepancies between the measured quantity take-off values from the As-Built drawings, the quantities listed in the Pay Applications received to date, and the final Engineer tabulated values cannot be reconciled.
- (3) Field inspections verified that 13 buffer tanks were installed as indicated in the As-Built drawings. Of this number, one buffer tank was installed per an addendum to the construction contract for Hurricane Joe's. In general, vacuum valve pits that are depicted on the As-Built drawings corresponded well to those visually observed in the field. URS confirmed the presence of additional vacuum valve pits along the vacuum main alignments.
- (4) Field inspections confirmed the physical location and depth of ten pre-selected vacuum mains and service stub-out locations. In general, the information presented on the As-Built drawings regarding the location and depth of burial of the mains were in agreement with the field data collected. Attachment C is a copy of URS field notes taken during

3.3 Plan Modifications

Issue

Was the constructed system modified from the anticipated design when the BOCC entered into its Capacity Reservation and Infrastructure Contract with the Utility on July 31, 2002? If the system was modified, could these changes result in adverse financial impacts to future individual users of the system?

Discussion

Concerns have been expressed recently with regard to possible modifications made to the May 30, 2002 design documents, used for contractor bid solicitation, and adopted by the BOCC on July 31, 2002 for construction. Additionally, if changes to the design plans were made, what impact would result for the system users.

In order to identify whether such changes had been made, a project chronology was developed to understand the sequence of events during planning, design, review, bidding, and contract execution. The project chronology is shown in Figure 4. The following summarizes significant milestone dates for the project:

- Conceptual Planning (1998 through 2001)
- Design and Permitting (January through May 2002)
- Bid Solicitation & Contractor Selection (June and July 2002)
- Capacity Reservation Contract Execution (July 2002)
- System Construction (September 2002 through August 2003)

As discussed in Section 3.2 of this report, review of the five drawing sets prepared by the Engineer indicated that quantities of the major system components (i.e., buffer tanks, valve pits, pipe lengths) were similar among all sets, except the May 21, 2002 drawing set. The May 21 set was described by the Engineer as an "Interim" or "Working" set of design drawings, and do not represent the final arrangement and quantities of major system components. The May 21 drawings were date-stamped and signed by the Engineer, but were not formally stamped with the design engineer's Seal of Professional Registration. The May 21 drawings were delivered to the County by the Utility on May 24, 2002. The Utility had requested a review and comment of

The County forwarded the May 21 drawings to their engineering consultant, CH2MHill, on May 24, 2002 for review on behalf of the County. Comments from CH2MHill were submitted to the County on July 5, 2002. These comments were subsequently included in the Agenda for the BOCC meeting held on July 17, 2002. Apparently, resolution of these comments on the May 21 drawings from CH2MHill was not made. A copy of the letter from CH2MHill is included in Attachment D. Utility personnel present at the July 17 BOCC meeting apparently also did not indicate that discrepancies existed in the design represented in the May 21 drawings and the contractor bid set of May 30.

As part of the contractor solicitation activities, a pre-bid meeting was held between the Utility, the Engineer, the County, and the contractors on June 11, 2002. Prior to the meeting with the contractors, the Utility, the Engineer, and the County convened to review the contractor bid drawings, dated May 30, 2002. There is no formal documentation that the May 30, 2002 drawings were delivered to the County, though these drawings were used during the pre-bid meetings on June 11. CH2MHill was not provided the May 30 drawings for review and comment. Contractor bids were received on June 27, 2002 and were based on the May 30 drawings.

During the BOCC meeting of July 31, a version of the Capacity Reservation Contract between the County and the Utility was attached to the formal Agenda for consideration by the BOCC. The contract document referenced engineering drawings dated May 16, 2002. After the BOCC meeting began, a revised version of the contract document was provided to the County Administrator, and included a date change for the referenced engineering drawings to May 30, 2002. This revised document was subsequently considered and executed by the BOCC and the Utility.

Following the execution of the Capacity Reservation Contract, the Utility issued a contract with the Contractor to commence construction activities. The Utility maintained direct control and supervision of the Contractor during the construction period. The Engineer was retained by the Utility to provide on-site construction supervision, and to provide material testing services. Pay Applications prepared by the Contractor were reviewed by the Engineer, and submitted to the County for payment. The County engineer reviewed the Pay Applications for approval prior to payment to the Contractor. The County did not conduct on-site inspections of day-to-day construction activities.

Findings

- (1) There are significant discrepancies in the number of valve pits and buffer tanks between the May 21, 2002 drawing set and the contractor bid set, the construction drawing set, and the as-built drawing set. According to County personnel, the May 21 set was reviewed with the understanding this represented the final design approach.
- (2) CH2MHill comments on the May 21 drawings were not addressed.
- (3) Substantial design changes made late in process has led to confusion regarding the collection system components and layout.

4.0 SUMMARY OF FINDINGS AND OTHER CONSIDERATIONS

The following subsections present a summary of the findings of the URS review of available documents related to the new sewer system in south Stock Island, and other considerations the County may wish to evaluate further.

4.1 Summary of Findings

URS identified nine key findings associated with its review of the project documentation. These findings are:

- (1) The constructed wastewater vacuum collection system is consistent with recommendations described in the referenced *Master Plan Update* with respect to this preferred type of sewer system.
- (2) Discrepancies exist between the County's *Master Plan Update* document and the Utility's *Engineering Report* with respect to a definitive planning value for either ERCs or EDUs present in the south Stock Island service area. There apparently is no clearly established value for planning future system expansion that will include the remaining unsewered areas, and for determining what impacts may result to both the new collection system and/or the wastewater treatment plant.
- (3) The review revealed that there is general agreement between the project construction drawings (Bid Set and Final Construction Set) and the As-Built drawings for major system components. In other words, the constructed wastewater collection system is consistent with the May 30, 2002 plans as adopted by the BOCC on July 31, 2002.
- (4) Until the final Pay Application is received from the Contractor and reviewed, the significant discrepancies between the measured quantity take-off values from the As-Built drawings, the quantities listed in the Pay Applications received to date, and the final Engineer tabulated values cannot be reconciled.
- (5) Field inspections verified that 13 buffer tanks were installed as indicated in the As-Built drawings. Of this number, one buffer tank was installed per an addendum to the construction contract for Hurricane Joe's. In general, vacuum valve pits that are depicted on the As-Built drawings corresponded well to those

- (6) Field inspections confirmed the physical location and depth of ten pre-selected vacuum mains and service stub-out locations. In general, the information presented on the As-Built drawings regarding the location and depth of burial of the mains were in agreement with the field data collected. Attachment C is a copy of URS field notes taken during the field inspections.
- (7) There are significant discrepancies in the number of valve pits and buffer tanks between the May 21, 2002 drawing set and the contractor bid set, the construction drawing set, and the as-built drawing set. According to County personnel, the May 21 set was reviewed with the understanding this represented the final design approach.
- (8) CH2MHill comments on the May 21 drawings were not addressed.
- (9) Substantial design changes made late in process has led to confusion regarding the collection system components and layout.

4.2 Other Considerations

During the review process of available project documents and information provided to URS described in the foregoing sections, three additional issues were identified that were beyond the established scope of work, but which the County may wish to review further. These issues include:

Issue No. 1 – Treatment Plant Reserve Capacity

As discussed in Section 3.1, the Utility apparently computed the number of additional EDUs that could be accommodated based on the actual reserve treatment capacity at the Stock Island Wastewater Treatment Plant. Additional analysis appears warranted to confirm that the capacity purchased by the County is equivalent to the actual reserve capacity available.

The Florida Administrative Code (F.A.C.), Chapter 62-600.405 describes specific planning requirements for municipal wastewater treatment plants when 50 percent of its rated capacity is reached. Specifically, when the plant hydraulic capacity is estimated to be reached or exceeded within five years, engineering planning and preliminary design for the expansion must commence. If the estimated plant capacity will be reached or exceed within four years, preparation of engineering plans and specifications for the plant upgrade are required. Finally, if

Monroe County Ordinance requires users with access to a centralized sewer system to connect to the system within one year. The newly completed wastewater collection project allows for the immediate connection of 1,500 EDUs. Connection of these new users in a short period of time would result in the plant rated hydraulic capacity to be reached. While provisions exist in FAC 62-600.405(9) to adjust the schedule for plant expansion, the County may wish to examine the current system configuration with regard to potential impacts at the treatment plant. Moreover, based on current plant capacity the FDEP has the authority to limit or possibly delay some of the new connections until capacity issues are resolved.

Issue No. 2 – Adequacy of Buffer Tank Distribution

The number and distribution of buffer tanks installed on the vacuum mains is limited based on physical limitations of the existing system design. According to the system manufacturer, the number of buffer tanks cannot exceed approximately 25% of the total number of service connections (i.e., both buffer tanks and valve pits). Thus, the existing vacuum system design will limit the total number of buffer tanks that can be installed on any one vacuum main, potentially affecting larger users. An engineering review may be warranted for the number and location of larger users, and the location of buffer tanks that would need to be installed with respect to potential impacts to connection and their associated costs.

Issue No. 3 – Scope of Engineering Services During Construction

The final negotiated construction cost between the Utility and the Contractor was \$3,500,000. Additional construction phase services (i.e., construction administration, construction inspection, engineering support, legal services, and material testing) were included in the approved Capacity Reservation Contract, resulting in a total contract price of \$4,606,000. This included a \$380,000 contingency. This contingency value represents 10.9 percent of the construction costs, and could be considered typical for projects of this nature. Information provided verbally from the Engineer during this review indicated that no contingency funds were required to complete the construction activities.

Table 4 summarizes the fees for construction phase services provided as a percent of the final negotiated construction cost of \$3,500,000. Note that the line item "Construction Administration & Certification" in the table was included in the December 2001 BOCC-approved expenditure under the Reimbursement Contract with the Utility.

Table 4 – Summary of Design and Construction Phase Service Costs

Item	Amount	Percentage of Total
1 Construction Administration & Certification ⁽¹⁾	46,300	1.3
2 Engineering Support and Inspection ⁽²⁾	279,000	7.9
3 Construction Administration and Legal Fees ⁽²⁾	347,000	9.9
4 Material Testing ⁽²⁾	100,000	2.9
Total	772,300	22.0

Notes:

These services were provided through the December 31, 2001 Reimbursement Contract with Utility.

These services were provided through the Capacity Reservation and Infrastructure Contract with the Utility.

Total costs incurred for construction phase services are 22.0 percent of the negotiated construction costs. An audit of the construction phase services provided may be warranted to confirm that the fees expended are consistent with the services provided.

System Evaluation

Note: Source Documentation Chronologically Ordered by Document Date.

Project Name	Document Information			Subject/Comments	Type
	Date	Source/Origin	Description/Title		
00e County	01/18/00	Monroe County	County Ordinance No. 04-2000	Wastewater Connection Policy	Regulations
00e County	06/08/00	Monroe County	Stock Island Road Work Sewer Line	Summary of Estimated Road Costs	Memo
00e County	05/24/00	Monroe County	Unfilled Letter	Notice to KWRU Re: County Budget for Roads/Drainage Work	Letter
00e County	10/22/01	Weller	Proposal for Engineering Services	Collection System Expansion for KW Resort Utilities	Letter/Proposal
00e County	12/19/01	Monroe County	Board of County Commissioners Agenda Item Summary	Approval of Reimbursement Contract with KW Resort Utilities	Contract with Cover
00e County	12/31/01	Monroe County	Reimbursement Contract with KW Resort Utilities	Engineering Design Services for New Wastewater Collection System	Legal Contract
00e County	03/01/02	Weller	Preliminary Design Plans for Vacuum Collection System	Apparently Used for FDEP Permitting	Plans
00e County	04/24/02	Monroe County	Monroe County Construction Management Invoice Approval	Reimbursement for Survey, Design, and Permitting Services	Memorandum/Invoices
00e County	05/17/02	KWRU	South Stock Island Sewer Project Update	Interim Status Report from KW Resort Utilities	Letter
00e County	05/21/02	Weller	Expansion Bid Documents	Bid Documents and Technical Specifications	Transmittal Letter
00e County	06/21/02	Weller	Initial Construction Plans for Vacuum Collection System	Set Containing Multiple Buffer Tanks and Services	Plans
00e County	06/30/02	Weller	Final Construction Plans for Vacuum Collection System	Reduced Number of Buffer Tanks and Services	Plans
00e County	08/30/02	Unknown	Contractor Schedule of Values	Copy of Schedule of Values from Application #10	Schedule
00e County	07/05/02	CH2M Hill	KW Resort Utilities Wastewater Collection System Expansion	Comments on Design Plans from CH2M Hill (Ken Williams)	Letter
00e County	07/08/02	Monroe County	Monroe County Construction Management Invoice Approval	Reimbursement for Design & Permitting Services	Memorandum/Invoices
00e County	07/11/02	CH2M Hill	Estimated EDUs at Existing Package WWTPs	CH2M Hill Estimate of EDUs Associated with Package WWTPs	Letter
00e County	07/24/02	Monroe County	Monroe County Construction Management Invoice Approval	Reimbursement for Bidding Phase Services	Memorandum/Invoices
00e County	07/31/02	Monroe County	Board of County Commissioners Agenda Item Summary	Approval of Contract with KW Resort Utilities for Capacity Reservation	Contract with Cover
00e County	07/31/02	Monroe County	Minutes of the Monroe County Board of County Commissioners	Special Meeting to Approve Contract with Date Change to Plans	Meeting Minutes
00e County	08/01/02	Weller	Interim Set of Construction Plans for Vacuum Collection System	???	Plans
00e County	08/18/02	KWRU	Pre-Construction Utility Coordination Meeting	Pre-Construction Meeting Notice to County	Memo
00e County	10/14/02	Weller	Proposal for Professional Design Services - Vacuum Sewer	Letter to Harbor Shores Re: Engineering Review/Design Fees	Letter
00e County	10/29/02	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #1	Memorandum/Invoices
00e County	11/20/02	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #2	Memorandum/Invoices
00e County	01/02/03	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #3	Memorandum/Invoices
00e County	01/23/03	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #4	Memorandum/Invoices
00e County	02/18/03	CH2M Hill	KW Resort Utilities-Stock Island Expansion-Design Criteria	CH2M Hill Letter Responding to Weller Engineering	Letter
00e County	02/18/03	Monroe County	Update on Key West Resort Utility Matters	Summary of Issues Raised by Property Owners and Actions Taken	Memorandum
00e County	02/28/03	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #5	Memorandum/Invoices
00e County	03/08/03	Weller	System Analysis Results & Recommended Connection Policy	Summary of Analysis Results and Policy Recommendation from Weller	Letter
00e County	03/18/03	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #6	Memorandum/Invoices
00e County	03/28/03	CH2M Hill	Evaluation to Date of KW Resort Utilities Matters	CH2M Hill Letter Containing Alternative Analysis for Connections	Letter
00e County	04/11/03	Monroe County	Findings and Recommendations for KWRU	Sewer Service to Private Properties and Utility Agreement Issues	Memorandum
00e County	04/14/03	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #7	Memorandum/Invoices
00e County	05/12/03	Monroe County	County Code, Chapters 15 and 16.5	Pollution Control & Sewage and Sewage Disposal	Regulations
00e County	05/20/03	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #8	Memorandum/Invoices
00e County	07/10/03	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #9	Memorandum/Invoices
00e County	07/15/03	Monroe County	County Ordinance No. 02B-2003	Uniform Wastewater Connection Policy	Regulations
00e County	08/07/03	Monroe County	Monroe County Construction Management Invoice Approval	Capacity Reservation & Infrastructure Contract Payment #10	Memorandum/Invoices
00e County	08/08/03	KWRU	30-Day Notice to Connect to Available Central Sewer System	Addressed to Monroe County Fire Station with Attached Application	Letter
00e County	08/15/03	ET MacKenzie	Your (Weller) Memo of 08/11/03	Notice of Additional Billing due to Apparent Mis-Direction by Weller	Memo
00e County	08/18/03	KWRU	KW Resort Utilities Invoice for \$46,800 (not paid)	Construction Administration & Certification Services	Invoice
00e County	08/21/03	Monroe County	Key West Resort Utilities Stock Island Sewer Project	Request for Additional Information for Changes Made to Plans	Letter
00e County	08/22/03	Weller	Stock Island Expansion Record Drawings	Notice of Record Drawings	Letter
00e County	08/27/03	Kim Hjalstrom	No Title	Letter from Private Citizen Questioning System Configuration	Letter
00e County	08/10/03	Monroe County	Stock Island Wastewater Issues	Memo from Jim Roberts Re: Contracting of Independent Engineer	Memo
00e County	08/12/03	Monroe County	Questions & Concerns from 08/08/03 Stock Island Meeting	Concerns/Issues Voiced by Commercial Park Owners and Harbor Shores	FAX
00e County	08/12/03	Weller	Record Drawings of Vacuum Collection System	Final Set of Drawings	Plans
00e County	08/12/03	Monroe County	Utility Agreement from KWRU	For Fire Station Connection and Associated Fee	Agreement with Cover
00e County	08/28/03	Brands Connor	No Title	Letter from Private Citizen Unsat Re: Sewer Connection Process	Letter
00e County	???	???	???	???	Letter
00e County	NA	Monroe County	Monroe County Seven Year Roadway/Bicycle Path Plan	Summary of Road Work Broken Down Per Project Phase	Spreadsheet

Attachment 2

1.0 BACKGROUND

1.1 HISTORY

1.1.1 Background

Previous environmental studies have been conducted in the past to assess the potential effects of various waste loadings to the soil, groundwater, and surrounding salt water bodies of the Florida Keys. These studies have documented the deleterious effects upon the environment related to the release of untreated sanitary wastewater and other miscellaneous wastes. The high nutrient content found in these wastes is of special concern as it is one of the major contributors to the decline of water quality in the Florida Keys. These wastes were historically discharged into cesspits, engineered septic systems, or small package plants that were located on upland areas within the various islands that form the Florida Keys. Cesspits, septic systems, or small package plants are not capable of removing or reducing the nutrient content of sanitary wastewater to the state of Florida's requisite water quality standards. Through both direct and indirect hydraulic connections to the surrounding marine environment, various waste constituents including nutrients have and continue to leach into environmentally sensitive ecosystems and habitats, thereby negatively affecting not only the environment, but potentially public health as well.

Monroe County recognizes the potential consequences associated with this issue and is currently channeling County resources to reduce the direct release of untreated wastes and wastewaters into the environment. The primary method being implemented to address this issue is the installation of a series of central collection systems that will properly collect the majority of wastewater that is generated by individual residential, commercial, and industrial facilities within the Florida Keys. The central sewer systems will convey the majority of untreated sanitary wastewater to a wastewater treatment plant that will be capable of reducing nutrient levels before discharging treated effluent to the environment. This process recently commenced and it is anticipated that it will take many years before all of the Florida Keys are properly served by central systems.

In the late 1990s, Monroe County contracted CH2M Hill, a Florida licensed engineering firm, to develop a Wastewater Master Plan for the Florida Keys. This Master Plan, issued in June 2000, evaluated potential sources of wastewater and possible means for the collection of wastewater from each island. One of the key conclusions presented in the Master Plan was that vacuum collection technology should be utilized as a cost effective and efficient approach for wastewater collection. A full description of this technology is presented in **Section 3.0**. In addition, the Master Plan also recommended that the vacuum collection systems be supplemented, where necessary and appropriate, with pump stations and associated force mains usually for the larger wastewater generators to maximize wastewater collection reliability of the overall sewerage effort. Careful consideration and planning efforts must be given to each sewerage effort to ensure that the resulting collection system(s) are properly configured to collect all wastewater.

The local private utility system that serves Stock Island, KW Resort Utilities (KWRU), contracted Weiler Engineering Corporation, Inc. (WEC) out of Port Charlotte, Florida to prepare a Master Plan specific to Stock Island. This work effort was conducted on a parallel track to the County's own master planning effort. In the Utility System's Master Plan that was issued sometime in late 1999, an evaluation of potential wastewater flows was conducted along with an evaluation of various potential sewer system configurations that could be further explored to serve the island. Alternative wastewater collection strategies considered in the WEC Master Plan included conventional gravity systems, low pressure sewer systems, and vacuum collection systems. Based on a cost analysis conducted by WEC as presented in their Master Plan, vacuum collection technology was documented as the most cost effective approach to address wastewater collection for the island. Thus, the general approach documented in the Master Plan prepared by the Utility System for wastewater collection was similar to the approach documented in the County's Master Plan. However, it is important to note that the Utility's Master Plan only considered the exclusive use of one approach over the others and did not appear to assess a blended solution, whereby two or more wastewater collection approaches would be used. In contrast, the County's Master Plan did consider and recommend that vacuum collection technology be supplemented with conventional force mains to ensure that a reliable and efficient wastewater collection strategy is selected and applied.

1.1.2 Recent Sewering Effort for South Stock Island

One of the first major central sewerage efforts recently conducted in the Florida Keys in support of both the County's and Utility System's Master Plans was the installation of the new vacuum collection system on south Stock Island. **Figure 1-1** is a project location map that depicts the general location where this sewer system was installed. The intent of this new sewer system was to properly and efficiently collect the majority of wastewater that may be generated on the southern portion of the island both currently and in the foreseeable future.

A large portion of residents and some businesses on the island were previously served by a pre-existing system of gravity collection mains and force mains, which collected wastewater and routed it to the local Utility System's Wastewater Treatment Plant (WWTP). This pre-existing system serves the users located on north Stock Island as well as select users present within south Stock Island, such as Lincoln Gardens and various commercial entities located along Third Avenue. Based on information presented in the Utility System's Master Plan, it is anticipated that this pre-existing system will continue to be used to collect and route wastewater to the local WWTP.

The goals of the new vacuum collection system that was installed for south Stock Island are essentially two-fold: (1) serve all entities on the southern portion of the island that were not previously served by the Utility's pre-existing central collection system, and (2) serve all of the larger properties on the south island so that their individual on-site package treatment plants or septic systems could be decommissioned. It is noteworthy that the ability to efficiently operate the small package plants that are present throughout south Stock Island to properly treat wastewater is difficult at best, requiring a significant time and monetary investment. This issue, coupled with the fact that package plants were not designed to remove dissolved nutrients such as nitrogen and phosphorus which is a requirement of the County's Master Plan, necessitates that they be dismantled and decommissioned.

To facilitate the installation of the new central vacuum collection system for south Stock Island, Monroe County executed two separate contracts with the local Utility System, KWRU. In the first contract dated December 31, 2001, the County agreed to reimburse the Utility System for engineering services associated with the design of the sewer system. A copy of that contract is provided in **Appendix A**. **Table 1-1** summarizes the engineering costs associated with the first contract.

Item	Description	Cost	Percent of Total
1	Survey	\$35,000	17.5%
2	Design and Permitting	\$94,750	47.5%
3	Bidding	\$16,750	8.4%
4	Construction Administration & Certification	\$46,800	23.5%
5	Reimbursable Expenses (including prints & application fees)	\$6,000	3.0%
6	Total	\$199,300	100.0%

Design work began in January 2002 and system permit applications were filed by the Utility System with the Florida Department of Environmental Protection (FDEP) in March 2002. At the conclusion of design activities in May 2002, the Utility System solicited bids from contractors to construct the vacuum collection system. Bids were received on June 27, 2002 from five contractors with bid amounts ranging from \$4.036M to \$5.883M. Based on a review and evaluation of the bids received for the project, the project was awarded to E.T. MacKenzie of Florida, Inc. for a negotiated construction cost of \$3.5M. Additional costs associated with the project brought the total cost of the project to approximately \$4.6M. **Table 1-2** provides a summary of project-related implementation and construction costs.

Item	Description	Cost	Percent of Total
1	Construction	\$3,500,000	76.0%
2	Engineering and Inspections	\$279,000	6.1%
3	Construction Admin/Legal	\$347,000	7.5%
4	Testing Services	\$100,000	2.2%
5	Contingency	\$380,000	8.2%
6	Total	\$4,606,000	100.0%

On July 31, 2002, the County entered into a second contract with the Utility System to reserve wastewater collection capacity for the new collection system that would be constructed. The second contract, a copy of which is included in **Appendix B** for reference, was developed and executed to reserve 1,500 EDUs (Equivalent Dwelling Units) of capacity for the new collection system. URS could find no documentation from the County, the Utility System, or WEC regarding how the 1,500 EDU reservation count was initially established. In a previous URS report submitted to the County on October 20, 2003, URS calculated that the 1,500 EDU reservation capacity may have been originally based on the remaining hydraulic capacity of the Utility System's WWTP in conjunction with a unit EDU wastewater flow of 167 gallons per day. This conclusion was made since any greater unit EDU value used to reserve capacity would effectively exceed the current capacity available from the Utility System. However, the subject

Contract indicates that the capacity reservation shall be in the amount of \$2,700 per EDU as set forth in the Utility's tariff filed with the Florida Public Services Commission (PSC). Since the capacity reservation per the Florida PSC is established based on an ERC (Equivalent Residential Connection) count and not an EDU count, a separate analysis would have to be performed to assess the total number of connections allowed per the Utility System's wastewater tariff. A more detailed discussion of this issue is presented in **Section 2.0** for consideration.

Project construction commenced in October 2002 and was essentially completed in August 2003. Construction of the system included the installation of a centrally located vacuum pump station complete with a wastewater transfer system at the Utility System's WWTP, six vacuum headers (A through F) along various routes within south Stock Island, and a series of vacuum valve pits, buffer tanks, and vacuum stub-outs that will be used to collect wastewater from individual properties. **Figure 1-2** illustrates the configuration of the vacuum collection system as it was installed based on a review of record drawings developed for the project.

1.1.3 Ancillary Considerations Affecting Final Project Implementation

Various questions and concerns were raised during and after project implementation that have impeded the ability for all planned connections to be made to the new vacuum collection system. A summary of some of the main issues voiced to date by County officials and the public, which has delayed the completion of the sewerage effort, include the following:

- Apparent Excessive Financial Burden on Large Property Owners – There are three possible components that may have led to an apparent financial burden for some of the properties that would be served by the new vacuum sewer system. These components include (1) connection fees, (2) construction costs on the part of the property owner to install a new on-site sewer collection system and/or upgrade their existing systems to industry standards, and (3) decommissioning costs associated with existing on-site septic systems or small package plants. Each of these components are examined and considered below.
 - Connection Fees – The Utility's wastewater tariff, as approved by the Florida Public Service Commission, assesses a one-time connection fee in the amount of \$2700 per ERC, where an ERC is defined as one single-family residential service connection. This fee is considered reasonable for an individual property owner to pay in order to connect to the system. Since connection fees are proportionate to the total number of units (houses, trailers, etc.) on each property, the total connection fee assessed for a large property would generally be greater than the connection fee assessed for a smaller property. However, the total cost of these fees per property is normalized by the actual number of units on each property in reality. A potential issue related to the payment of connection fees is the originating source for the funds that will be used to pay them and when the capital outlay will occur. For example, for small properties only containing one house, the property owner would typically be directly responsible for and pay the \$2700 connection fee. Conversely, for a larger property containing 100 equivalent units, the legal owner of that property would be assessed a connection fee of \$270,000.

Although that owner could potentially collect connection fees from individuals that reside in each unit that occupies the property, the following concerns may delay or impede fee collection from those individuals, thereby leading to a possible reduction in the cash flow of money and potentially an extra financial burden for the owner: (1) insufficient income level of residents in trailers or mobile homes to afford the extra cash outlay, (2) vacancy of multiple units at time of fee assessment, and (3) insufficient capital availability to the property owner to cover the full connection fee on an interim basis until the capital can be secured from those residents or tenants that occupy the property.

- On-Site Construction Costs – The burden of upgrading on-site systems or installing new systems on private property usually falls to the property owner as part of any similar sewerage effort. The cost of this work is usually not too significant for small properties serving a single family residence, e.g., one sewer lateral. However, for the larger properties, a considerable amount of new and/or rehabilitated infrastructure may be needed to serve multiple units on that property. Previous cost estimates that were developed for on-site sewer collection systems for some of the larger properties have ranged from the low \$10,000s to the low \$100,000s. To support the construction of the on-site systems, the property owners would also face additional costs including engineering design, surveys, and testing services. Also, the Utility would typically assess an inspection fee before the on-site collection systems can connect to the central sewer system within the ROW.
- Decommissioning Costs – Many of the large properties contain a series of existing septic systems or a small wastewater treatment plant (e.g., a package plant). Decommissioning costs for these existing systems further increases the amount of capital that some owners must spend in order to complete the new sewerage effort.

The combined costs associated with the above requirements could potentially result in a substantial financial burden to at least some of the larger properties associated with the sewerage effort. This apparent financial impact has led to many of the large properties from not connecting to the sewer system per the anticipated time table of the local Utility System. The County is currently considering resolutions or similar actions that could result in financial assistance to property owners with respect to both the initial connection fees as well as costs associated with the rehabilitation and upgrading of the on-site sewer system components for each property.

- Plans Used for Construction – Based on an initial URS review of plans conducted during September and October 2003, it was confirmed that a set of drawings was submitted to the County for review late in the design phase that substantially deviated from other plans that were previously submitted for project permitting and later for contractor bidding and construction. The drawing set in question was issued to the County in the middle of May 2002 (date stamped May 21, 2002), just prior to the contractor bidding process. In the subject drawing set, numerous buffer tanks were depicted on the plan-and-profile sheets

at various locations along the vacuum headers (total of 29 single buffer tanks and 14 dual buffer tanks). In contrast, the set of drawings submitted for contractor bidding (dated May 30, 2002), depicted only 15 single buffer tanks and no dual buffer tanks. While the title sheet and plan sheets in that set did not indicate that the set was intended for construction, a revision note dated April 30, 2002 appeared in the title block of the plan-and-profile sheets (Sheets 13 through 31) of the set. That revision note states "*Revised for Construction*". This note in the title block of some of the sheets in the May 21, 2002 drawing set may have been one reason that led to substantial confusion and allegations from County officials and members of the public regarding whether or not the system that should have been installed was the system that the County approved for construction.

As a point of information, if a set of engineering plans is intended to be used for construction, the drawing set is usually stamped or otherwise demarked "*Issued for Construction*" or "*Approved for Construction*" and is officially certified (sealed) by a licensed professional engineer who was responsible for the preparation of the plans. The May 21, 2002 drawing set did not contain these demarcations nor was any professional engineer seal found anywhere on the drawings. The confusion that resulted from the May 21, 2004 drawing set substantially impeded moving forward with connections to the new vacuum collection system. (As a matter of record, the BOCC approved for construction a later set of drawings dated May 30, 2002, which did not depict the larger number of buffer tanks. Through an examination of the project's record drawings, in conjunction with a field inspection conducted by URS in September 2003, it was confirmed that the May 30th drawing set was used to construct the system.)

- Equity Regarding Assignment of Buffer Tanks – Many questions were voiced regarding why certain properties received a buffer tank while others received only a vacuum stub-out. Based on URS' initial evaluation of the system design in 2003, and through a subsequent assessment conducted as part of this project during 2004, it was confirmed that only a certain number of connections via buffer tanks can be allowed in order to ensure proper operation of the vacuum collection system. In fact, only 25 percent of the total flow contribution to the vacuum collection system can occur via buffer tanks. While a limited number of buffer tanks were provided for some of the larger wastewater generators to intercept large point source discharges into the vacuum system, only vacuum stub-outs were provided for the remaining large generators to comply with the 25 percent limit. Consequently, the Utility System provided vacuum stub-outs for the remaining large wastewater generators in anticipation that the property owners would extend vacuum lines onto their properties. Section 3.0 of this report assesses potential options that could be further explored to address equity related to the type and method of connection for the larger properties on south Stock Island.
- Uncertainty Regarding Most Appropriate Sewer System Configuration – This last issue remains in question. One of the primary goals of this report is to more fully address this issue to the satisfaction of all affected parties. Many members of the public remain firm in their belief that on-site gravity collection is the better approach for wastewater collection. Others are satisfied that the extension of the vacuum system onto private

property is a suitable choice. Both of these configurations are considered in more detail in this report. Conceptual sewer system configurations along with estimated costs are presented in **Section 3.0**.

1.1.4 Conceptual Roadmap to Complete Sewering Effort

During November and December 2003, URS entered into a series of discussions with the County regarding how to proceed with the sewerage effort for south Stock Island, while addressing concerns from the public as to how best to serve certain properties. During that time frame, URS developed a Conceptual Roadmap, which would serve as a guide to complete the sewerage effort. A copy of the Conceptual Roadmap is presented in **Appendix C**. A summary of the key roadmap tasks is provided below.

- **Task 1: Preparation of Conceptual Roadmap and Supporting Information** – Under Task 1 of the roadmap, URS proposed that certain activities be performed to better establish and clarify how the sewer system should be configured to efficiently and cost effectively serve all entities on the south island.
- **Task 2: Public Partnership and Project Planning** – The purpose for Task 2 of the roadmap is to confirm and update potential wastewater flows that are generated on the south island and develop conceptual plans along with supporting cost estimates to complete the sewerage effort. This report presents critical data, information, and conceptual configurations for the wastewater collection system for the island and addresses the principal work effort associated with Task 2. The results from Task 2 as presented later in this report should serve as a basis to support and guide final details and construction efforts related to completion of the sewerage effort for the island.
- **Task 3: Final Design and Construction** – Once this report is finalized, completion of the sewerage effort must be completed by those individual properties that will be served by the Utility System's central sewer system. Also, any modifications and/or extensions of the vacuum system within County right-of-ways to serve all users within the service area will need to be made by the Utility System. Thus, Task 3 of the roadmap will include final engineering design to address wastewater collection for the larger properties as well as from other portions of the south island that currently has no available wastewater collection system in place. As such, it is anticipated that the Utility System, WEC, members of the public, one or more engineering firms, and the County itself will be involved with completing Task 3 activities.

At the completion of Task 3, if one of the conceptual plans outlined in this report is adopted and implemented, the bulk of the initial sewerage effort for south Stock Island should be properly addressed and completed. At that time, the Utility System will need to continue to monitor the operation of the vacuum system to ensure that it remains in good operational condition and is properly collecting all wastewater routed into it. As time progresses and additional redevelopment projects and changes to the overall density of the island occur, it shall be incumbent upon the Utility System as part of their charter to the Florida PSC to make whatever modifications are necessary to the vacuum system to adequately capture increased wastewater

flows. The conceptual sewer configurations presented for the future condition in Section 3.0 considers possible modifications that may be eventually needed to address wastewater collection over the next 20 years.

1.2 SUMMARY OF URS SCOPE OF SERVICES

In December 2003, URS submitted to the County a draft Scope of Services for the work proposed to address Task 2 as described above. A copy of URS' scope of services is included for reference in Appendix D. In summary, URS conducted the following activities, the results of which are presented in this report:

- Task 1 - Evaluate Existing Stock Island Service Area - Includes land use projections for the island, wastewater flow projections, and estimates for system reserve capacity.
- Task 2 - Optimization of Existing Collection System - Includes on-site meetings with property owners and an alternative analysis for on-site system configurations. For the majority of the properties, two or more alternative sewer system configurations were developed and presented herein.
- Task 3 - Conceptual Sewer Design for Remainder of Stock Island - Includes an evaluation of alternative sewer system configurations for the island and confirm expansion requirements for the Utility's WWTP.
- Task 4 - Summary Report - The results from the foregoing tasks will be summarized in an Engineering Report (this report) and will include, at a minimum, the following: existing and projected wastewater capacity needs of the island, alternative sewer configurations that were evaluated, a recommended conceptual sewer configuration for implementation, modifications proposed to the existing vacuum collection system, conceptual plans (total of 19) for the private on-site collection systems, and conceptual construction costs to expand and modify the existing system.
- Task 5 - Third Party Review - A third party peer review function was proposed to allow additional input and validation of the various engineering means and methods used to conduct the various tasks described above. CH2M Hill was selected by the County to support this peer review function.
- Task 6 - Public Outreach Program - A public outreach component was proposed and included as part of this project in an effort to include affected members of the public into the engineering and planning process. URS visited individual properties and met with various property owners to listen to specific concerns related to the sewerage effort. Where possible, URS took into account the concerns and comments of the public.

It should be noted that as URS completed certain work tasks and associated activities for the scope of services described above, certain adjustments were made to the work effort. For instance, the scope of work indicated that wastewater flows would be projected for south Stock Island in 5 year increments. However, due to the great deal of uncertainty regarding the rate of

potential redevelopment on the island, the accuracy of the interim projections could not be guaranteed and could lead to erroneous conclusions and/or recommendations. As such, URS considered only one future condition for the 20 year planning horizon as detailed later in this report. Also, relatively minor changes were made to some of the terms and expressions used in URS' scope of services. For example, this report was re-titled from the Summary Report, as described above under Task 4, to the Engineering Report. These and other minor changes and adjustments that were made during project execution did not substantially affect the overall intent or material content of the overall reporting effort.

1.3 LIMITATIONS AND EXCLUSIONS OF REPORT

Due to the nature of the conceptual evaluation and associated design effort for this project, there are inherent limitations and exclusions that should be documented for purposes of clarity and understanding. Where possible, URS attempted to obtain as much supporting data as possible to substantiate the conceptual design efforts presented in this report. However, additional work effort will be required by various parties as described below in the following bullets in order to satisfactorily complete the sewerage effort for south Stock Island to support the activities associated with Task 3 of the *Conceptual Roadmap* as described above.

- The engineering analysis conducted for this project, and detailed in the following report, was strictly a flow-based analysis. Due to the nature of this analysis, estimated wastewater flows were used as the primary basis to *configure the components* of the wastewater collection system needed to serve each property. For the estimated wastewater flows, flow-based connection counts were estimated. For each connection count, a unit flow rate of 167 gpd was used. The connection counts presented in this report will differ from the official EDU/ERC counts that the Utility System conducts to establish connection and user fees per the Florida Public Services Commission. An official assessment regarding the number of connections to the vacuum sewer system via the ERC count methodology is not presented in this report. A more thorough discussion of this important topic is provided in **Section 2.0**.
- The sewer system configurations developed and presented in this report were based strictly on the peak wastewater generation rates estimated for each property within the study area. This peak rate estimated for each property was used to establish the number of vacuum valve pits and/or other infrastructure requirements for the property. This process established the minimum sewer system requirements for each property for the conceptual level effort conducted as part of this reporting effort. However, it is acknowledged that additional sewer infrastructure, whether on public or private properties, may be needed to fully support wastewater collection from certain properties to comply with the Utility System's ERC methodology using actual unit counts as described above. Confirmation of the total number and type of wastewater collection system infrastructure needed to fully support each property should be conducted during the official detailed design phase to support modifications to the existing collection system and/or new sewer system construction. The cost impact of any modifications and/or other related work should also be taken into account at that time. In an attempt to

address a potential increase in costs between the conceptual and final design efforts, a 20 percent cost contingency was included in this report.

- Detailed engineering design must be conducted to complete the sewerage effort along with the necessary land surveys and other studies, as needed, to support final design efforts. This detailed engineering effort will apply to all unconnected systems, whether existing or new, that are located on private properties as well as those areas on the island within the public right-of-ways, where the extension of or modifications to vacuum mains (and/or force mains) will be needed to serve various properties. Private property owners will be responsible for the costs associated with detailed engineering design and any requisite supporting work for the former, while the Utility System will be responsible for a similar work effort within the County right-of-ways.
- Testing of on-site systems to validate their use, as applicable, to convey wastewater to the central sewer system within the right-of-way will likely be required. An initial round of testing may be needed to confirm the "tightness" of an existing system, while confirming potential rehabilitation costs related to upgrading the system to industry standards. A second round of testing may be needed subsequent to system rehabilitation to substantiate to the Utility System that the system is sufficient and can be integrated into the central sewer system within the right-of-way. In a new system is installed, testing of the new system components may also be required to confirm proper construction. All costs associated with on-site system testing will likely be the responsibility of the individual property owners, unless special funding mechanisms can be found. Limited ability was available for URS to assess the condition of the existing on-site systems during this project.
- Final decisions regarding how to best complete the sewerage effort for all properties on the island must be made between the Utility System and the property owners. In order to mitigate further obstacles and issues, to the degree possible, it is anticipated that the County will need to take an active roll in facilitating the completion of the sewerage effort in order to protect the interests of all involved parties. On a related note, special financing options and means that could potentially be used to mitigate the up-front cost impact to private property owners are not considered in this report. Potential financing options should be confirmed and approved by the County.

1.4 REPORT ORGANIZATION

The remaining report is organized and divided into three sections. A summary of the report contents follows:

- Section 2.0: Project Planning Components - This report section establishes a foundation for the subsequent conceptual planning effort associated with the various sewer system configurations developed for south Stock Island. In order to substantiate the configuration of each alternative sewer system configuration, existing wastewater flows are estimated. In addition, projected wastewater flows for a future condition were also estimated. The distribution of small versus large wastewater generators was developed

based on the flows estimated for the current and future condition. Lastly, estimated EDU counts for the current and future conditions were developed using a methodology described in further detail in this section.

- Section 3.0: Alternative Wastewater Collection Strategies - Various potential strategies that could be further explored to address and complete the sewerage effort for south Stock Island were considered and presented in this section. A description for each alternative strategy is provided followed by a conceptual configuration associated with each strategy. Estimated capital and annual O&M costs were developed and presented in this section for each alternative considered. A life-cycle cost analysis for each wastewater collection strategy was conducted in order to confirm the most cost-effective alternative that should be considered to complete the sewerage effort for the island. Lastly, an assessment of the Utility System's wastewater treatment plant is presented, which is important to consider as it will affect the total number of connections that can be made on the island during the next few years.
- Section 4.0: Conclusions and Recommendations - Under this last section of the report, URS provides a series of key conclusions and recommendations regarding this sewerage effort that may be important to understand and be aware of for future sewerage efforts that may occur in the near term within the Florida Keys. The Conceptual Roadmap that was previously developed and described in Section 1.1.4 is revisited and its timeline updated for the remaining task and associated activities that must be conducted in order to complete the sewerage effort for the island. These activities include upgrades to the Utility System's wastewater treatment plant, additional connections that must be made to support current wastewater users on the island, and the effect that future connections may have on the sewer system that should be considered in order to ensure that the system is properly configured to maintain service to all wastewater generators on the island.

In addition to the remaining report sections, a series of figures is included under a designated tab near the end of the report. Also, a series of appendices can be found at the end of this report that contain supporting information and documentation that readers of this report may find useful to understand the various issues addressed in this report. The various large size drawings that were prepared and referenced in the report for this project are located in the appendices.

2.0 PROJECT PLANNING COMPONENTS

2.1 PLANNING CRITERIA AND METHODOLOGIES

The following section provides a general overview and discussion regarding the technical analysis that was conducted to estimate current and projected wastewater flows and potential connection counts for south Stock Island. The estimates developed in this section were used to develop the alternative sewer system configurations presented in **Section 3.0** of this report. As such, it is important to document the approach used to assess wastewater generation for the island in order to validate the estimated wastewater flows presented herein. If wastewater flows are properly established and distributed, the resulting design configuration of the central sewer system should be adequate to ensure proper wastewater collection for the community. All pertinent engineering assumptions and conditions necessary to support the flow estimates and connection counts are addressed and summarized below.

2.1.1 Definition of Study Area and Planning Horizon

For the purposes of this report, the study area is defined as south Stock Island. U.S. Highway 1 that bisects the island is generally considered the dividing line that separates south Stock Island from north Stock Island. Thus, the study area includes all developed residential, commercial, and industrial properties, as well as certain undeveloped properties, that lie to the south of U.S. 1 on the island. Of special note, Cow Key that is located immediately south of Stock Island was not included in the study area, since it is generally considered a protected and reserved area not suitable for development. **Figure 2-1** illustrates the study area, which was the focus of the following study.

For the purposes of this study, a suitable time period was established to define the planning horizon for the sewerage effort. A 20-year planning horizon was used to project future wastewater flows and associated conceptual configurations of the central sewer system. It should be noted that for an underground piping system, such as a sewer system, a 20-year period is usually the minimum time frame considered, since the piping system should remain in fairly good operating condition during this time requiring minimal reinvestment and unplanned maintenance work. Furthermore, all life-cycle costs estimated and presented later in this report are based on this 20-year period. In actuality, once installed, underground piping systems usually remain in place well beyond the initial planning horizon. However, increasing maintenance and rehabilitation costs coupled with additional capital costs usually results through an extended time frame as a consequence of requisite system modifications to meet additional growth conditions and increased wastewater flows. These additional capital modifications and increased maintenance requirements through an extended period cannot be easily quantified and would reduce the accuracy of the resulting life-cycle costs.

2.1.2 Summary of Technical Approach

A flow-based analysis was adopted and used by URS to assess potential wastewater flows that could be generated by each property on the island. Potential wastewater flows generated by each property were estimated by using historical potable water use records. Certain adjustment factors were applied to the records to quantify the range of potential wastewater flows that could be generated by each property. Potential adjustments that were applied to the water use records to estimate wastewater generation rates include a wastewater-to-water conversion ratio, a factor to account for inflow & infiltration (I&I) into the collection system, and a peaking factor to account for peak instantaneous wastewater flows relative to average daily flows. In addition, escalation factors to the current estimates for wastewater generation along with other adjustments were used to project potential wastewater flows for a future condition. Through a flow-based analysis, minimum sewer system requirements that may be needed to adequately support the sewerage effort for the project area can be confirmed, which is a central and important consideration that should be verified through this reporting effort.

It should be noted that URS did obtain wastewater flow data for the various package plants in the study area and reviewed the wastewater flows associated with some of the larger properties. However, this flow data was not used in the analysis due to (1) uncertainty regarding the accuracy of the wastewater flow measurements and (2) the desire to apply a consistent methodology to all properties regarding the estimation of flows. In addition, many of the on-site gravity systems that feed the small package plants are considered by many to be prone to I&I, thereby resulting in increased wastewater flows. Since on-site systems would have to be rehabilitated and/or upgraded to meet industry standards if they would continue to be used as part of the overall sewerage effort for the island, the current flow contribution from I&I would be substantially reduced or eliminated altogether. Thus, for all of the foregoing reasons, the use of historical wastewater flowrates for the various package plants was not used in this study.

In addition to wastewater flows that were estimated and documented in this report for each property, potential connection counts were also confirmed and presented for consideration. For the purposes of this report, a connection count represents the average quantity of wastewater that is generated by a typical single family residence. Flow studies within an area are usually conducted to derive what a reasonable flow rate would be for a single-family residence. For instance, the Florida Keys Aqueduct Authority uses a value of 167 gpd to represent a residential EDU for water consumption based on average historical water use trends that have been documented within the Florida Keys. Furthermore, the County's own Wastewater Master Plan uses 168 gpd as the wastewater generation rate for a typical residence (refer to Appendix C of the Master Plan). A unit value of 167 gpd was adopted in this report to represent the average quantity of wastewater that would be routed to the Utility System from a typical residential connection.

2.1.3 EDU versus ERC Counts

Usually, for purposes of billing equity and in the case of private utilities, a different type of analysis is conducted to estimate potential wastewater flows that could be generated at a particular property. The methodology for this type of analysis is defined by the Florida

PSC, which has jurisdictional authority over private utility companies. The PSC uses Equivalent Residential Connection (ERC) counts in order to establish connection and user fees. The following summarizes the ERC count methodology, details of which can be found in Chapter 25-30 of the Florida Administrative Code (F.A.C.):

- The number of facilities on each property within the study area are inventoried and confirmed;
- The type of facility, or facilities, that may be on any given property are classified as residential, commercial, or industrial.
- By PSC definition, an ERC is equivalent to a single-family residence and has a standard unit wastewater flow value of 250 to 280 gpd, depending on the specific F.A.C. rule. One of these values is typically adopted unless another rate is established through a specific flow study conducted for a particular area. A unit flow value of 250 gpd applies for the study area since the Utility System has typically used this value in the past to establish connection and user fees for various entities.
- For commercial and industrial facilities, either the size of the water meter that serves the facility or the three highest nonconsecutive months of flow records for the facility are used as the basis for the ERC count. In the latter case when flow records are used to establish an ERC count for a particular commercial/industrial property (which the Utility System normal practices within the service area), the facility's estimated maximum wastewater flow is divided by a unit flow of 250 gpd.

The ERC count methodology is similar in nature to the EDU count methodology in that it establishes an index of potential wastewater flows, which allows one to compare the relative quantity of wastewater generated by each property under evaluation. However, one of the most important and significant differences between an ERC count and an EDU count is that the former uses a relatively conservative unit flow rate for residential facilities. This unit flow rate can be greater than that documented through a flow-based analysis as described above. In fact, the difference between an ERC and an EDU as defined above is approximately 50 percent, using the EDU value as the basis for comparison.

WEC conducted a separate flow study in the late 1990s, the results of which are summarized in their Master Plan. In that study, a unit flow of 205 gpd was documented for a typical single-family residence. The County's Wastewater Master Plan prepared by CH2M Hill used a unit wastewater flow of 168 gpd per EDU. In the latter case, the EDU term was used interchangeably for an ERC. However, based on feedback obtained from the Florida PSC, the Utility System has typically used a unit value of 250 gpd per ERC. In conclusion, the unit flow value that is currently used as the basis for an ERC count is generally greater than the unit value established from other flow-related studies and used by other organizations.

Another principal difference between the two methodologies is the relative simplicity, fairness, and equity afforded by the ERC approach. It is generally easier to quantify and defend the total number and types of facilities on any given property and apply a uniform wastewater generation

rate to estimate the total potential wastewater generation rate for the study area. In this approach, unit counts for each property are assigned and ERC counts are consistently applied per the type of facility(ies) on each property. Once ERC counts are established, the total potential wastewater flows that could be generated within the service area can be easily calculated. This methodology provides maximum assurance that potential wastewater flows generated will not exceed the total ERC count, thereby protecting the Utility System's wastewater collection and treatment infrastructure to the degree practical and allowable under law. Furthermore, this methodology eliminates the inherent variation in wastewater generation rates that actually occur between similar properties so that a consistent basis is established to allow connection and user fees to be fairly assessed and applied. However, the Florida PSC has officially stated that whenever site-specific flow studies are available that can more accurately characterize and quantify wastewater generation rates for a particular area, a unit flow established from such studies should be used.

It should also be noted that the contract executed between the County and the Utility System to reserve capacity for the vacuum collection system was developed using the term EDU, and not an ERC. A total of 1,500 EDUs were reserved per that contract. Based on a previous evaluation of the remaining available capacity of the Utility System's wastewater treatment plant as presented in the October 20, 2003 report issued by URS, it is possible that the EDU reservation count used for that contract was based on a unit rate of 167 gpd, consistent with the flow-based analysis that is presented in this report. As such, this report estimates a generic connection count using a unit rate of 167 gpd that is consistent with the available capacity of the Utility System's WWTP. A service connection for commercial, industrial, or other types of non-residential entities would have a different, usually higher, unit flow rate than the rate used to establish the connection counts in this report.

In conclusion, the inconsistency regarding the reference to and use of an EDU count to confirm system capacity versus an ERC to assess billing requirements represents a true disconnect between the intent of both subjects. Furthermore, the Florida PSC confirmed directly with URS that the term EDU is not officially recognized when establishing or applying connection and/or user fees. Only the term ERC is recognized by the Florida PSC. Yet the Contract between the Utility System and the County specifically calls for an EDU count to be conducted per the requirements of the Florida PSC. While contracting issues related to this subject should be confirmed and resolved between the County and the Utility System, this report will evaluate if the vacuum collection system will have sufficient capacity to properly address wastewater collection for south Stock Island.

2.1.4 Source Data for the Wastewater Flow Analysis

The methodology used to establish estimates for current and future wastewater flows within the project area consisted of a flow-based analysis using historical potable water use records as obtained from the Florida Keys Aqueduct Authority (FKAA). Other documents and information were used to assess where wastewater flows are generated and how they may change through time. The following provides a summary of pertinent documents, information, and data that were used for the engineering analysis to estimate wastewater flows for the study area.

- Flow Records - Potable water flow records for all registered water users within the study area were obtained from an FKAA database. The database consisted of an MS-Excel spreadsheet containing over 1,300 lines of individual metered flows that were delivered to the various properties in the study area. Nearly five years of monthly flow records were included in the database for the period of October 1999 through May 2004.
- County GIS Database - The County maintains an electronic GIS (Graphic Information Systems) database, which contains a considerable amount of information related to the study area as well as the entire Florida Keys. The database was provided to URS as an important tool to allow the mapping of current and projected wastewater flows to property locations and land use codes throughout the study area. Platted property boundaries, right-of-way lines, property IDs, and other important information in the database were used to prepare graphics and drawings that are presented later in this report.
- Land Use Maps - Current and future land use maps and associated land use codes were obtained from the County and reviewed to assess potential issues and impacts associated with wastewater flow generation due to re-development trends with the study area.
- Master Plans - Two separate Master Plans were reviewed and considered for this study. These plans include the County's 2000 Wastewater Master Plan as prepared by CH2M Hill and the Utility System's 1999 Master Plan as prepared by WEC.

In addition to the foregoing documents, URS obtained a considerable amount of supplemental information and documents during our initial assessment of the vacuum collection system that was performed in late 2003 as well as more recently during the execution of this project. Specific information that was available from these documents were used to support the evaluation of wastewater flows as well as certain aspects related to the conceptual sewer system configurations presented later in this report. These documents included, but were not limited to, the following:

- Aerial Photographs of the South Stock Island
- Record Drawings for the Vacuum Collection System
- Contractor Bids and Pay Applications for the Vacuum Collection System
- Current Capacity Analysis Report for the Utility System's WWTP
- Discharge Monitoring Reports for Package Plants
- The Utility System's Wastewater Tariff
- Pending and Anticipated ERC Reservation Counts from WEC
- Influent Flow Strip Charts (total of 2) for the Utility System's WWTP
- AIRVAC Design Spreadsheet and Associated Documents

2.1.5 Description of the Flow-Based Analysis

In order to derive estimates for potential wastewater flows that could be generated at the various properties within the study area, the FKAA potable water use records described above were used as the initial data set. A flow matching exercise was first conducted which assigned individual metered flows to platted properties in the County's GIS database. Since the two databases were not electronically linked or otherwise coordinated, a manual procedure was used to match flow records from the FKAA to the individual platted properties in the County's GIS database as described in further detail below. Following the flow-matching exercise, a series of adjustment factors were applied to the potable water use records to derive estimates for the wastewater flows generated by each property.

Initially, URS attempted to automatically match the FKAA flow records using the service address with the physical location address in the County's GIS database. This initial effort only produced a 26 percent match of the records. This relatively low matching rate was attributed to the fact that the FKAA and County GIS databases use different address formats. Other reasons contributing to the low record match include inconsistent address information between the two databases and multiple records found for the same address. Therefore, to improve the matching of records between the two databases, a manual matching exercise was conducted. The following provides a step-by-step description of the manual flow matching exercise that was conducted to assign potable water flows to individual properties within the study area.

- Step 1 - An exact address match was initially conducted, whereby two index columns for the FKAA and County GIS data were created to sort the order of the original data contained in each database and match each data entry.
- Step 2 - The percent of the exact record match was calculated for the number of users and their associated flowrates. The remaining portion of unmatched flow records were then manually distributed to the closest physical address relative to the platted property in the County GIS database.
- Step 3 - For the remaining unmatched records, the ratio of the overall flow to the matched flow as summed above from Steps 1 and 2 was calculated and then weighted to the distributed users to balance the overall flowrate.
- Step 4 - Water flow records for multiple units at the same physical location were summed to establish the total flow delivered to that location.

Table 2-1 summarizes the results from the manual flow matching exercise with respect to both percentage matches of individual records and delivered water flows to the properties within the study area.

Table 2-1 Summary of Results from Flow Matching Exercise

Item Description	Manual Match			Automated Match		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Total Number of Records	1,316	1,316	1,316	1,316	1,316	1,316
Matched Records	1,107	1,271	1,316	1,107	1,271	1,316
Match Ratio (total records)	84%	97%	100%	84%	97%	100%
Total Monthly Flow	11,425	11,425	11,425	33,718	33,718	33,718
Matched Monthly Flow	9,088	10,709	11,425	27,259	32,210	33,718
Match Ratio (total flow)	80%	94%	100%	81%	96%	100%

(1) All flows reported in terms of 1,000 gallons.

Based on the foregoing flow matching exercise, approximately 80 percent of the total flow records were manually matched to the various properties during the initial step. The match ratio increased to approximately 95 percent from the second step in the process. The unaccounted flow balance of 5 percent remaining after the second step is considered nominal and well within the margin of acceptable error for conceptual planning purposes. Thus, the 95 percent match achieved through the first two steps in the analysis provides a statistically valid basis upon which to estimate potential wastewater generation rates for the individual properties. Furthermore, to ensure to the degree practical that the remaining 5 percent flow contribution to the study area is taken into account, this contribution was distributed among the properties within the area. Refer to **Appendix E** for the results of the manual flow matching exercise including property IDs, physical addresses, and monthly flows.

Once potable flows were distributed and assigned to each property, a series of adjustment factors were applied to convert potable water flows into sanitary wastewater flows. The following adjustment factors were used to derive wastewater generation estimates for each property:

- **Wastewater-to-Water Conversion Ratio** - Adjustment factors were used to estimate the portion of water supplied to a property that enters the collection system and becomes wastewater. The use of potable water for irrigation and washdowns at marinas are potential uses that could affect the value selected for this ratio. URS was informed that irrigation practices are fairly limited for the majority of properties in the study area. Thus, a relatively high conversion ratio of 0.95 was selected and used for the majority of properties in the area. For certain properties, such as the various marinas where boat washdowns may have a more significant impact on the quantity of water making its way into the collection system, a lower conversion ratio of 0.25 was adopted. The use of internal deduct meters within marinas can be used to adjust the latter factor that was used for these facilities if this analysis needs to be refined in the future.
- **Infiltration & Inflow Adjustment Factor** - Infiltration & inflow (I&I) to a collection system can contribute a significant quantity of additional wastewater to the treatment plant. The relative quantity of I&I can vary significantly and depends on many factors including, but not limited to, the type of collection system, the age of the system, proper or inadequate maintenance of the system through time, and the depth of the groundwater table relative to the piping system. For a new collection system that is properly engineered and constructed, I&I into the system can be considered negligible. This

assumption was adopted for the new vacuum collection system that was installed to serve the study area. However, for the older gravity collection system that serves Lincoln Gardens as well as the on-site gravity systems that feed miscellaneous pump stations and force mains, a factor was selected and applied to take into account the potential flow contribution due to I&I. In WEC's Capacity Analysis report dated December 2003 that was prepared for the WWTP, wet weather flows observed at the treatment plant were compared to dry weather flows in an attempt to quantify the flow contribution to the system due to I&I. According to the subject report, flows during wet weather conditions ranged from 12 to 37 percent greater than dry weather flows. Based on this range, URS selected a 30 percent adjustment factor to take into account potential inflow to the older gravity collection system during the rainy season. Since a high groundwater table is always present, an accurate estimate for infiltration into the system could not be established.

- **Instantaneous Peaking Factor** - The use of average water supply conditions as the basis to estimate average wastewater generation rates is an important first step in understanding the total quantity of wastewater that may be generated by each property during the course of a typical day. However, peak wastewater flows that occur during the day are extremely important since peak flows will directly affect the sizing of individual components within the wastewater collection system. Usually, two substantial wastewater peaks occur during the day: one in the early morning and a second in the late evening. Peaks in wastewater flows can also occur at other times, including at and around the noon hour when people take breaks to have lunch, for example. To account for peak flows that occur within the study area, an estimated peaking factor of 3.5 was applied to the average wastewater flows estimated for each property. This factor is supported based on an analysis of daily flow records provided to URS by the Utility System, whereby peaks ranged from 3.14 to 3.77. In addition, AIRVAC has adopted the use of a 3.5 peaking factor for most of the systems that use this technology.

2.2 UPDATED CURRENT WASTEWATER FLOWS AND CONNECTION COUNTS

The following section provides the results of the flow analysis for the current condition. The current spatial distribution of wastewater flows is presented, followed by an inventory of all large wastewater generators, and estimated connection counts for the study area. The current condition is defined as calendar year 2004 and includes wastewater estimates for all properties that are located in the study area, whether or not they are served by the Utility's central sewer system.

2.2.1 Current Spatial Distribution Mapping of Wastewater Flows

Using the process described above, estimated wastewater flows were derived for the majority of properties within the study area. **Appendix F** is an inventory of estimated wastewater flows for each property for the current condition. Both average daily flows and peak instantaneous flows for each property is provided in the inventory. A large-size map was prepared and included in **Appendix F** to illustrate the distribution and magnitude of average daily wastewater flows that

could be generated throughout the study area. Table 2-2 summarizes the total wastewater flow estimates for the current condition. Estimated wastewater flows are segregated between those properties that were previously served by pre-existing gravity and force mains from those properties that are located directly adjacent to the existing vacuum system that was recently installed (i.e., Phases 1, 2, and 3). In addition, any remaining properties that may generate wastewater but do not fit into these categories, are reported separately under a future phase, i.e., Phase 4.

System	Average Daily Wastewater Flows		Peak Instantaneous Wastewater Flows	
	gpd	gpm	gpd	gpm
Gravity & Force Mains ⁽²⁾	205,000	142	716,000	497
Phases 1, 2, and 3 ⁽³⁾	164,000	114	579,000	402
Phase 4 ⁽⁴⁾	21,000	15	72,000	50
Total Flows	390,000	271	1,367,000	949

- (1) All gpd values were rounded to the nearest 1,000 gallons.
- (2) The gravity and force mains are those that were previously present that serve various properties including those in Lincoln Gardens and others dispersed throughout the study area.
- (3) Estimated wastewater flows for Phases 1, 2, and 3 correspond to those properties that are within the area where the vacuum collection system is installed.
- (4) Estimated wastewater flows for Phase 4 correspond to the balance of properties not included in the previous lines. These properties include those along south Shrimp Road and the western end of 5th Avenue.

To reiterate, the map depicting the average daily wastewater generation rates for each property is important to use as the basis to understand and quantify the total volume of wastewater that each property may contribute to the Utility System. However, the potential peak wastewater generation rate for each property is important to confirm in order to ensure that individual components within the wastewater collection system are properly sized to handle the peak flows established through the foregoing analysis. The latter data set was subsequently used to assess potential modifications to the existing wastewater collection system in the conceptual-level planning process for the alternative sewer system configurations.

It should be noted that there were some properties within the service area for which wastewater flows could not be established or verified through the foregoing analysis. On the large-size map, these properties are cross-hatched, but not color coded. Flow records from the FKAA database could not be matched to the physical addresses of these properties. As such, additional investigations regarding the quantity of water used by these properties must be conducted in order to estimate potential wastewater generation rates. Once potential wastewater flows are estimated for these properties, the updated flow estimates should be incorporated and added to the remaining flows documented through this study for purposes of completeness.

2.2.2 Identification & Location of Large Wastewater Generators

One of the more important considerations regarding the subsequent analysis of sewer system configurations is the identification of small versus large wastewater generators. Although various criteria can be used to define a small versus a large wastewater generator, the criteria developed and used by AIRVAC was adopted herein to differentiate between a small versus

larger generator. AIRVAC generally differentiates a small wastewater generator from a large generator at an average flow of 1,000 gallons of wastewater per day. Thus, a property that generates less than 1,000 gpd is considered a small generator, while any property that generates greater than 1,000 gpd was classified as a large generator. This definition for small versus large wastewater generators is adopted since the central focus of this particular study is the vacuum collection system from AIRVAC. As such, all principal design considerations that apply to the vacuum collection system should be consistent with the AIRVAC design standards.

The primary reason why 1,000 gpd is used to differentiate between a small and large wastewater generator is attributed to the flow capacity available from a vacuum valve pit. This unit, as described in more detail in Section 3.0 can properly handle up to approximately 1,000 gpd on an average flow basis. Thus, for any generators that contribute 1,000 gpd or less of wastewater, a vacuum valve pit would be the most appropriate component to connect the generator to the central sewer system. For flow contributions that exceed 4,300 gpd on a peak flow basis, but are less than 43,200 gpd, a buffer tank would be required to properly collect this range of wastewater flows. For peak flows that exceed 43,200 gpd, a dual valve buffer tank arrangement would be necessary to properly collect this higher range of wastewater flows. For any wastewater generators whose average flow contribution exceeds 86,400 gpd, another method should be considered for wastewater collection, such as a conventional pump station and associated force main. Thus, there is a maximum flow limitation associated with a vacuum collection system beyond which another type of wastewater collection strategy must be used.

Table 2-3 presents an inventory of large wastewater generators documented through the flow-based analysis conducted for the current condition, of which there are a total of 46. Pertinent information provided in the following table includes the map ID, the corresponding County parcel ID, the parcel's land use code, the physical address for the parcel, and the estimated average and peak wastewater flows for each parcel. All entries listed in the following table are in order of increasing wastewater flows. Bold type entries in the following table represent some of the 20 properties that were examined as part of this project. (Not all of the 20 properties are classified as large wastewater generators.)

Map ID	Parcel ID	Land Code	Physical Address	Average Flow	Peak Flow
1001	124350	36	5600 Laurel Ave	1042	3,646
907	133580	02	5432 Fifth Ave	1085	3,797
527	125610	71	5790 Maloney Ave	1105	3,868
92	127250	48	5700 Fourth Ave	1105	3,866
835	126210	21	5948 Peninsular Ave	1113	3,896
2	123740	25		1135	3,971
821	124530	11	5611 Macdonald Ave	1142	3,998
887	125380	25	5585 Second Ave	1199	4,195
933	125740	36	6531 Maloney Ave	1298	4,544
1013	125170	17	5450 Macdonald Ave	1343	4,699
406	125750	36	6529 Mac Donald Ave	1363	4,769
1053	124990	04	1 Sloans Landing	1365	4,778
1016	124140	49	5400 Us 1 Lots 1,2,3,18,19,20	1367	4,783
1150	124550	36	6325 First St	1757	6,149

Table 2-3 Summary of Large Wastewater Generators within Study Area for the Current Condition

Map ID	Parcel ID	Land Code	Physical Address	Average Flow	Peak Flow
51	125850	49	6639 Maloney Ave	1823	6,379
749	127060	12	5630 Third Ave	1836	6,426
587	123510	27	5110 Overseas Hwy	1919	6,716
513	132400	08	15230 Overseas Hwy	2046	7,160
677	127470	27	6000 Peninsula Ave	2200	7,700
775	126000	49	8 Peninsular Ave	2209	7,733
756	126060	21	4th Ave & 6440 Maloney Ave	2341	8,193
934	123720	44	700 Shrimp Rd	2419	8,467
611	127510	03	6630 Maloney Ave	2476	8,667
728	124560	36	6125 Second St	2614	9,148
1	127430	04	5960 Peninsula Ave	3000	10,500
1007	127230	19	5505 Fifth Ave	3026	10,590
792	132750	36	5236 Suncrest Rd	3067	10,734
173	133730	02	5446 Fifth Ave	3167	11,083
449	123760	04	Shrimp Road	3870	13,545
318	123800	04	5550 5th Ave	3979	13,926
1081	125770	36	6621 Maloney Ave	4043	14,151
886	123660	48		4239	14,838
650	126970	12	5530 Third Ave	4987	17,454
94	123770	49		5316	18,606
822	124470	36	5671 Mac Donald Ave	5601	19,604
341	124760	25	5620 Macdonald Ave	6506	22,772
131	125350	36	5302 Macdonald Ave	6726	23,541
438	133760	04		7391	25,869
936	123590	12	6810 Front St	8000	28,000
498	124540	36	5700 Laurel Ave	9990	34,964
810	126550	36	5031 5th Ave	11047	38,664
145	125670	36	5727 2nd Ave	12163	42,571
924	126090	36	6500 Maloney Ave	18356	64,247
924	126090	36	6500 Maloney Ave	18356	64,247
1032	126400	03	5501 3rd Ave	41183	144,139
1032	126400	03	5501 3rd Ave	41183	144,139
Total Average and Peak Flows from Large Wastewater Generators				213,425	746,988

(1) Refer to maps in Appendix F for the location of each property and corresponding Map ID number.

(2) All flows are expressed in terms of gallons per day (gpd).

The total estimated wastewater flow generated by the large users was divided by the total estimated wastewater flow generated within the study area to estimate the percent flow contribution attributed to the large generators. Based on this calculation, the large wastewater generators contribute approximately 58.4 percent of the total wastewater flow within the study area.

2.2.3 Summary of Current Wastewater Flows and Connection Counts

All estimated wastewater flows for the current condition were categorized into their respective land use codes and summed to provide a flow estimate for the study area per land use code. These flows were then divided by 167 gpd to establish a potential connection count for each land

use code. A summary of estimated wastewater flows and corresponding connection counts per land use code is presented in **Table 2-4**.

Based on the above inventory of wastewater flows and connection counts for the study area, approximately 53 percent of the total estimated wastewater flow is generated by residential properties, while 39 percent is generated by mix use commercial properties, and 7 percent is generated by industrial properties. The balance of 1 percent of the wastewater flow is generated by the remaining land use types, which includes institutional, governmental, and miscellaneous. The total current connection count for the entire study area was established at approximately 2,335 and includes all of the entities described and inventoried in **Table 2-4**.

It should be noted that the wastewater flowrates and associated connection counts as presented in **Table 2-4** are for the entire study area of south Stock Island, and includes all properties served by the pre-existing gravity and force main systems. The estimated quantity of wastewater associated with the properties served by the pre-existing gravity and force mains was previously segregated from the remaining study area as summarized in **Table 2-2**. Through the segregation of flows, the total average wastewater flow associated with the remaining study area was estimated at 185,000 gpd for the current condition. Thus, this estimated average wastewater flow is what should be accounted for when assessing additional wastewater collection requirements for the current condition in the study area, which includes the vacuum collection system and any other new collection system needed to serve for Phases 1 through 4. By excluding Phase 4 flows, the average wastewater flow for the initial three phases would be 164,000 gpd.

Table 2-4 Estimated Wastewater Flows and Connection Counts for the Current Condition			
Land Use Code	Parcel Count	Estimated Wastewater Flow (gpd)	Connection Count (1/6" x 18" Count)
Residential Codes 00 - 09			
00	50	4,767	29
01	183	50,113	300
02	327	75,611	453
03	2	43,659	261
04	42	22,461	134
08	36	14,149	85
Total Residential		210,759	1,262
Mixed Use Commercial Codes 10 - 39			
10	54	5,729	34
11	13	2,987	18
12	14	20,867	125
14	1	544	3
17	5	1,817	11
18	1	0	0
19	3	3,466	21
21	4	4,303	26
22	1	985	6
25	13	10,423	62
26	1	100	1
27	8	9,875	59
29	2	557	3

Table 2-4 Estimated Wastewater Flows and Connection Counts for the Current Condition			
Land Use Code	Parcel Count	Estimated Wastewater Flow (gpd)	Connection Count
33	1	100	1
35	1	518	3
36	20	81,877	490
Total Mix Used Commercial		144,149	863
Industrial Codes 40-49			
41	6	1,724	10
44	9	4,536	27
48	23	9,428	56
49	30	13,780	83
Total Industrial		29,468	176
Institutional Codes 70-79			
71	1	1,105	7
Total Institutional		1,105	7
Governmental Codes 80-89			
86	5	759	5
87	3	0.0	0
88	1	0.0	0
Total Governmental		759	5
Miscellaneous Codes 90-99			
91	8	1,069	6
94	9	0.0	0
95	12	0.0	0
Total Miscellaneous		1,069	6
Summary of Total Flows and Counts			
Grand Total Flow and Count		390,000	2,335
Phases 1, 2, and 3 Flow and Counts		164,000	982
Phase 4 Flow and Counts		21,000	126

2.3 WASTEWATER FLOW PROJECTIONS AND FUTURE CONNECTION COUNTS

The wastewater flow estimates established above for the current condition were used as the basis to project flows for the future condition. For the purposes of the following analysis, flow projections are based on a 20-year planning horizon. Due to the relative amount of uncertainty regarding the current rate of increase in wastewater flows, which are attributed to the sporadic and significant re-development efforts that have already started to occur within the study area, only projections for the 20-year planning horizon are documented herein. Additional studies and updated evaluations will likely be required every few years to assess the actual rate of growth within the study area and how this growth will affect future, short-term increases in wastewater generation.

2.3.1 Projection Methodology and Assumptions

A two-tiered methodology was used to project wastewater flows within the study area. In the first tier, a reasonable, average growth rate was selected based on information contained with the County's Master Plan. In that plan, the anticipated growth rate for the study area was estimated to be approximately 10 percent through a 20-year period. In order to ensure to the degree

practical that adequate provisions are made to account for a potential exceedance of this anticipated growth rate, URS derived a higher rate by applying and distributing a range of potential growth rates between the various individual properties. For instance, larger growth rates were applied to those properties, which may be more attractive to investors for purposes of land re-development, such as waterfront properties and properties bordering U.S. Highway 1. For these properties, a relatively liberal 20 percent factor was used to address the relatively high degree of uncertainty regarding potential changes in land use density through time. A lower growth rate of 2 percent was applied to the majority of the interior properties within the study area. Upon compositing all projected flows from each property, the resulting aggregate increase in flow from the current to future condition for all properties within the study area equaled approximately 18 percent. Through the application and distribution of reasonable multipliers to current wastewater flows, reasonable consideration is given to the potential increase in wastewater flows that could occur through the planning horizon for all properties located within the study area.

For the second tier of this analysis, URS interfaced with WEC to confirm any current, pending, and/or potential land re-development projects that could have a significant impact on the projected wastewater generation rates for certain properties. Some re-development projects that have recently occurred within the study area may have a much larger impact to the increase in wastewater flows than what could be accounted by the projection rate used in the first tier of the analysis alone. Thus, this second tier of the analysis is considered extremely important in order to account for and address larger potential deviations (increases) in flow at certain locations in the study area. The following examples demonstrate the larger resulting impact to projected wastewater flows that may occur due to certain land re-development projects.

- **Second Tier Flow Projection Example #1** - It was confirmed that re-development plans are already underway for Pennisular Marina, which is located at the end of Maloney Avenue on the southeast end of the study area. The current quantity of wastewater generated by this property was estimated at approximately 2,200 gpd. If only an 18 percent growth rate were applied to the current wastewater generation rate for this property per Tier 1, the projected wastewater flow would equal approximately 2,600 gpd. However, a capacity reservation application was recently submitted to the Utility System for 110 ERCs. Using a unit flow of 167 gpd per connection, the potential future wastewater flow from this property could equal 18,370 gpd. Thus, the percent increase in wastewater flow for this property from the current to future condition could be nearly 700 percent, which far exceeds what could be predicted and justified in Tier 1.
- **Second Tier Flow Projection Example #2** - Another re-development project that appears to be moving forward is one for Robbie's Marina, which is located at the end of Shrimp Road on the southern end of the study area. The current quantity of wastewater generated by this property was estimated at approximately 4,200 gpd. If only an 18 percent growth rate were applied to the current wastewater generation rate for this property, the projected wastewater flow would be nearly 5,000 gpd, since only a limited quantity of water is currently used for the existing marina. The developers for Robbie's Marina have had discussions with KWRU for 70 ERCs. Using a unit flow of 167 gpd per

connection, the potential future wastewater flow from this property could equal 11,690 gpd. Thus, the percent increase in wastewater flow for this property from the current to future condition could be 234 percent, which results in a similar change in flow magnitude as documented in the previous example.

Based on the foregoing examples for the second tier analysis, it is obvious that re-development trends can and most likely will have a tremendous impact in terms of future wastewater generation in the study area at certain locations. **Table 2-5** provides a summary of select properties where potential re-development could substantially escalate wastewater flows. The entries in this table were based on current, pending, and even rumored re-development possibilities for the properties listed; all of which should be considered during any conceptual-level planning effort. All entries in the following table were provided to URS by WEC and the reported flows were based on WEC's ERC counts for each property. The ERC count given to URS was multiplied by 167 gpd to estimate the total quantity of wastewater that may be generated by these re-developed properties.

Flow results obtained from the Tier 2 analysis for the properties listed above were either added to (for new facility construction) or replaced (for property re-developments) the flow estimates previously calculated during the Tier 1 analysis. Upon combining the wastewater flow projections from both analysis tiers, a composite wastewater projection rate of approximately 50 percent from the current to future condition is realized. In other words, the sewer collection system for the study area should be sized to address an additional wastewater flow of 50 percent when compared to the current rate of wastewater generation for the study area.

This particular result is of special significance since it suggests that wastewater planning efforts can not rely on simple population projection estimates alone. Furthermore, if re-development trends are not taken into account for this or other similar sewerage projects, the resulting size of a new central sewer system could be grossly underestimated in some locations, thereby leading to insufficient carrying capacity to convey wastewater to its intended destination.

Property Name	Approximate Location	Potential Flow (gpd)	Comments
Old Race Track	2 nd Ave. West of the Stock Island Apts.	10,020	No current development plans known
Pearl Trailer Park	McDonald Next to Coral Hammock	8,350	Potential plans for the expansion of Coral Hammock onto this property.
Keys Federal	Laurel Ave. East of Coral Hammock	3,750	Plans for Keys Federal Office Building
Standard Marine (Vacant Lot)	2 nd St. East of Malone	1,170	No current development plans known.
S&V (Vacant Lot)	Maloney Ave. & 2 nd St.	1,170	No current development plans known.
Hurricane Hole Vacant	U.S. Highway 1	2,000	No current development plans known.
Old Drive-in Theater	West End of 5 th Avenue	10,020	Potential development plans may exist.

Table 2-5 Summary of Properties with Significant Redevelopment Potential

Property Name	Location	Area (sq. ft.)	Comments
Robbie's Marina	End of Shrimp Rd.	11,690	Redevelopment plans are under way.
Alex's Junk Yard	Shrimp Rd.	8,350	No current development plans known.
Safe Harbor West	Shrimp Rd.	16,700	Several properties including docks, live-aboards
Peninsular Marine Ent.	Peninsular Ave.	18,370	Capacity recently reserved by owner
Stock Island Lobster	Maloney Ave, east side	11,690	No current development plans known, but prime waterfront property
Historic Tours (Vacant)	Maloney & Peninsular	2,500	No current development plans known
Oceanside Marina	Maloney & Peninsular	12,360	More condos, plans in the works
Vacant Lot	Suncrest & Cross	1,840	Condos, plans in the works

(1) All flows listed are average daily flows.

2.3.2 Spatial Distribution Mapping of the Projected Wastewater Flows

The projected average wastewater flow estimated for each property as described above was used to replace the current wastewater flow for the corresponding property on the previously developed distribution map. **Appendix G** is an inventory of estimated wastewater flows for each property for the future condition. Both average daily flows and peak instantaneous flows for each property is provided in the inventory. A large-size map was prepared and included in **Appendix G** to illustrate the distribution and magnitude of average daily wastewater flows that could be generated throughout the study area in the future. **Table 2-6** summarizes the total wastewater flow estimates for the future condition. As reported above for the current condition, estimated wastewater flows are segregated between those properties that were previously served by pre-existing gravity and force mains from the remaining properties present in the study area.

Table 2-6 Summary of Estimated Future Wastewater Flows for the Study Area

System	Average Daily Wastewater Flows		Peak Instantaneous Wastewater Flows	
	gpd	gpm	gpd	gpm
Gravity & Force Mains ⁽²⁾	230,000	160	807,000	560
Phases 1, 2, and 3 ⁽³⁾	247,000	172	865,000	600
Phase 4 ⁽⁴⁾	66,000	46	230,000	160
Total Flows	543,000	378	1,902,000	1,321

(1) All gpd values were rounded to the nearest 1,000 gallons.

(2) The gravity and force mains are those that were previously present that serve various properties including those in Lincoln Gardens and others dispersed throughout the study area.

(3) Estimated wastewater flows for Phases 1, 2, and 3 correspond to those properties that are within the area where the vacuum collection system is installed.

(4) Estimated wastewater flows for Phase 4 correspond to the balance of properties not included in the previous lines. These properties include those along south Shrimp Road and the western end of 5th Avenue.

2.3.3 Summary of Large Wastewater Generators for Future Condition

Table 2-7 summarizes the number of large wastewater generators that could exist for the future condition based on the foregoing flow projections and associated methodology. All entries listed in the following table are in order of increasing wastewater flows. It should be noted that there is a 13 percent increase in large wastewater generators from the current to the future condition,

i.e., from 58 to 71 percent between the two conditions. This potential percentage increase may require that certain portions of the existing vacuum collection system be modified to maintain the proper proportion of buffer tanks and valve pits to ensure a balanced system. Furthermore, the relative amount of wastewater flow generated by the various large properties could also increase through time, thereby necessitating certain additional modifications to the vacuum collection system. Bold type entries in the following table represent some of the 20 properties that were examined as part of this project. (Not all of the 20 properties are classified as large wastewater generators.)

Table 2-7 Summary of Large Wastewater Generators within Study Area for the Future Condition

Map ID	Parcel ID	Land Code	Physical Address	Average Flow	Peak Flow
443	126370	10	Fourth Ave	1,030	3,606
443	126370	10	Fourth Ave	1,030	3,606
1001	124350	36	5600 Laurel Ave	1,063	3,719
1001	124350	36	5600 Laurel Ave	1,063	3,719
907	133580	02	5432 Fifth Ave	1,085	3,797
718	132720	10		1,086	3,800
719	132710	10	Sunkrest Rd	1,086	3,800
212	132350	36	6511 Malony Ave	1,112	3,891
835	126210	21	5948 Peninsular Ave	1,135	3,973
2	123740	25		1,157	4,051
527	125610	71	5790 Maloney Ave	1,160	4,061
821	124530	11	5611 Macdonald Ave	1,165	4,078
453	125520	11	6301 Maloney Ave	1,169	4,092
887	125380	25	5585 Second Ave	1,223	4,279
933	125740	36	6531 Maloney Ave	1,324	4,635
92	127250	48	5700 Fourth Ave	1,381	4,832
406	125750	36	6529 Mac Donld Ave	1,390	4,864
1016	124140	49	5400 Us 1 Lots 1,2,3,18,19,20	1,394	4,879
1013	125170	17	5450 Macdonald Ave	1,410	4,934
1053	124990	04	1 Sloans Landing	1,434	5,017
1150	124550	36	6325 First St	1,792	6,272
749	127060	12	5630 Third Ave	1,873	6,554
587	123510	27	5110 Overseas Hwy	1,957	6,850
233	132640	49		2,004	7,014
513	132400	08	15230 Overseas Hwy	2,087	7,303
51	125850	49	6639 Maloney Ave	2,187	7,655
775	126000	49	8 Peninsular Ave	2,253	7,887
756	126060	21	4th Ave & 6440 Maloney Ave	2,388	8,357
546	124090	10		2,505	8,768
611	127510	03	6630 Maloney Ave	2,526	8,840
728	124560	36	6125 Second St	2,744	9,606
52	125860	41	6639 Maloney Ave	2,791	9,767
1007	127230	19	5505 Fifth Ave	3,086	10,801
792	132750	36	5236 Suncrest Rd	3,128	10,948
173	133730	02	5446 Fifth Ave	3,167	11,083
449	123760	04	Shrimp Road	3,947	13,816
318	123800	04	5550 5th Ave	4,058	14,205



Table 2-7 Summary of Large Wastewater Generators within Study Area for the Future Condition					
Map ID	Parcel ID	Land Code	Physical Address	Average Flow	Peak Flow
1081	125770	36	6621 Maloney Ave	4,852	16,981
457	126430	10		5,010	17,535
458	126420	10		5,010	17,535
650	126970	12	5530 Third Ave	5,087	17,803
94	123770	49		5,422	18,97
822	124470	36	5671 Mac Donald Ave	5,713	19,996
341	124760	25	5620 Macdonald Ave	6,637	23,228
131	125350	36	5302 Macdonald Ave	6,860	24,011
438	133760	04		7,539	26,387
245	124150	10	5510 Overseas Hwy	8,350	29,225
934	123720	44	700 Shrimp Rd	8,350	29,225
529	127400	18		10,020	35,070
936	123590	12	6810 Front St	10,706	37,471
810	126550	36	5031 5th Ave	11,268	39,437
765	123680	44		11,690	40,915
886	123660	48		11,690	40,915
498	124540	36	5700 Laurel Ave	11,988	41,956
145	125670	36	5727 2nd Ave	14,596	51,085
317	123800	04	5550 5th Avenue	18,126	63,442
677	127470	27	6000 Peninsula Ave	18,370	64,295
924	126090	36	6500 Maloney Ave	19,274	67,459
1	127430	04	5960 Peninsula Ave	21,610	75,635
935	123730	25		21,710	75,985
1032	126400	03	5501 3rd Ave	43,242	151,346
Total Average and Peak Flows from Large Wastewater Generators				441,138	1,555,030

- (1) Refer to maps in Appendix G for the location of each property and corresponding Map ID number.
(2) All flows are expressed in terms of gallons per day (gpd).

2.3.4 Summary of Future Wastewater Flows and Connection Counts

All estimated wastewater flows for the current condition were categorized into their respective land use codes and summed to provide a flow estimate for the study area per the existing land use codes. These flows were then divided by 167 gpd to establish a connection count for each land use code. A summary of estimated wastewater flows and corresponding connection counts per land use code is presented in Table 2-8.

Based on the foregoing wastewater flow projection for the future condition, it is estimated that 3,251 connections may be present at the planning horizon within the study area. As previously stated and confirmed by the data presented in Table 2-8, future wastewater flows and the resulting connection count is about 50 percent greater than the current condition.

Table 2-8 Estimated Wastewater Flows and Connection Counts for the Future Condition			
Future Use Code	Future Connections	Estimated Wastewater Flow (gpd)	Estimated Connection Count
Residential Codes 00-09			
00	50	6,188	37
01	183	50,301	301
02	327	75,781	454
03	2	45,767	274
04	42	58,337	349
08	36	14,383	86
Total Residential		250,757	1,502
Mix Used Commercial Codes 10-39			
10	54	32,751	196
11	13	4,483	27
12	14	21,285	127
14	1	555	3
17	5	1,895	11
18	1	10,020	60
19	3	3,546	21
21	4	4,389	26
22	1	815	5
25	13	32,044	192
26	1	102	1
27	8	21,558	129
29	2	568	3
33	1	102	1
35	1	622	4
36	20	89,077	533
Total Mix Used Commercial		223,810	1,340
Industrial Codes 40-49			
41	6	4,662	28
44	9	21,863	131
48	23	17,236	103
49	30	17,923	107
Total Industrial		61,684	369
Institutional Codes 70-79			
71	1	1,160	7
Total Institutional		1,160	7
Governmental Codes 70-79			
86	5	773	5
87	3	0	0
88	1	829	5
Total Governmental		1,602	10
Miscellaneous Codes 70-79			
91	8	1,297	8
94	9	0	0
95	12	0	0
Total Miscellaneous		1,297	8
Summary of Total Flows and Counts			

Category	Estimated Wastewater Flow (gpd)	Connection Count
Grand Total Flow and Count	543,000	3,251
Phases 1, 2, and 3 Flow and Counts	247,000	1,479
Phase 4 Flow and Counts	66,000	395

In a similar manner as reported for the current condition, the wastewater flowrates and associated connection counts as presented in **Table 2-8** are for the entire study area of south Stock Island, and includes all properties served by the pre-existing gravity and force main systems. The estimated quantity of wastewater associated with the properties served by the pre-existing gravity and force mains was previously segregated from the remaining study area as summarized in **Table 2-6**. Through the segregation of flows, the total average wastewater flow associated with the remaining study area was estimated at 313,000 gpd for the future condition. Thus, this estimated average wastewater flow is what should be accounted for when assessing additional wastewater collection requirements for the future condition in the study area, which includes the vacuum collection system and any other new collection system needed to serve for Phases 1 through 4. By excluding Phase 4 future flows, the average wastewater flow for the initial three phases in the future would be 247,000 gpd.

3.0 ALTERNATIVE WASTEWATER COLLECTION STRATEGIES

3.1 SCREENING OF POTENTIAL ALTERNATIVES

The following section summarizes the results documented in previous engineering studies that were conducted to support the selection of viable sewer system options as well as those options that will be considered in more detail in this report. It should be noted that the number of viable alternatives that could be considered and retained in this report was highly influenced by the recent installation of the vacuum collection system, which was designed to support the majority of properties within the study area. With the vacuum system in place, there is reduced justification to use some of the alternatives described below. However, each alternative potential sewer system is listed and addressed below along with rationale that was used to either retain or eliminate each alternative for the subsequent conceptual design effort.

3.1.1 Potential Alternatives for Wastewater Collection

There are a number of available options that can be explored to properly sewer a particular area. Which specific option is ultimately selected and used should be based on a proper engineering judgement, experience, and analysis to ensure that the system selected is (1) technically feasible and (2) cost effective compared to the other options considered. The following are viable sewer options that could potentially be used and applied to the study area:

- Conventional Gravity Collection Sewers
- Small Diameter Gravity Sewers
- Conventional Pump Stations and Force Mains
- Low Pressure Sewers
- STEP Sewers
- Vacuum Collection Sewers

Most of these alternative sewer system configurations were initially considered and evaluated by one or both of the Master Plans that were previously prepared for the study area. A central conclusion documented in both Master Plans was that vacuum collection technology would be a cost effective and reliable means for wastewater collection within the study area. However, the County's Master Plan, as prepared by CH2M Hill, also indicated that consideration should be given to the use of conventional pump stations and force mains where needed to properly address wastewater collection from larger wastewater generators. This latter consideration is important to take into account for the reasons described in the following screening of alternatives.

3.1.2 Screening of Alternatives

URS reviewed the analyses of alternative sewer system configurations as documented in the Master Plans and found that the analyses were properly performed and that results from the analyses were generally well founded. As such, URS concurs with the results and recommendations presented in the County's Master Plan; i.e., vacuum collection technology supplemented with pump stations and force mains. The following provides justification and rationale for the potential use or elimination of the alternative sewer system options for the subsequent conceptual design effort.

- Conventional Gravity Collection System - This traditional approach for wastewater collection remains one of the most reliable means to route any liquid from one location to another. By relying strictly on the forces of gravity, any liquid media will flow downhill. This usually results in an extremely reliable means to ensure proper wastewater collection, while minimizing energy costs associated with the system. However, the principal drawback for the application of a large gravity collection within the study area is the relatively high groundwater table. A high groundwater table substantially complicates the installation of gravity mains. For proper system construction, gravity mains must be precisely installed with a certain slope. If the slope established for the installed pipe were too large, a deeper installation would result, thereby increasing construction costs. Conversely, if the established slope for the installed pipe were too small, inadequate drainage of wastewater within the piping system would result, thereby reducing the functionality and reliability of this option.

Due to the geographic setting of the study area, the ground water table is typically located only a few feet below local land surface. While construction techniques are available for gravity main installations in locations that have high water table conditions, the installation costs can be significant and the progress of such installations can be slow. This is primarily due to the need to maintain sufficient pumping during main installation to dewater the open pipeline trench, while limiting the total length of trench that is open at any given time. Ancillary issues associated with installing pipe under high groundwater conditions include (1) reduced ability to stabilize the trench bed, (2) sediment accumulation within the pipe joints and on the gasket materials during field installation, and (3) adequate stabilization of the pipeline during backfilling operations.

Another disadvantage of installing gravity mains in areas with a high groundwater table is the potential for increased infiltration into the system through pipe joints. If the system is properly constructed using sound construction techniques, this is usually not an issue in the early years of the pipeline. However, as time progresses, the potential for infiltration into gravity mains increases. The latter issue can occur as gasket materials within individual joints degrade allowing additional seepage into the mains through time. Annual maintenance costs will likely increase in the long-term to address this issue, thereby further increasing the overall costs associated with a conventional gravity system.

The above considerations regarding the gravity collection option must be qualified by the total depth of main installation required to properly serve all users within the study area. URS agrees with the previous studies in as much that it would not be cost effective to install gravity collection mains within the County right-of-ways to serve all properties. This course of action would result in relatively deep mains being installed coupled with multiple lift stations at various locations along the gravity main routes. However, the use and application of gravity mains at shallower depths below grade can and should be retained in the conceptual design phase as a potentially viable and cost effective option for wastewater collection within individual properties. At shallow depths, less groundwater would be encountered, thus, minimizing the disadvantages described above, while controlling construction costs within reason.

- Small Diameter Gravity Sewers - A small diameter gravity sewer system uses an interceptor tank at each property. The tank is essentially the same as a conventional septic tank, which retains the majority of solids and grease. The remaining liquid wastewater flows by gravity out of the interceptor tank and into and through a gravity collection main similar to a conventional gravity collection system. However, since the majority of solids and grease are removed by and stored in the interceptor tank, the resulting gravity main can be smaller in diameter and laid at a flatter slope as compared to a conventional gravity collection main.

The use of this sewer option is best suited when there is high uniformity of property types and use within the study area. For example, if most of the properties contained single family residences that generate low to moderate quantities of wastewater, a small diameter gravity sewer would be a suitable alternative to explore in further detail. However, in the subject study area, there is high variability regarding both the number and types of wastewater generators present. While this option could be potentially explored to address some users, the resulting percentage of properties served by this type of system would be relatively low, thereby necessitating that another type of collection system be considered to address other properties in the area. Exploration of this alternative would further complicate the piping network that would be located within County right-of-ways. Also, the resulting number of interceptor tanks associated with this option could be substantial and require periodic hauling of anaerobic wastes to the local treatment facility. This latter factor increases administrative and maintenance issues and costs associated with this alternative. For these reasons, this particular sewer system option is eliminated from further consideration.

- Pump Stations and Force Mains - Wastewater conveyance via pumping has traditionally been used when there were logistical or cost effective issues associated with the installation of a gravity collection system. Wastewater collection using a system of one or more pump stations coupled with force mains mitigates the principal disadvantages described above for gravity collection mains when there is a high groundwater table. This option can be explored nearly without limit regardless of the quantity of wastewater that could potentially be generated. In recent history, pre-engineered pumping systems have been developed and are available to provide a cost-effective option to address low to

moderate wastewater volumes. This particular sewer system configuration is generally categorized as a low pressure sewer system and is described in more detail below. For larger wastewater quantities, a variety of pumping units are commercially available that could be installed in field-constructed pump stations to ensure proper wastewater conveyance.

One disadvantage associated with this particular option is the need for backup power to improve the reliability of wastewater collection. Good engineering design practice usually dictates that for any mechanical system that requires electricity for proper operation, a secondary or auxiliary source of power should be provided. The Florida Administrative Code also has specific backup power requirements and provisions for wastewater pump stations. Backup power can be addressed either through an on-site emergency generator or an emergency power receptacle located on the station's control panel that can be used to connect a portable generator. For the former, an emergency generator would be provided complete with a fuel storage tank to ensure a sufficient back-up power supply for a certain period of time. For the latter, a portable generator would be deployed to a station that loses power to maintain operation of the station. Usually, one portable generator would be needed for every pump station that is not equipped with a dedicated generator system. Obviously, this specific requirement for a backup power supply for each pump station increases the overall capital cost associated with this option.

Thus, the use of pump stations remains a viable and cost effective option that should be retained and considered on a case-by-case basis during the conceptual planning phase. However, considering the implications associated with back-up power requirements for pump stations will likely limit the use of pump stations when compared to other wastewater collection alternatives. As such, the use of pump stations should be considered and limited to only those properties that generate a significant quantity of wastewater and/or where other collection options may not be feasible.

- Low Pressure Sewers - This type of wastewater collection system involves the use of multiple pump stations feeding a common force main. Each pump station is equipped with one or two small grinder pumps that route wastewater from individual properties into a common force main. Since each pump station usually serves only one or perhaps two single-family residences (or their equivalents), the station and its associated pumps are usually relatively small units. The pump stations themselves are usually installed on private property and collect wastewater from only that property.

Low pressure sewers are ideal for a collection of properties that are nearly identical to one another with respect to the type of entity on the properties; i.e., all residential entities. However, the total number of users that can be connected to one low pressure sewer system is generally limited, since the pressure of the system increases as additional users are added. This is perhaps the most significant factor in limiting the application of this particular sewer option for the study area. The variation in both the size of the various properties within the study area and the type of entities on each property would severely preclude the successful application of this option. Also, the total number of properties

that are present in the study area would require that multiple low pressure sewers be installed, further complicating the network of piping that would have to be installed. Lastly, the resulting number of small pump stations that would be installed throughout the study area would be significant and could lead to substantial operation and maintenance issues through time. For these reasons, this option is eliminated from further consideration.

- STEP Systems - As a small diameter gravity sewer is similar to a conventional gravity sewer, a STEP system is similar to a conventional pump station and force main system. The term STEP stands for Septic Tank Effluent Pumping. In this type of system, an interceptor (septic) tank is used to retain the majority of solids and grease. The remaining liquid wastewater is routed into a small pump system, which transfers it into and through a small force main. Since the majority of solids and grease are removed by and stored in the interceptor tank, the pump does not need to grind the solids as in a conventional pressure system.

While this system could be considered as a viable, cost effective option for the study area, there are various drawbacks associated with it. First, an interpretation of results from various studies on effluents from STEP systems suggests that the quality of wastewater routed out of the interceptor tank can vary significantly from the quality of mixed wastewater. Combining wastewater from STEP systems with mixed wastewater from other sources and collection systems could have a detrimental impact to the overall biological treatment efficiency of the treatment plant. Second, similar to the small diameter gravity sewer option, this alternative would result in a large number of interceptor tanks located throughout the service area, thereby necessitating periodic hauling of accumulated wastewater sludge and increasing maintenance requirements. Lastly, since a pumping system is required for this option, the need to address backup power provisions may apply. For all of these reasons, this option is eliminated from further consideration.

- Vacuum Collection Systems - In a vacuum collection system, ambient air coupled with a high vacuum is used to collect wastewater from individual properties and route it to a central collection point for subsequent transfer to its ultimate destination for treatment and disposal. The vacuum collection system that was recently installed to serve the properties within the study area contains the following principal components: (1) vacuum pump station, (2) wastewater receiver (interceptor) tank, (3) wastewater transfer pumping system, (4) vacuum collection headers, (5) vacuum valve pits, and (6) buffer tanks. **Figure 3-1** is a schematic diagram for the first four components summarized above. A description of all of these components follows:

- Vacuum Pumps - These units comprise the heart of the overall vacuum collection system. A set of vacuum pumps is used to maintain an extremely high vacuum level (e.g., 15 to 25 inches of mercury) within the collection mains that compose a vacuum collection system. The vacuum pumps are rated and sized to create a certain volumetric air flow rate through the collection piping system. A critical design factor related to the sizing of the vacuum pumps is the air-to-wastewater

ratio needed to ensure proper collection of the total wastewater volume that could be generated in the area served by the vacuum system. For the AIRVAC system, a 3:1 air-to-wastewater ratio is used to ensure proper collection of wastewater. That is, for every one unit of wastewater that must be collected, three units of air are required to transfer the wastewater within the system. The units used to compare air and wastewater volumes must be expressed on a common basis, i.e., cubic feet per minute (cfm) or gallons per minute (gpm). Thus, once the total wastewater volume is established, the size of the vacuum pumps in terms of air flow (usually in cfm) can be calculated and selected.

- Wastewater Interceptor Tank - This tank serves to separate air from wastewater once it reaches its final destination within the collection system. This tank also partially serves to dampen peak instantaneous flows that may occur within the vacuum collection system. The air-wastewater mixture enters the tank, where the wastewater falls to the bottom of the tank and is retained. Air continues to be routed through the tank by the vacuum exerted on it from the vacuum pumps described above. The vacuum pumps extract all air from the interceptor tank and route it out of the system through a stack pipe.
- Wastewater Transfer Pumps - A set of submersible wastewater transfer pumps are installed within the wastewater interceptor tank. These pumps are used to periodically extract wastewater from the tank and route it to the headworks of the Utility System's WWTP. Liquid level probes installed within the tank are used to activate and terminate the operation of the pumping system as needed.
- Vacuum Headers - A system of vacuum headers are used to route wastewater from individual properties to the wastewater interceptor tank described above. The total number and length of vacuum headers are established through a formal, site-specific, engineering design process to address wastewater collection requirements for all properties within the study area. During the design process, particular attention and consideration must be given to properly document all large wastewater generators that may be located along a particular vacuum header route if buffer tanks are to be consistently used to address wastewater collection from each of these properties.
- Vacuum Valve Pits - A valve pit is one of two types of hydraulic connections that are used to transfer wastewater from atmospheric pressure into the vacuum collection system. Valve pits are typically located in close proximity to the sources that generate wastewater. **Figure 3-2** illustrates a typical valve pit as manufactured by AIRVAC. Wastewater is usually routed by gravity from the originating source, such as a residential entity, through a lateral and/or system of collection mains. Wastewater flows out of the gravity system and into the sump portion of the valve pit where it collects. A probe is used to sense the relative level of wastewater within the sump and at a certain level, the probe triggers the vacuum valve assembly to open. Once the valve is opened, the wastewater within the sump is exposed to the high vacuum present within the vacuum header, which

is attached to the valve pit. The wastewater, in turn, is extracted from the valve pit by a high vacuum along with some air that serves as the motive force that moves wastewater through the vacuum collection system. Air at ambient pressure is supplied to the valve pit via a vent pipe installed upstream of the valve pit on the service laterals. Once the majority of wastewater in the valve pit is removed, the probe closes the vacuum valve thereby terminating the transfer of wastewater into the vacuum collection system. This cycle repeats itself as additional quantities of wastewater are generated. A valve pit can adequately transfer approximately 1,000 gpd of wastewater on an average flow basis and has an upper flow (peak) capacity of 3 gpm.

- **Buffer Tanks** - A buffer tank is the second type of hydraulic connection used to transfer wastewater from atmospheric pressure into the vacuum collection system. A buffer tank is essentially the same as a valve pit with one major difference. The sump capacity for a buffer tank is substantially more than what can be provided by a valve pit. The vacuum valve assembly and associated controls are similar to those found in a valve pit. **Figure 3-3** illustrates a typical buffer tank as specified by AIRVAC. A buffer tank is typically used when the average daily flow begins to exceed the capacity available from a valve pit. The primary purpose of the buffer tank itself is to dampen extreme peak flows generated by larger residential properties and commercial/industrial entities before routing wastewater into the vacuum collection system. A buffer tank can be used to address peak instantaneous flows of up to 30 gpm (43,200 gpd) that are routed to the tank via one or more service laterals. When wastewater flows exceed this limit, a dual buffer tank, or dual valve buffer tank arrangement must be used. It should also be noted for technical reference and clarity, that a 3-inch valve assembly is typically used for a standard buffer tank. This valve has a continuous flow-rated capacity of 15 gpm. This would be the actual transfer rate of wastewater from the buffer tank to the vacuum header.

The existing vacuum collection system that was recently installed within the study area contains all of the components described above. The vacuum pump station and associated wastewater transfer system are located at the Utility System's WWTP site. All mechanical components for the vacuum collection system at this location utilize power from the local power grid and have a dedicated backup power supply. There are a total of six vacuum headers that are routed along various streets in the study area to provide sewer system service to the majority of the properties (refer to **Figure 2-1**). Of the six headers, two headers merge into two other headers in such a manner that only four headers approach the vacuum pump station.

The existing vacuum collection system also has a total of 71 valve pits and 15 buffer tanks at various locations along the vacuum headers to collect wastewater from the majority of properties in the study area. However, valve pits and/or buffer tanks were not provided at 20 larger properties. For these properties, a vacuum stub-out from the vacuum mains was installed. Per feedback from the Utility System, the vacuum stub-outs would be used to extend vacuum lines onto some of the larger private properties. **Table**

3-1 is a list of those properties where vacuum stub-outs were provided in anticipation that these properties would extend the vacuum collection system onto them.

One final and important consideration regarding the use of vacuum collection systems is the relative number of buffer tanks that can be used. Per design limitations associated with the technology, AIRVAC recommends that the flow contribution from buffer tanks not exceed 25 percent of the total system flow. While this flow limitation is stated as an official guideline for design purposes, the limit can be exceeded to some degree on a case-by-case basis. However, this limit should be maintained in order to safeguard the operational reliability of the system. If the limit is exceeded, there is greater risk that the requisite air-to-wastewater ratio within the vacuum collection system would be reduced to such a level that there would be insufficient air to maintain the transfer of wastewater through the piping system. Thus, while the vacuum collection system can address wastewater collection from large generators through the use of buffer tanks, there is a flow limit beyond which other alternative sewer systems must be explored or an extension of the vacuum collection mains using multiple valve pits must be relied upon to ensure proper wastewater collection from all large generators.

Table 3-1 Summary of Properties to be Served through On-Site Extensions of Vacuum Mains

Number	Property Name	Address	Average Flow (gpd)
1	Area East of Styron's	Lots 3 and 4 Maloney Avenue	130
2	Boyd's Campground ⁽¹⁾	6401 Maloney Avenue	14,600
3	Coconut Grove Trailer Park	6621 Maloney Avenue	4,850
4	El Mar RV Park	6700 Maloney Avenue	410
5	Gomez Trailer Park	5600 Laurel Avenue	1,060
6	Harbor Shores Condo Association ⁽²⁾	6800 Maloney Avenue	7,540
7	Hideaway Trailer Park	6531 Maloney Avenue	4,640
8	Leo's Campground	5236 Suncrest Road	3,130
9	Liz's Trailer Park (E of Front St.)	6440 Maloney Avenue	2,390
10	Oceanside Marina	5960 Peninsula Avenue	3,000
11	Ocean Spray	6529 Maloney Avenue	1,390
12	Overseas Trailer Park	5300 MacDonald Avenue	6,860
13	Pozzi #2 Trailer Park	5950 Peninsula Avenue	790
14	Roy's Trailer Park	6500 Maloney Avenue	19,270
15	Stock Island Trailer Park	Stock Island TP	500
16	Styron's Trailer Park	6511 Maloney Avenue	1,110
17	Sunhaven Trailer Park	5671 MacDonald Avenue	5,710
18	Tropic Palms Trailer Park	6125 Second Street	2,740
19	Waters Edge Colony Trailer Park	5700 Laurel Avenue	11,990
20	Woodsons Trailer Parks ^(1 & 2)	6325 First Street	1,820
21	Total		93,930

(1) Boyd's Campground upgraded their on-site gravity system and will use a dedicated pump station located in the ROW to transfer wastewater generated on this property to the Utility System.

(2) A vacuum stub-out was provided and would serve a dual valve buffer tank for Harbor Shores Condo Association Condo Association. This buffer tank has not been installed to date pending completion of a contract between the Utility System and the property owner association for this property.

3.1.3 Retained Alternatives for Conceptual Design

Based on the foregoing evaluation of sewer alternatives, three options were retained for consideration, in some capacity, for the conceptual sewer system configurations presented in this report. These alternatives include the following along with a brief description regarding how each may be used in the conceptual design process:

- Gravity Collection - As stated above, a gravity system offers an extremely reliable method for wastewater collection, while minimizing energy and overall maintenance costs. This option will be explored primarily as a means to collect wastewater within individual properties. However, due to depth limitations and associated capital costs to install, the use of deeper gravity collection mains within County right-of-ways to collect wastewater from multiple properties will not be considered.
- Vacuum System - As indicated above, and as supported by the previous Master Plans, a vacuum collection system is a viable and cost effective approach for wastewater collection. Since a substantial vacuum collection system has already been installed to support the majority of properties within the study area, there is added emphasis to utilize this system to the maximum extent possible. Therefore, the existing vacuum collection system will be included in each conceptual configuration presented in this report and utilized as needed to efficiently address wastewater collection.
- Pump Stations - Due to flow limitations associated with the vacuum collection system as described above, the use of pump stations to serve certain properties is retained for further consideration. Flow limitations include the 25 percent flow contribution cap via buffer tanks as well as those properties that generate more wastewater than what could be properly collected by the vacuum collection system. Furthermore, based on feedback received from various property owners and County officials, there is a perception that a series of pump stations and one or more force mains may be preferable than relying only on the vacuum collection system. In order to evaluate the use of pump stations against the vacuum collection system, a conceptual configuration of a parallel pump station and force main system is developed and presented.

It should be noted that as many options as possible were retained for the conceptual design effort described and presented in this report. If one or more options listed above were summarily eliminated without due consideration, specific limitations or restrictions may be realized and/or the resulting sewer system configuration may not be the most cost effective one that would ultimately be recommended for the study area. Thus, the resulting conceptual configurations developed for each of the following wastewater collection strategies include a mixture of the options described above in an attempt to address these potential concerns.

3.2 STRATEGY #1: MAXIMIZE USE OF VACUUM COLLECTION SYSTEM

3.2.1 Introduction of Possible Configurations

There are two possible configurations that were identified for this wastewater collection strategy. The first configuration is the same one previously recommended by the Utility System, whereby segments of the existing vacuum collection system would be extended onto private properties. This option would most likely require that easements be established within private properties to facilitate access for the Utility System to the vacuum system components located on these properties. While this configuration has received considerable scrutiny, criticism, and debate in the past, URS has established that it is a viable option that could be used to ensure proper and reliable collection of wastewater within the study area.

A second configuration identified for this strategy is one in which the majority of vacuum collection components are configured and sited within County right-of-ways. URS, working in conjunction with CH2M Hill during the peer review process for this project, established that the existing vacuum collection system could be modified to serve the majority of the large properties from the right-of-way without the need to extend the vacuum collection system onto the private properties in most, but not all cases.

A description of the conceptual sewer system configurations is presented below. For each configuration, a discussion is provided regarding recommended modifications that should be considered to the existing collection system within the right-of-ways to properly support wastewater collection from all properties in the study area for the current condition. Subsequently, additional modifications that may be necessary to address additional wastewater collection for various properties in the future are presented. In addition, confirmation of the existing hydraulic capacity of the vacuum collection system that was recently installed is provided as a basis to support either conceptual sewer system configuration proposed in this report for this strategy.

3.2.2 Confirmation of Existing System Configuration and Capacity

An important aspect for this study was to confirm the existing configuration and available capacity associated with the existing vacuum collection system. It is important to document this information so that a proper evaluation can be provided to assess if the system is properly configured while having sufficient capacity to properly serve all properties within the study area. Sufficient system capacity should be available to support both the current and future wastewater generation rates documented in this report.

In order to assess the available system capacity of the vacuum collection system, it was first necessary to inventory all principal components in the system. **Table 3-6** provides a summary of the various components that comprise the existing vacuum collection system. The quantities listed in **Table 3-2** were based on information obtained and documented in the October 16, 2003 URS assessment report prepared for the County.

Table 3-2 Summary of Components within Existing Vacuum Collection System

1	Valve Pit, Type A1 (2)	22
2	Valve Pit, Type A	15
3	Valve Pit, Type B	31
4	Buffer Tanks (Type C)	13
5	Vacuum Stub-Outs	16
6	10-inch PVC Vacuum Main	13,665
7	8-inch PVC Vacuum Main	4,709
8	6-inch PVC Vacuum Main	5,434
9	4-inch PVC Vacuum Main	844
10	Wastewater Interceptor Tank	1
11	Submersible Wastewater Transfer Pumps	2
12	Vacuum Blowers	4

(1) The listed quantities were based on the Engineer's (Weiler Engineering) Final Tabulation.

Once all components were inventoried, the available design capacity of each component was assessed. Confirmation of available capacity per component was obtained directly from AIRVAC. URS provided AIRVAC with the spatial wastewater distribution maps for the study area for the current and future conditions, which were used as the basis to develop possible system modifications. The wastewater flows presented on these maps differed from flows that were previously used by WEC to develop the initial configuration of the vacuum collection system. This is due in part to the methodology used to estimate and document wastewater flows from the various properties in the service area. AIRVAC used the maps in an attempt to modify the system to serve all properties, while performing a standard hydraulic analysis of the system. As URS evaluated and prepared the conceptual sewer system configurations presented previously in this report, AIRVAC worked on a parallel track to modify the system to support wastewater collection from all properties in the service area.

AIRVAC indicated that they were unable to configure the system to serve all properties within the study area to the detail that URS developed and presented in this report due to the number of unknown or unconfirmed field conditions. This was due primarily to the fact that AIRVAC could not confirm and/or coordinate the location of individual properties from the maps prepared by URS to their internal system design documents. The design documents that AIRVAC has used to date were based on business name or type of property. However, AIRVAC was able to confirm certain aspects regarding the use and modification of the system to serve all properties within the study area. Original documentation and feedback that AIRVAC provided to URS, inclusive of their design calculations, is provided in **Appendix L** for reference. The following provides a summary of AIRVAC's evaluation of the capacity for each principal component in that comprises the vacuum collection system:

H

Attachment 3

- Vacuum Pump Capacity - The vacuum pump station has a total of four pumps. One of these pumps serves strictly as a redundant or backup unit in event that one of the other pumps fail for any reason. The remaining three pumps operating in a parallel configuration would produce the maximum wastewater collection capacity for the system. Since each pump is rated to produce an air flow rate of 455 cubic feet per minute (cfm), the maximum available air flow capacity produced by the three vacuum pumps would be 1,365 cfm. At this rate, AIRVAC indicated that approximately 33 percent of additional vacuum piping volume can be installed on the existing system based on the available capacity of the existing vacuum pumps. This piping limitation is based on the need to maintain adequate air flow through two-thirds of the total pipe volume of the collection system. The remaining one-third of the pipe volume would be used to transfer wastewater through the system. Thus, if more than 33 percent of additional collection pipe volume were needed to support the conceptual sewer system configuration, an additional vacuum pump would have to be installed or one or more of the existing pumps would have to be replaced with larger units. For the projected future wastewater flows, only 10 percent more vacuum piping could be installed to serve additional users.
- Wastewater Transfer Pumps and Interceptor Tank - These components of the vacuum collection system were sized based on the estimated peak flow that the system may experience. Per AIRVAC, these components are sized based upon a peak flow rate of 825 gpm (1,200,000 gpd). Based on the conceptual configuration developed for the vacuum system that would serve all properties within the study area, peak flows for the current and future conditions were estimated at 602,000 and 1,135,000 gpd, respectively. Based on these estimated wastewater flows, the existing wastewater transfer pumps and interceptor tank should be adequately sized to support all properties in the study area through the planning horizon.
- Vacuum Headers - Friction losses within Vacuum Header A & B approaches the maximum acceptable value for the future wastewater collection condition. If wastewater flows are accurately projected and distributed for the future condition, this vacuum header should be able to adequately continue to support the properties it serves. Friction losses within the remaining Vacuum Headers remain within reason, thereby indicating that all of the remaining headers can be relied upon to collect wastewater from those properties in the study area that are located near a header.
- Buffer Tanks - One of AIRVAC's greatest concerns is the amount of flow that could be introduced to the system via buffer tanks. Large quantities of wastewater input due to infiltration & inflow via these connections could potentially reduce system vacuum levels within the immediate area surrounding the input, thereby jeopardizing proper wastewater collection in that area. In other words, if large quantities of I&I are routed into the system via one or more buffer tanks (which would typically serve the larger properties), increased potential of sewage overflows at nearby locations served by the system would result. For this reason, the Utility System is rightly justified to require that any gravity system that feeds a buffer tank is properly constructed to industry standards so as to limit the quantity of I&I that could enter the vacuum collection system.

3.2.3 Strategy #1A: Extension of Vacuum Systems on Private Properties

As previously proposed by the Utility System, a potential option to complete the sewerage effort is to extend vacuum lines from the existing vacuum headers that are located within County right-of-ways onto private properties. A series of vacuum stub-outs were provided during initial construction of the existing vacuum collection system to facilitate these extensions onto private properties.

The extension of vacuum lines onto private properties would consist of installing a relatively small diameter pipe (typically three to four inches ID) within the limits of the property. A series of vacuum valve pits would be sited at appropriate locations within each property to serve all existing units that could generate wastewater. Each vacuum valve pit would be connected to the four-inch diameter vacuum line. In order to establish the final hydraulic connection to make the on-site system complete, new or rehabilitated service laterals would be used to route wastewater from individual units to the vacuum valve pits. Depending on the total number of units and their location relative to one another, the individual laterals may be routed directly into a valve pit or through an intermediate manhole structure. Shallow manholes may be necessary prior to a vacuum valve pit to reduce the total number of piping connections needed for an individual valve pit. An atmospheric vent line would also be provided for each gravity lateral that feeds a valve pit. As stated above, proper easements would need to be established to allow access by the Utility System to all on-site vacuum mains as well as any vacuum valve pits. **Figure 3-4** illustrates a general piping schematic for this general piping system configuration.

Appendix H contains a large-size plan that illustrates a conceptual piping system configuration for this strategy for the current condition, whereby vacuum lines would be extended onto private properties. This plan shows all modifications that are recommended to the existing vacuum collection system within the confines of the County right-of-ways. (Details regarding the sewer concept plans for the on-site properties are provided below.) Recommended modifications to the vacuum collection system within County right-of-ways include the relocation of vacuum stub-outs to support the conceptual layouts developed for the on-site systems as well as additional valve pits within the right-of-way to address wastewater collection from other properties. Based on the conceptual configuration developed for this strategy, 28 percent of additional vacuum pipe volume would be added to the existing system to support the current condition.

A complete list of proposed modifications to the vacuum system within the right-of-way for this conceptual sewer system configuration is provided below in **Table 3-3**.

Table 3-3 Proposed Current Modifications to the Vacuum Collection System within County ROWs		
Item	Description of Modification	Physical Boundary Address
Proposed Changes 1, 2, and 3 Modifications to the Vacuum Collection System within County ROWs		
1	Add new valve pit to vacuum header, A6-V1	4 th Ave and 2 nd St., property ID 751
2	Extend vacuum system main to property line from MacDonald Ave.	Water's Edge Colony, Laurel Ave. and 2 nd St.
3	Extend vacuum system main to property line from 2 nd St.	Water's Edge Colony, Laurel Ave. and 2 nd St.
4	Extend vacuum main and add valve pit, E8-V1	Southeast on Maloney from 4 th Ave. to property ID

NO.	DESCRIPTION	PROPERTY ID
		1035 and 442.
5	Extend vacuum main E7 to property line from Front St.	Liz's Trailer Park, 4 th Ave and Front St., property ID 756
6	Extend vacuum main F3 northwest on Maloney and to property line	Maloney Ave., property adjacent to Boyd's, property ID 437
7	Install new vacuum header south on Shrimp Rd	Shrimp Rd., property ID's 886 to 119
8	Add new valve pit on Shrimp Rd, C9-V31	Shrimp Rd., property ID's 119 and 935
9	Install new vacuum header south from WWTP on Front St. and to property line	Front St., property ID 61

Note: Refer to map in Appendix H for exact property location per property ID number.

Details regarding the on-site configuration of the vacuum system are included on a series of smaller graphics located in the **Appendix I**. In general, one 11-inch-by-17-inch concept plan is provided for each of the properties where the vacuum system would be extended onto the property. Each concept plan provided for the individual properties illustrates potential routes that could be further explored during final engineering design for the installation of the on-site vacuum mains and valve pits as well as upstream service laterals and manholes that may be needed to gravity drain wastewater to individual valve pits. It should be noted that the number of vacuum valve pits established for each property was based upon the flow analysis results documented in **Section 2.0** of this report. The estimated wastewater peak flow established for each property was divided by the rated peak flow rate for a valve pit, which established how many pits would be needed for each property.

The following conditions and qualifications are noted regarding this particular concept plan:

- The vacuum system was not extended onto all of the properties that were to originally be connected to the Utility System's central vacuum collection system. One of these properties was Boyd's Campground. During the last year, Boyd's upgraded their on-site gravity collection system to meet requisite industry standards and has installed a dedicated force main and a section of new gravity main. A pump station will be constructed to convey all wastewater generated at Boyd's through the force main that will ultimately lead to the Utility System's WWTP. The Utility System has accepted this specific change to their original sewer system plan for the study area.
- Due to the proximity of Roy's Trailer Park to the Utility's WWTP and given that relatively large quantities of wastewater are already routed to one pump station located near the southern property line, this particular property will be served by a dedicated pump station. The existing lift station on the property that currently routes wastewater into the on-site package plant would likely need to be upgraded to ensure that wastewater can be routed into an existing force main within the adjacent ROW that leads to the WWTP. A land easement would be established to provide the Utility with adequate access to the pump station.

- Another property where the vacuum system was not extended onto it was the Harbor Shores Condo Association. The Utility System has proposed that a dual valve buffer tank be installed within the right-of-way to collect all wastewater generated by this property. To date, a buffer tank has not been installed pending the execution of a formal service contract between the Utility System and the property owners of the Harbor Shores Condo Association. However, based on current feedback from the Utility System, it is assumed that this arrangement would be provided to support this property under this conceptual sewer system configuration. As such, all wastewater generated on this property will be routed either by pumping or gravity to the County right-of-way where it will be collected by a dual valve buffer tank.
- There have been discussions about extending sewer service to Oceanside Marina via the existing vacuum collection system. Similar to the other properties, the Utility System has proposed that vacuum mains be extended onto this property. WEC has proposed that the two existing on-site pump stations be converted into and used as buffer tanks to serve the existing users on the property. (The ability to use and convert the existing pump stations into buffer tanks would have to be further evaluated and confirmed between WEC, AIRVAC, and KWRU.) As future development of this property occurs, an appropriate number of valve pits may be needed to serve new condominium units. For this strategy, it is assumed that the above vacuum components will be installed. If this proposed configuration is adopted, the property would need to establish easements to allow the Utility System access to the two on-site pump stations and the associated segments of new vacuum mains. Per feedback received from CH2M Hill, it should be noted as a matter of record that the BOCC authorized the transfer of a buffer tank that was originally reserved for Oceanside Marina to Harbor Shores Condo Association.
- For all remaining large properties excluding those considered in this report, it is assumed that the vacuum collection system would be extended onto these properties at the appropriate time to support the overall wastewater collection effort for the study area. The ultimate configuration for these remaining on-site systems would be dependent on the total number and types of units constructed on these properties and their relative location to one another. Thus, while the total wastewater flow for these properties were accounted for as described in **Section 2.0** of this report, the physical on-site configuration of the vacuum collection system is not detailed herein.
- Estimated costs associated with this conceptual sewer system configuration were segregated between those components that would be installed within the right-of-way and those that would be installed on private properties. The estimated costs to extend the vacuum collection system on individual properties were segregated per property according to the conceptual layouts illustrated on the individual concept plans in the referenced appendix. In this manner, the estimated cost to each property owner is presented for review and consideration. Also, all costs associated with modifications to the existing vacuum collection system within the right-of-way are presented.

To address the eventual need to collect additional wastewater volumes from certain properties through time, URS assessed additional modifications to the vacuum collection system that may be necessary for this option. These modifications would address wastewater collection from many of the properties that may be redeveloped within the planning horizon. Additional modifications may be required to continue to support proper wastewater collection from other properties within the study area that may generate larger wastewater quantities than what occurs currently. The large-size plan presented in **Appendix H** depicts the various modifications that may be necessary to support additional wastewater generation for the future condition. Based on the conceptual configuration developed for this strategy for the current condition, 5 percent of additional vacuum pipe volume would be added to support the upgraded configuration for the future condition. Thus, the total additional vacuum pipe volume that would be added to the existing vacuum collection system to support both the current (28 percent) and future (5 percent) configurations of the system would be approximately 33 percent.

A complete list of potential future modifications to the vacuum system within the right-of-way for this conceptual sewer system configuration is provided below in **Table 3-4**.

Item	Description	Location
1	Future development extend vacuum system to property line	Suncrest Rd west of Cross St property ID 719
2	Add new Valve Pit to existing stub A1-V18	Suncrest Rd east of Cross St property ID Skylink
3	Future development extend vacuum system header to property line	North side of MacDonald Ave West of 3 rd St., 245
4	Future development extend vacuum system header to property line	South side of 2 nd Ave, North of 5 th St., 457 and 458
5	Add new valve pit to vacuum header A6-V2	4 th Ave east of 2 nd St, 443
6	Add new valve pit to vacuum header C2-V2	Sunshine St
7	Add new valve pit to vacuum header C4-V2	5 th St North of 3 rd Ave
8	Future development extend vacuum system header to property line	Possible Coral Hammock expansion 3 rd St and Laurel Ave.
9	Future development extend vacuum system header E1 to property line	Keys Federal Office Building, Laurel Ave. and 2 nd St.
10	Future development extend vacuum system header E5 to property line	Standard Marine vacant lot, 1 st Ave. East of Maloney
11	Future development extend vacuum system header E5 to property line	S&V vacant lot, Maloney Ave and 2 nd St., property ID 453.
12	Future development extend vacuum system header F2 to property line	Historic Tours vacant parcel, property ID's 480 to 483
13	Add new valve pit to vacuum header, F1-V8	Peninsula Ave., property ID's 143, 144 and 740
14	Future development extend vacuum system header F1 to property line	Peninsula Ave. Stock Island Lobster, property ID 765

Note: Refer to map in Appendix H for exact property location per property ID number.

3.2.4 Strategy #1B: Minimize Vacuum Components on Private Properties

A variation of this wastewater collection strategy is to modify the existing system that is present by installing additional valve pits directly within the County right-of-ways to serve the large properties. This particular configuration was developed to minimize how much wastewater infrastructure would be installed on private properties, while attempting to minimize the total cost that individual property owners would incur. It should be noted that a defensible concept plan is presented below that can be further explored and considered to support the majority of large properties which were evaluated as part of this study. However, due to the overall configuration of some of the larger properties, it was not possible to apply this concept plan to all of the properties. Yet, the inability to apply this configuration to 100 percent of the larger properties should not preclude this option from being considered, since it could directly benefit many of the properties under study.

In this concept plan, a series of mini-gravity collection systems would be configured within the confines of each property to collect wastewater via gravity and route it to the closest possible location in the County right-of-way, where a series of vacuum valve pits would be located. The individual valve pits would collect wastewater routed to them from the mini-gravity systems and transfer it into the central vacuum collection system. As indicated above in the screening of alternatives, gravity collection remains a viable and cost effective solution if the overall depth of the pipes within the system remain relatively shallow compared to the groundwater table. Under these conditions, installation costs remain within reason and comparable to costs associated with the installation of an on-site vacuum line. Similar to the previous option, a system of gravity laterals and mains would be configured to properly collect wastewater from each on-site entity with manholes sited where necessary to ensure proper access to the on-site system for purposes of inspection, repair, and maintenance. **Figure 3-5** illustrates a general piping schematic for this general piping system configuration that would replace the configuration illustrated above in **Figure 3-4**.

Appendix J contains a large-size plan that illustrates a conceptual piping system configuration for this strategy, whereby multiple valve pits are installed within the right-of-way to support the on-site mini-gravity collection systems. This plan shows all modifications that are recommended to the existing vacuum collection system within the confines of the County right-of-ways. (Details regarding the sewer concept plans for the on-site properties are provided below.) The primary difference between this conceptual configuration and the previous one described above is that a larger number of vacuum valve pits have been relocated from private properties into the County right-of-ways along with individual gravity lines feeding each valve pit from the properties. Otherwise, the same modifications to the vacuum system listed above are identical to those for this option. Based on the conceptual configuration developed for this strategy, 25 percent of additional vacuum pipe volume would be added to the existing system to support the current condition. This volume is less than that associated with Strategy #1A, since the vacuum system was not extended onto private properties.

A complete list of proposed modifications to the vacuum system within the right-of-way for this conceptual sewer system configuration is provided below in **Table 3-5**.

Table 3-5 Proposed Current Modifications to the Vacuum Collection System within County ROWs

Table 3-5 Proposed Current Modifications to the Vacuum Collection System within County ROWs		
1	Add new VP A1-V6 to stub plus 3 additional VP's to header A1-V15, 16 and 17	Leo's Campground, property ID 792
2	Add new Valve Pit to Vacuum Header A1-V11	Stock Island TP, property ID 959
3	Add eight new Valve Pits to Vacuum Header A1-V2, A3-V1 to A3-V4 and A4-V4 and 5	Overseas TP, property ID 131
4	Add new valve pit to vacuum header A6-V1	4 th Ave and 2 nd St. property ID 751
5	Add two new valve pits to header, E1-V2 and E1-V11	Gomez Trailer Park, Laurel Ave., property ID 1001.
6	Extend header E East on Laurel Ave and add 5 new valve pits, E1-V10 to E1-V14	Water's Edge Colony TP., Laurel Ave., property ID 498.
7	Add new valve pit to header E on 2 nd St, E2-V2	Water's Edge Colony TP., Laurel Ave., property ID 498.
8	Add 8 new valve pits to header E on MacDonald Ave, E3-V5 to E3-V12	Water's Edge Colony TP., Laurel Ave., property ID 498.
9	Add 6 new valve pits to header, E3-V13 to E3-V18	Sunheaven TP, MacDonald Ave and Maloney Ave, property ID 822
10	Add buffer tank to stub, E3-B6	Tropic Palms, MacDonald Ave and 1 st St, property ID 728
11	Add two valve pits to existing stubs, E4-V1 and E4-V2.	Woodson's #1 and #2 Trailer Parks, 1 st Ave and 1 st St.
12	Extend vacuum header and add valve pit, E8-V1	Southeast on Maloney from 4 th Ave. to property ID 1035 and 442.
13	Add three new valve pits to header, E7-V1 to V3	Liz's Trailer Park, 4 th Ave and Front St. property ID 756
14	Add new double buffer tank to vacuum header, F3-B5	Harbor Shores Condo Association, Maloney Ave., Property ID 438.
15	Add valve pit to existing vacuum stub, F3-V10	El Mar RV, Maloney Ave., Property ID 332.
16	Add valve pit to existing vacuum stub, F3-V6 and add an additional 5 valve pits to vacuum header, F3-V15 to F3-V19	Coconut Grove, Maloney Ave., Property ID 1081
17	Add valve pit to existing vacuum stub, F3-V8	Lots 3 & 4 Maloney Ave., (Area east of Styrons) property ID 778
18	Add valve pit to existing vacuum stub, F3-V11 and add an additional valve pit to vacuum header, F3-V20	Styrons TP, Maloney Ave., property ID 212
19	Add valve pit to existing vacuum stub, F3-V12 and add an additional valve pit to vacuum header, F3-V21	Ocean Spray TP, Maloney Ave., property ID 406
20	Add valve pit to existing vacuum stub, F3-V9 and add an additional valve pit to vacuum header, F3-V22	Hideaway TP, Maloney Ave., property ID 933
21	Extend vacuum header and add valve pit, F3-V23	Maloney Ave., property adjacent and southeast of Boyd's, ID 437
Proposed Phase 3 Modifications to the Vacuum Collection System within County ROWs		
22	Extend vacuum header south on Shrimp Rd	Shrimp Rd
23	Add new valve pit on Shrimp Rd, C9-V31	Shrimp Rd property ID's 119 and 935
24	Extend vacuum header south from WWTP on Whitehead St. and add valve pit G1-V1	Whitehead St. property ID 61

Note: Refer to map in Appendix J for exact property location per property ID number.

Details regarding the on-site configuration of the mini-gravity collection systems themselves are included on a series of smaller graphics located in **Appendix K**. Like the foregoing option, one 11-inch-by-17-inch concept plan is provided for each of the properties where mini-gravity collection systems would be installed. Each concept plan provided for the individual properties illustrates a potential configuration for service laterals, gravity mains, and manholes that may be needed to gravity drain wastewater to the individual valve pits that would be located within the right-of-way under this option. The approximate location for each valve pit that would be within the County right-of-way is also shown on the individual concept plans for each property.

The following conditions and qualifications are noted regarding this particular concept plan:

- For the same reasons stated above for the previous option, a new on-site system for Boyd's Campground, Harbor Shores Condo Association Condo Association, and Roy's Trailer Park were not developed since these properties already have a competent on-site collection system that can be used.
- Due to the physical configuration of Oceanside Marina, coupled with uncertainty regarding how this property may ultimately be redeveloped, the proposed configuration described above for Strategy #1A will be used and applied to this property for this strategy, i.e., conversion of the existing pump stations (total of 2) to buffer tanks and installation of additional vacuum pits to serve all on-site users, as necessary through time.
- For all remaining large properties, it is assumed that the vacuum collection system would be extended onto these properties at the appropriate time to support the overall wastewater collection effort for the study area. This is the same qualification presented above for the previous option and is considered appropriate for purposes of this conceptual planning effort.
- Similar to the above option, estimated costs associated with this conceptual sewer system configuration were segregated between those components that would be installed within the right-of-way and those that would be installed on private properties. The estimated cost to configure the on-site mini-gravity collection systems for the individual properties were segregated per property according to the conceptual layouts illustrated on the individual concept plans in the referenced appendix. In this manner, the estimated cost to each property owner is presented for review and consideration, and can be compared to the costs estimated for the previous option. Also, all costs associated with modifications to the existing vacuum collection system within the right-of-way are presented.

To address the eventual need to collect additional wastewater volumes from certain properties through time, URS assessed additional modifications to the vacuum collection system that may be necessary for this option. These modifications would address wastewater collection from many of the properties that may be redeveloped within the planning horizon. Additional modifications may be required to continue to support proper wastewater collection from other

properties within the study area that may generate larger quantities than what occurs currently. The large-size plan presented in **Appendix I** depicts the various modifications that may be necessary to support additional wastewater generation for the future condition. Based on the conceptual configuration developed for this strategy, 4 percent of additional vacuum pipe volume would be added to the conceptual configuration developed for the current condition to support the upgraded configuration for the future condition. Thus, the total additional vacuum pipe volume that would be added to the existing vacuum collection system to support both the current (25 percent) and future (4 percent) configurations of the system would be approximately 29 percent, which is less than the volume estimated for Strategy #1A.

A complete list of potential future modifications to the vacuum system within the right-of-way for this conceptual sewer system configuration is provided below in **Table 3-6**.

1	Future development extend vacuum system header to property line	Pearl TP., MacDonald Ave West of 3 rd St., 245
2	Future development extend vacuum system header to property line	Old Race Track 2 nd Ave, North of 5 th St., 457 and 458
3	Add valve pit to vacuum header A6-V2	4 th Ave east of 2 nd St, 443
4	Add new valve pit to vacuum header A8-V2	Front St., property ID 76
5	Add two new valve pit to existing stub C2-V1, 2	Sunshine St., property ID's 252, 254, 255 and 257
6	Extend vacuum header and add VP, C4-V2	Extend header north on 5 th St from 3 rd Ave., property ID's 259, 261 and 262.
7	Future development extend vacuum system header E1 to property line	Keys Federal Office Building, 2 nd St and Laurel Ave.
8	Future new development extend vacuum system header E5 to property line	Standard Marine vacant lot, 1 st Ave. East of Maloney
9	Future new development extend vacuum system header E5 to property line	S&V vacant lot, Maloney Ave and 2 nd St., property ID 453.
10	Future development extend vacuum system header F1 to property line	Peninsula Ave. Stock Island Lobster, property ID 765
11	Future development extend vacuum system header F1 to property line	Peninsula Ave. Peninsular Marine Enterprises, property ID 677

Note: Refer to map in Appendix J for exact property location per property ID number.

3.3 STRATEGY #2: UTILIZE PARALLEL FORCE MAIN SYSTEM

3.3.1 General Description of Parallel System Configuration

This second wastewater collection strategy involves serving the majority of large wastewater generators with a second parallel system to the existing vacuum collection system. For this strategy, various pump stations would be sited at strategic locations within the study area. These stations would receive wastewater either by gravity or force mains from nearby properties. A system of new force mains would be installed to route all wastewater from each pump station to the Utility System's WWTP. **Figure 3-6** is a schematic illustrating this parallel piping system

configuration. If possible, existing force mains within the area could be used as part of the force main network proposed for this strategy. However, a complete hydraulic analysis of this piping arrangement would need to be conducted to confirm if sufficient capacity were available from the existing force mains. It is assumed that all force mains and pump stations associated with this strategy would be owned and operated by the Utility System.

Through the exploration of this strategy, existing on-site gravity systems at the larger properties could continue to be used, although upgrades and proper rehabilitation work may be necessary to ensure that these systems meet industry standards and the general requirements of the Utility System. For the majority of larger properties with package plants, wastewater would be re-routed from the on-site plants to a new pump station properly sited within the County right-of-ways, if possible. For other properties that have existing septic systems, a new gravity collection system would need to be developed to collect wastewater from individual locations on the property and route it to a pump station. If existing on-site pump stations are used to route wastewater into the force main system within the right-of-way, such would be the case for Oceanside Marina, an easement(s) would have to be established for the on-site stations and force mains to allow the Utility System access for purposes of operation and maintenance. In addition, the capacity of any existing pumping system would need to be confirmed to ensure that the existing pumping units could be used or if larger pumps would be needed.

Appendix M is a large-size plan that illustrates a conceptual piping system configuration for this strategy, whereby multiple pump stations are installed within County right-of-ways to support the various on-site gravity collection systems. This plan shows all work that would be required within the confines of the County right-of-ways. (Details regarding the gravity sewer concept plans for the on-site properties are provided below.) It should be noted that modifications to the vacuum collection system itself would be restricted only to those identified to properly serve the various properties within the study area that would not be served by one of the proposed pump stations. However, the majority of all components associated with the parallel force main system would be completely new work that would have to be designed and installed to establish this second, parallel wastewater collection system. A complete list of proposed modifications to the vacuum collection system within the right-of-way is provided below in **Table 3-7**. Refer to the following section that provides an inventory of all new pump stations and force mains that would be required to support this wastewater collection strategy.

Details regarding the configuration of the on-site gravity collection systems themselves are included on a series of smaller graphics located in **Appendix N**. In a similar manner to the foregoing strategies, one 11-inch-by-17-inch concept plan is provided for each of the properties where new or reconfigured gravity collection systems would be installed. Each concept plan provided for the individual properties illustrates a potential configuration for service laterals, gravity mains, and manholes that may be needed to gravity drain wastewater to the pump stations that would be located within the right-of-way under this option. The configuration of the on-site gravity systems differ from those presented above for Strategy #1B since all wastewater would be collected within one integrated gravity system before being transferred to the pump station within the right-of-way.

This option was explored in order to evaluate whether a second parallel system would be a cost effective approach to address wastewater collection from the larger properties without relying solely on the existing vacuum collection system. This option would eliminate the need to extend the vacuum collection system onto private properties as well as negate the need for additional buffer tanks. However, one of the principal drawbacks identified with this option is that a parallel force main system would reduce capacity requirements for the vacuum collection system. Since it has already been established that the vacuum system has sufficient capacity to serve all properties within the study area, reducing the amount of wastewater that the vacuum collection system would otherwise be able to transfer would result in under utilization of the vacuum system. This fact coupled with the costs associated with installing a parallel force main system and multiple pump stations significantly reduces the economic feasibility of this option.

Table 3-7 Proposed Modifications to the Vacuum Collection System within County ROWs

1	Add new Valve Pit to Vacuum Header A1-V11	Stock Island TP, property ID 959.
2	Add new valve pit to vacuum header A6-V1	4 th Ave and 2 nd St. property ID 751.
3	Add two new valve pits to header, E1-V2 and E1-V11	Gomez Trailer Park, Laurel Ave., property ID 1001.
4	Add two valve pit to existing stubs, E4-V1 and E4-V2	Woodson's #1 and #2 Trailer Parks, 1 st Ave and 1 st St.
5	Extend vacuum header and add valve pit, E8-V1	Southeast on Maloney from 4 th Ave. to property ID 1035 and 442.
6	Add three new valve pits to header, E7-V1 to V3	Liz's Trailer Park, 4 th Ave and Front St. property ID 756.
7	Add valve pit to existing vacuum stub, F3-V10	El Mar RV, Maloney Ave., Property ID 332.
8	Add valve pit to existing vacuum stub, F3-V8	Lots 3 & 4 Maloney Ave., (Area east of Styrons) property ID 778.
9	Add valve pit to existing vacuum stub, F3-V11 and an additional valve pit to vacuum header, F3-V20	Styrons TP, Maloney Ave., property ID 212.
10	Add valve pit to existing vacuum stub, F3-V12 and an additional valve pit to vacuum header, F3-V21	Ocean Spray TP, Maloney Ave., property ID 406.
11	Add valve pit to existing vacuum stub, F3-V9 and an additional valve pit to vacuum header, F3-V22	Hideaway TP, Maloney Ave., property ID 933.
12	Extend vacuum header and add a valve pit, F3-V23	Maloney Ave., property adjacent and southeast of Boyd's, ID 437.
13	Add new valve pit to vacuum header A8-V2	Front St., property ID 76.
14	Add new valve pit to vacuum header C2-V1	Sunshine St., property ID's 252, 254, 255 and 257.
15	Extend vacuum header and add VP, C4-V2	Extend header north on 5 th St from 3 rd Ave., property ID's 259, 261 and 262.
16	Future development extend vacuum system header on property	Pearl TP., possible Coral Hammock expansion, North side of MacDonald Ave West of 3 rd St., 245.

3.3.2 Inventory of Pump Stations and Force Mains

Based on the conceptual design prepared for this wastewater collection strategy, a total of 19 pump stations would be installed at various locations within the right-of-way as illustrated on the large-scale plan previously referenced. **Figure 3-7** illustrates a typical configuration for a duplex pump station. It is also assumed that each pump station would be equipped with an emergency generator receptacle and that there would be one emergency generator available from the Utility System for each pump station to address power reliability issues. In addition, approximately 10,570 linear feet of new force main ranging in size between 2 to 6 inches in diameter would be installed to route all wastewater from each pump station to the Utility System's WWTP. **Table 3-8** summarizes all of the new components associated with the second parallel system.

Table 3-8 Proposed Pump Stations and Force Mains within County ROWs		
1	Add pump station, A1-PS1, and manifold force main to existing force main on Cross St.	Leo's Campground, Suncrest Rd., property ID 792.
2	Add pump station, E3-PS8 on MacDonald Ave., and extend a force main to existing force main system on 1 st St. and 1 st Ave.	Water's Edge, MacDonald Ave., property ID 498.
3	Add pump station, E3-PS9 on MacDonald Ave., and extend a force main to proposed force main system on MacDonald Ave., and 1 st St.	Sunheaven TP, MacDonald Ave., property ID 822.
4	Add force main system from WWTP south on Maloney Ave. to Peninsula Ave.	Oceanside Marina, Peninsula Ave., property ID 1.
5	Add pump station, F3-PS12 to proposed force main system on Maloney Ave.	Coconut Grove, Maloney Ave., property ID 1081.
6	Add pump station, A1-PS18 and manifold to proposed force main system.	Tropic Palms, MacDonald Ave., property ID 728.
7	Add pump station, E7-PS13 and manifold to existing force main system on Front St.	Liz TP., East of 4 th Ave. and Front St., property ID 756.
8	Extend Force Main System from existing on 5 th Ave., and Shrimp Rd. south on Shrimp Rd.	Shrimp Rd.
10	Add pump station, C9-PS4 at end of Shrimp Rd. and manifold to proposed force main system.	Shrimp Rd., property ID 886 and 934.
11	Add pump station, C9-PS5 on Shrimp Rd. and manifold to proposed force main system.	Shrimp Rd., property ID 124, 449, 952, 246 and 648.
12	Add pump station, C9-PS6 on Shrimp Rd. and manifold to proposed force main system.	Shrimp Rd., property ID 935 and 119.
13	Add pump station, C10-PS7 west of Shrimp Rd. and manifold to proposed force main system.	Shrimp Rd., property ID 94, 2 and 908.
14	Add force main system south from WWTP on Whitehead St. and add pump station G1-PS10.	Whitehead St. property ID 61.
15	Add pump station, A5-PS3 and manifold force main to proposed force main system 5 th St.	Old race track, 2 nd Ave., property ID 457 and 458.

Table 3-8 Proposed Pump Stations and Force Mains within County ROWs

Item	Description	Location
16	Extend proposed force main system east on peninsula Ave. and install pump station F1-PS16.	Peninsular Marine Enterprises, Peninsula Ave., property ID 677, 775, 143, 770, 769, 768 and 765.
17	Add pump station, A1-PS18, extend force main and manifold to existing force main on Cross St.	Future condominiums, Suncrest St. and Cross St., property ID 719 and 718.
18	Add pump station, A1-PS19, extend force main and manifold to existing force main on 5 th Ave.	Old drive-in theater, 5 th Ave., property ID 529.
19	Add pump station, A1-PS17, extend force main and manifold to proposed force main on MacDonald Ave. and 2 nd St.	Pearl TP., possible Coral Hammock expansion, MacDonald Ave., property ID 245.
20	Add pump station, F3-PS21, and manifold to proposed force main on 5 th Ave.	Maloney Ave., property ID 52 and 53.
21	Add pump station, F3-PS16, extend force main east on Peninsula Ave., and manifold to proposed force main on Maloney Ave.	Peninsular Marine Enterprises, Peninsula Ave., property ID 677, 765

3.4 OPINION OF PROBABLE COSTS

An opinion of probable costs was prepared for each alternative wastewater collection strategy described above for all properties that should be sewerred under Phases 1, 2, and 3. A separate capital cost estimate was prepared for Phase 4 of the conceptual systems developed for each strategy. Estimated costs were developed for both the capital work associated with the recommended modifications to the existing vacuum collection system (both within the right-of-way and on individual properties) as well as annual operation and maintenance (O&M) costs associated with each strategy. These cost estimates were compiled and subsequently used to generate life-cycle cost estimates for each alternative.

All capital cost estimates developed and presented below are based on the current wastewater flow condition for Phases 1, 2, and 3, and separately for Phase 4. There is greater certainty and overall understanding to be able to support and defend the conceptual configurations developed for the current condition as compared to the future condition. Accurate cost estimates for the future condition cannot be developed at this time for a few reasons. First, the potential increase in construction costs through time as a consequence of market fluctuations cannot be easily quantified with respect to either materials or labor. Second, the actual amount and type of infrastructure that may be needed in the future to properly support all properties could vary significantly from that presented in this report. For the latter, an accurate understanding regarding when specific work (i.e., new main installations, modifications to the system, etc.) would be required in order to project and program costs. Thus, if cost estimates were developed for the future wastewater condition, they would likely not be accurate or useful in evaluating the future condition for the reasons stated above.

3.4.1 Capital Cost Estimates for Alternative Strategies

Estimates for capital costs associated with each alternative wastewater collection strategy were developed. A master spreadsheet workbook was prepared to inventory and summarize the

various capital costs associated with each strategy. Each workbook was organized into the following sheets for purposes of clarity and review:

- Roll-up Summary Sheet
- Right-of-Way Sheet
- Individual Property Sheets (total of 20)

The Roll-up Sheet provides a concise summary of the remaining costs associated with the current sewerage effort for each strategy, both within County right-of-ways and on the selected private properties that were considered in this study. Individual lines on this sheet report the total cost associated with each of the remaining sheets in the workbook. Detailed quantity take-offs and unit costing for the proposed work within the County right-of-ways is provided on the Right-of-Way Sheet. These take-offs were inventoried specifically for Phases 1, 2, and 3 of the vacuum collection system. Similarly, detailed quantity take-offs and unit costing for the proposed work within the 20 private properties is provided on the Individual Property Sheets. **Appendices O, P and Q** provides the capital cost estimate spreadsheet workbooks for the three strategies evaluated. **Table 3-9** provides a summary of the estimated capital costs associated with the conceptual wastewater collection strategies developed in this report.

Modifications and Additions to ROW	\$275,100	\$776,200	\$3,649,600
Area East of Styron's	\$28,600	\$21,700	\$2,700
Boyd's Campground	\$153,800	\$153,500	\$153,500
Coconut Grove Trailer Park	\$151,400	\$147,500	\$134,100
El Mar RV Park	\$74,000	\$74,000	\$69,700
Gomez Trailer Park	\$43,300	\$39,700	\$38,400
Harbor Shores Condo Association	\$60,600	\$60,600	\$55,300
Hideaway Trailer Park	\$62,400	\$56,100	\$44,300
Leo's Campground	\$137,600	\$100,100	\$138,100
Liz's Trailer Park (E. of Front St.)	\$75,700	\$60,900	\$56,100
Oceanside Marina	\$89,100	\$89,100	\$58,900
Ocean Spray	\$54,700	\$45,500	\$43,500
Overseas Trailer Park	\$327,000	\$271,000	\$299,100
Pozzi #2 Trailer Park	\$41,100	\$41,100	\$26,200
Roy's Trailer Park	\$54,000	\$54,000	\$54,000
Stock Island Trailer Park	\$35,400	\$33,100	\$31,400
Styron's Trailer Park	\$48,100	\$46,900	\$51,200
Sunhaven Trailer Park	\$105,000	\$103,400	\$76,800
Tropic Palms Trailer Park	\$101,800	\$102,500	\$96,800
Waters Edge Colony Trailer Park	\$379,200	\$260,200	\$257,300

Table 3-9 Estimated Capital Costs for Each Wastewater Collection Strategy

Woodsons Trailer Park (1 & 2)	\$111,900	\$77,900	\$53,200
Subtotal On-Site	\$2,106,000	\$1,817,000	\$1,738,000
Total Capital Costs	\$2,381,000	\$2,594,000	\$5,388,000

- (1) All capital costs for the individual line items were rounded to the nearest \$100, with the exception of the totals where were rounded to the nearest \$1,000.
- (2) Capital cost estimates do not include any field testing, final engineering, or system closure and abandonment costs.
- (3) Capital cost estimates include system rehabilitation costs for each property.
- (4) Of the total estimated conceptual costs related to the ROW infrastructure, approximately \$163,000 is associated with Boyd's force main and pump station. Capital has already been spent by Boyd's to install these components in County owned property.
- (5) The capital costs reported above are specific to Phases 1, 2 and 3 of the study area. Additional costs would occur associated with Phase 4.

Unit costing for the various line items in the cost estimates, such as gravity mains, vacuum mains, valve pits, etc., were based on average contractor unit pricing that was submitted for the recent construction work related to the installation of the vacuum collection system. To account for potential changes in unit costing since the contractor pricing data was submitted, as well as to account for potential changed field conditions that may result in slightly higher capital costs for any of the options, a 31 percent contingency factor was applied to all capital cost estimates. This contingency factor includes an 11 percent escalation factor to adjust the 2002 unit pricing data to 2004 US dollars. The remaining 20 percent in the contingency factor addresses unknown or changed field and other uncertainties that may affect the final cost to complete the work.

It should be noted that all previous capital expenditures associated with the existing vacuum collection system were not taken into account in the cost estimates presented herein. (Any capital that was previously spent to date on the sewerage effort was considered vested.) Only costs associated with the additional work and modifications recommended in this report were taken into account. Through this approach, the resulting life-cycle cost analysis will be able to confirm how to proceed with completing the sewerage effort from this point onward in the most cost effective manner.

At the request of Monroe County, a rough capital cost estimate was estimated for the conceptual infrastructure that was considered and developed in this report for Phase 4. The capital cost estimates for Phase 4 were based numerous assumptions since pending redevelopment of the majority of properties that would be served by the infrastructure in this phase has not yet been initiated and/or completed at the time of report submittal. As such, Phase 4 capital costs may not be as accurate as those developed for Phases 1, 2 and 3. A more detailed evaluation of Phase 4 infrastructure and resulting costs should be made once actual development plans for properties in this area of the island are finalized. For the two modifications developed in this report for Strategy #1, the approximate capital cost to extend service via the existing vacuum system range from \$885,000 and \$923,000. For Strategy #2, the approximate capital cost to extend sewer service via force mains and pump stations was estimated at \$547,000.

3.4.2 Annual O&M Estimates for Alternative Strategies

Estimated annual O&M expenses for each alternative wastewater collection strategy were developed. Primary annual O&M expenses include (1) labor costs to operate, monitor, and maintain the wastewater collection system(s), (2) energy costs associated with operating the various mechanical equipment such as the vacuum blowers and pumping units, and (3) material costs associated with the replacement of any components. The primary assumptions made to support each of these O&M components follows:

- Labor - Labor requirements will vary between the various wastewater collection strategies. Feedback regarding the amount of time needed to operate and maintain the components within the vacuum collection system was obtained from AIRVAC. For the strategy involving the alternative parallel force main system, a reasonable annual manhour estimate was established based on the total number of pump stations associated with this strategy. For all labor cost estimates, a burdened unit labor rate of \$65 per hour was used, which includes the base salary, payroll taxes, and fringe benefits.
- Power - Power use will also vary between the various collection alternatives. The total amount of wastewater flow that would be transferred through the vacuum collection system was used to estimate power costs to run the vacuum blowers and the wastewater transfer pumps. A unit power cost of \$0.085 per kW-hour was used.
- Material Costs - Material costs include spare parts and/or replacement units that may be needed during the life of the project. An annual monetary allocation for materials that may be required through the life of the project was estimated. These materials include annualized cost for the replacement of the primary mechanical equipment components (e.g., blowers, pumps, etc.), replacement parts and materials for the various mechanical units, vacuum valve assemblies, and other miscellaneous items.

To adequately address increasing power costs through time as a consequence of installing additional collection system components, such as vacuum valves and/or pumping units, and transferring additional wastewater quantities through the collection system, a median value for the wastewater flow for the planning period was estimated. The median flow over the planning period was estimated by taking the average wastewater flows estimated for the current and future planning conditions and averaging these values. For Strategy #2, estimated wastewater flows that would be transferred in each system were segregated in order to estimate power costs for the vacuum collection system versus the parallel force main system. **Table 3-10** summarizes the average wastewater flows for the two wastewater collection strategies.

Strategy	System	Current	Future	Median
1	Vacuum	247,000	164,000	205,000
	Force Main	99,000	86,000	92,000
2	Vacuum	148,000	78,000	113,000
	Force Main	99,000	86,000	92,000

Appendix R provides a breakdown of the various O&M costs for the various wastewater collection strategies. Table 3-11 is a summary of the estimated annual O&M costs for each wastewater collection strategy. For each strategy, an estimated cost is presented for each of the O&M components described above.

Labor	\$64,500	\$64,500	\$78,400
Power	\$16,100	\$16,100	\$9,600
Materials	\$9,900	\$9,900	\$19,800
Subtotal	\$90,500	\$90,500	\$107,800
10% Contingency	\$9,000	\$9,000	\$10,800
Total	\$99,500	\$99,500	\$118,600

(1) All values were rounded to the nearest \$100.

(2) Annual O&M costs reported above are specific to Phases 1, 2 and 3 of the study area. Additional costs would occur associated with Phase 4.

3.5 LIFE-CYCLE COST ANALYSIS OF ALTERNATIVES

Using the estimated capital and annual O&M expenses summarized above, a life-cycle cost analysis of each wastewater collection strategy was performed for Phases 1, 2, and 3. This analysis combines capital costs with annual O&M expenses so that the overall cost of each alternative can be assessed and compared to one another on a consistent basis in order to establish which alternative is the most cost-effective solution. The alternative identified as the most cost-effective solution is usually recommended unless other considerations require that another option be explored. Since ancillary issues were identified for this particular study (refer to Section 1.1.3), these issues should also be considered along with the cost estimate for each alternative when making a recommendation on the most suitable option.

The life-cycle cost analysis conducted for this study used the estimated annual O&M costs over the 20-year planning period. All annual O&M costs for a particular alternative were converted to a Present Worth value using a discrete compounding method, which was then added to the estimated capital cost for that alternative. Once all costs were combined, the total cost was divided by the total quantity of wastewater estimated for the alternative in order to provide a life-cycle unit cost estimate in terms of wastewater generation. An interest rate of 8.0 percent was used for the analysis, which is an average rate that could result over the relatively long planning period as market conditions fluctuate. While the actual long-term average interest rate may vary from that used in this analysis, the use and application of a specific and consistent rate to each alternative will prove the relative cost-effectiveness of each option considered.

Table 3-12 is a summary of the total capital, present worth annual O&M, and resulting life-cycle costs for each alternative. The current wastewater flow estimated for the planning period was used to report the unit life-cycle costs, as noted in the following table. Actual life-cycle costs for the collection system will likely be greater than those reported below since capital expenses associated with future modifications are not taken into account for the reasons stated above.

However, since modifications that may be needed in the future would be similar between the various alternatives, the exclusion of these costs should not have a significant effect on the overall life-cycle cost analysis.

Table 3-12 Estimated Life-Cycle Costs for Each Wastewater Collection Strategy

Initial Capital Cost Investment	\$2,381,000	\$2,594,000	\$5,388,000
Present Worth Annual O&M Cost	\$976,900	\$976,900	\$1,164,400
Total Life-Cycle Cost	\$3,357,900	\$3,570,900	\$6,552,400
Phase 1, 2, and 3 Current Flow (gpd)	164,000	164,000	164,000
Unit Life-Cycle Cost (\$/1,000 gallons)	\$20,500	\$21,800	\$40,000

- (1) All costs listed in the table, except for unit costs, were rounded to the nearest \$1,000.
- (2) The life-cycle costs reported above are specific to Phases 1, 2 and 3 of the study area. Additional costs would occur associated with Phase 4.
- (3) Sunk capital costs associated with the existing vacuum collection system are not included in the above cost estimates.

Based on the foregoing life-cycle cost analysis, the most cost effective option to complete the sewerage effort appears to be Strategy 1. It is noteworthy that the cost effectiveness of the two modifications associated with this strategy are close to one another since both are very similar with respect to the total amount of infrastructure improvements required. The principal difference between the two options of Strategy 1 lies primarily in how the costs are distributed based on the conceptual sewer configurations developed for the 20 subject properties. Key conclusions and recommendations regarding which option should be considered for implementation are provided in **Section 4.0**.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This section summarizes key conclusions and recommendations regarding the engineering analysis of the south Stock Island sewer collection system. In addition, specific proposed actions for the completion of the sewer system are presented. Expansion requirements for the WWTP as a consequence of expanding sewer service to the majority of properties on south Stock Island are also addressed.

4.1 KEY CONCLUSIONS

Based on an evaluation of the results documented in this report, URS offers the following conclusions with respect to the completion of the sewerage effort for the study area.

Estimated Wastewater Flows and Connection Counts

- A connection count for the study area's current condition was estimated at 2,335. This value was based on a total estimated wastewater generation rate of approximately 390,000 gallons per day (gpd) and a unit connection rate of 167 gpd. For the future condition at the 20-year planning horizon, the connection count is projected to be 3,251, which corresponds to approximately 543,000 gpd. The estimated average daily wastewater generation rates were based strictly on the flow analysis conducted for this study, whereby potable water supplied to the area was used to establish approximate wastewater generation rates.
- In order to establish the total net wastewater flow and associated connection count for that portion of the study area that requires sewer service via the central vacuum collection system (as well as any supplemental collection systems), estimated wastewater flows from properties that were previously served by a central gravity and/or force main system were subtracted from the totals listed above. From this adjustment, the total net average wastewater flows and associated connection counts for the current and future condition associated with Phases 1, 2, and 3 versus Phase 4 were estimated and summarized below in Table 4-1.

	Current Condition	Future Condition
Average Wastewater Flows (gpd)	164,000	247,000
Net Connection Counts	982	1,479
Average Wastewater Flows (gpd)	21,000	66,000
Net Connection Counts	126	395
Average Wastewater Flows (gpd)	185,000	313,000
Net Connection Counts	1,108	1,874

- A peaking factor of 3.5 was used to escalate the above reported average daily wastewater generation rates in order to establish peak instantaneous rates that may occur during the day from each property. All components of the central wastewater collection system should be based on peak flow conditions to ensure that the system has adequate capacity to transfer all wastewater volumes generated within the study area. Peak wastewater rates for the current and future condition for the entire study area were estimated at 1,367,000 gpd and 1,902,000 gpd, respectively.
- It is assumed that all properties within the study area that were already connected to the Utility's pre-existing gravity and force main system would continue to be served by those systems. Net peak wastewater rates for the current and future condition for the balance of the study area were estimated at 651,000 gpd and 1,095,000 gpd, respectively. These peak flow values should be used as the basis to assess system capacity requirements for the vacuum collection system and any supplemental collection systems that are installed to serve the balance of properties within the study area.
- The connection counts estimated and summarized above do not correspond to the number of connections that the Utility System would assess by using the ERC count methodology associated with their current wastewater tariff. A separate analysis would need to be conducted to confirm the total number of ERCs within the study area.
- The average unit flow rate for a connection to the system taken as 167 gpd versus the unit rate for an ERC at 250 gpd represents a difference of 50 percent. This difference in the unit flow rate could have a profound impact on the requisite size of the wastewater collection and treatment system needed to serve the study area. The results of the analysis provided in this report confirm that the existing vacuum collection system should be capable, with some modifications, to handle the current and future flows estimated for the study area. However, this study did not confirm potential capacity limitations of the existing system associated with using a higher ERC unit wastewater flow of 250 gpd. An additional assessment would need to be conducted to confirm potential system capacity limitations associated with an official ERC count.

Assessment of Vacuum Collection Technology

- Vacuum collection technology was identified in previous studies by the County as a viable and cost-effective strategy for wastewater collection within the study area. The technology can be applied in an extremely efficient and equitable manner when the types of properties that must be served contribute relatively small quantities of wastewater, i.e., less than 1,000 gpd. This technology can also be used to address larger wastewater flows from large properties and/or generators, however, there are limitations regarding how the system can be configured to support all large generators as discussed in more detail below.
- Application of vacuum technology to waterfront settings where boats and other water craft may be present is well suited, since small diameter vacuum lines could be easily

extended to individual boat slips to pump-out boat holds as needed. Any wastewater collection improvements that can be easily implemented to make it easier for boat owners to dispose of their sanitary wastes should be encouraged in an attempt to reduce illegal waste dumping in open marine waters. Extension of small vacuum lines into marinas and other docking facilities can be cost effectively achieved with relative ease compared to other collection system configurations.

- For proper and efficient application of this technology, it is critical that a good and thorough understanding is available regarding where, when, and how much wastewater could be generated within the area to be served. Sufficient consideration should be given during the detailed engineering design process to address potential temporal and spatial changes in wastewater generation rates that could occur within the study area. If this understanding is not established before the system is designed and installed, there is increased potential that the system may (1) not operate properly and/or efficiently, (2) have limitations regarding how it can be modified through time to accept additional wastewater quantities, and (3) not be able to adequately serve all entities in the area through the service life of the system.

Assessment of the Stock Island Vacuum Collection System

- The existing vacuum collection system that was designed and installed on south Stock Island should have sufficient capacity to properly serve all of the properties within the study area for the current condition that were originally intended to be served this system. Final additions and/or modifications to the existing system will be required in order to finalize the collection system and serve all of the properties in this area of the island per the conceptual sewer system configurations presented herein. These modifications would include extensions of vacuum mains, installation of additional valve pits, and other miscellaneous components, as described in more detail in Chapter 3 and illustrated on the large-size plans located in the report appendices.
- The vacuum collection system appears to have sufficient capacity to continue to support wastewater collection efforts in the study area throughout the 20-year planning horizon for not only Phases 1, 2 and 3, but for Phase 4 as well. However, based on a set of hydraulic analyses conducted by AIRVAC, it appears that there may be limited remaining capacity for one of the four vacuum headers associated with Phases 1, 2, and 3 at the end of the 20-year planning horizon. If the actual wastewater flow collected by existing Headers A & B in the future are greater than the flows estimated in this report, an additional parallel header may be needed to properly collect all of the projected wastewater along this header route. All other headers in the vacuum collection system appear to be properly sized to support wastewater collection throughout the study area. An additional vacuum header may need to be installed to serve the remaining properties along Shrimp Road as part of Phase 4. While the vacuum system should have sufficient capacity to accommodate Phase 4 properties, the Utility System may prefer to install a force main along with one or more pump stations to sewer this portion of the island at their discretion.

- The ability to add more buffer tanks to serve larger wastewater generators within the study area through time will be extremely limited. Furthermore, the total amount of additional vacuum mains that can be installed without upgrading the vacuum pumps will be limited to approximately 33 percent of the total vacuum main volume currently installed. This latter issue is of particular importance regarding the extension of mains onto private properties as part of Strategy #1A since this approach would result in more vacuum mains being installed than what would need to occur for Strategy #1B. Similarly, the use of force mains versus the extension of additional vacuum mains to serve Phase 4 properties may be desirable to remain below the 33 percent theoretical limit. It should be qualified that the 33 percent limit could potentially be exceeded if additional vacuum pump capacity is installed.

Recommended Conceptual Sewer System Configuration and Cost Estimates

- Two conceptual sewer system strategies were evaluated through this study. The first strategy (Strategy #1) maximized the use of the existing vacuum collection system. The second strategy (Strategy #2) considered a parallel system of pump stations and force mains along side of the existing vacuum collection system to support the larger wastewater generators in the area. Two sub-alternatives for the vacuum collection system associated with Strategy #1 were identified, developed, and presented in this report. Strategy #1A involved the extension of the vacuum system onto private properties along with all necessary vacuum components such as valve pits, etc. Strategy #1B explored the possibility of establishing a series of mini-gravity collection systems on private property to gravity drain all wastewater to the County right-of-way, where one or more vacuum valve pits would be located.
- Based on the conceptual configuration of the vacuum system presented in this report (inclusive of Phase 4) for Strategy #1A, 28 percent of additional vacuum main volume would be required to serve the bulk of remaining properties for the current condition. For the future condition, an additional 5 percent of vacuum main volume may be required. Thus, the total pipe volume that may be needed for Strategy #1A reaches the 33 percent theoretical design limit indicated above that is associated with the existing capacity of the vacuum pump station. The total quantity of vacuum pipe that would be needed to support Strategy #1B (inclusive of Phase 4) would result in an additional 25 percent of pipe volume for the current condition. For the future condition, an additional 4 percent of vacuum main volume may be required. Thus, the total pipe volume that may be needed for Strategy #1B would remain below the theoretical 33 percent limit and would provide a reasonable buffer to ensure adequate collection capacity without the need to upgrade and or install additional vacuum pumps.
- A summary of results obtained from the life-cycle cost analysis for the various wastewater collection strategies evaluated in this report is presented below in **Table 4-2**. The total estimated life-cycle cost for each strategy is reported along with a unit life-cycle cost in terms of dollars per 1,000 gallons of wastewater collected. Life-cycle costs include additional capital costs identified to complete the sewerage effort within the study

area as well as annual O&M costs that would be incurred within the 20-year planning period. Refer to Section 3.4 for a breakdown of capital versus annual O&M costs.

Initial Capital Cost Investment	\$2,381,000	\$2,594,000	\$5,388,000
Present Worth Annual O&M Cost	\$976,900	\$976,900	\$1,164,400
Total Life-Cycle Cost	\$3,357,900	\$3,570,900	\$6,552,400
Unit Life-Cycle Cost (\$/1,000 gallons)	\$20,500	\$21,800	\$40,000

- (1) All costs listed in the table, except for unit costs, were rounded to the nearest \$1,000. Unit costs were rounded to the nearest \$100.
- (2) The life-cycle costs reported above are specific to Phases 1, 2 and 3 of the study area. Additional costs would occur associated with Phase 4.
- (3) The total wastewater flow estimated for the current condition of 164,000 gpd was used to report the unit life-cycle cost estimates.
- (4) Sunk capital costs associated with the existing vacuum collection system are not included in the above cost estimates.

- The more cost effective wastewater collection strategy for the study area was established to be the one in which the vacuum system is used (Strategy #1) versus one in which a parallel system of force mains and pump stations are installed and utilized for the larger properties within the area (Strategy #2). Installation of a parallel force main system at this time to serve some of the larger wastewater generators would require a significant capital investment and would result in additional infrastructure that would need to be maintained through time. Furthermore, the use of pump stations would substantially reduce the number of hydraulic connections that would otherwise be made to the vacuum collection system via valve pits. The reduction of the number of additional valve pits to the vacuum system would, in turn, further limit the number buffer tanks that could be attached to the vacuum system in the future. Thus, the use of a parallel wastewater collection system could actually have a detrimental effect on the vacuum collection system as it is currently configured. As such, further exploration of Strategy #2 is not recommended to address wastewater collection for this particular area.
- While the cost effectiveness of the two modifications associated with Strategy #1 is similar to one another, Strategy #1A appears to be slightly more cost effective than Strategy #1B. The primary difference between the two modifications of Strategy #1 is how the vacuum system is configured to serve many of the larger properties, i.e., extending vacuum mains onto private properties along with the installation of multiple valve pits versus utilizing mini-gravity collection systems to gravity drain the majority of wastewater from the properties into valve pits located in the County right-of-ways. Table 4-3 summarizes the difference in costs between these two versions of the same wastewater collection strategy per property.

1	Area East of Styron's	\$28,600	\$21,700	\$6,812
2	Boyd's Campground ⁽²⁾⁽³⁾	\$153,800	\$153,500	\$0
3	Coconut Grove Trailer Park	\$151,400	\$147,500	\$3,900
4	El Mar RV Park	\$74,000	\$74,000	\$0
5	Gomez Trailer Park	\$43,300	\$39,700	\$3,600
6	Harbor Shores Condo Assoc. ⁽³⁾	\$60,600	\$60,600	\$0
7	Hideaway Trailer Park	\$62,400	\$56,100	\$6,300
8	Leo's Campground	\$137,600	\$100,100	\$37,500
9	Liz's Trailer Park	\$75,700	\$60,900	\$14,800
10	Oceanside Marina	\$89,100	\$89,100	\$0
11	Ocean Spray	\$54,700	\$45,500	\$9,200
12	Overseas Trailer Park	\$327,000	\$271,000	\$56,000
13	Pozzi #2 Trailer Park	\$41,100	\$41,100	\$0
14	Roy's Trailer Park ⁽³⁾	\$54,000	\$54,000	\$0
15	Stock Island Trailer Park	\$35,400	\$33,100	\$2,300
16	Styron's Trailer Park	\$48,100	\$46,900	\$1,200
17	Sunhaven Trailer Park	\$105,000	\$103,400	\$1,600
18	Tropic Palms Trailer Park	\$101,800	\$102,500	(\$700)
19	Waters Edge Colony	\$379,200	\$260,200	\$119,000
20	Woodsons Trailer Park	\$111,900	\$77,900	\$34,000
21	Totals for Private Properties	\$2,106,000	\$1,817,000	\$289,000
22	ROW Infrastructure ⁽²⁾	\$275,100	\$776,200	(\$501,100)
23	Grand Totals	\$2,381,000	\$2,594,000	(\$213,000)

(1) All values were rounded to the nearest \$100 or the nearest \$1,000.

(2) Of the total estimated conceptual costs related to the ROW infrastructure, approximately \$163,000 is associated with Boyd's force main and pump station. Capital has already been spent by Boyd's to install these components.

(3) The vacuum collection system would not be extended onto these properties since these properties will either be served by a dedicated force main system or by a buffer tank connected to the vacuum collection system. As such, no difference in costs would occur for these properties between Strategy #1A and #1B.

- The method selected to complete the sewerage effort will impact the costs to each property owner as well as the Utility System. If the vacuum system is extended onto private properties, the property owners will likely face larger capital costs as demonstrated in the table above, while necessitating the establishment of easements for the new vacuum system components. Conversely, if mini-gravity collection systems are utilized on each property to route wastewater to the County right-of-ways, costs to the property owners could be minimized in most cases, while eliminating the need for new

easements onto these properties. Implementation of the latter approach will shift additional costs to the Utility System in order to complete the sewerage effort.

System Operation and Maintenance

- A final conclusion that was reached based on the evaluation of vacuum collection technology being utilized for this area, coupled with feedback and information obtained from AIRVAC, is that the vacuum collection system must be carefully monitored and studied through time to ensure that the system can be properly modified when necessary to collect additional quantities of wastewater. This is a basic and common recommendation for all wastewater collection strategies when additional capacity must be added to an existing system. However, the piping network associated with a vacuum collection technology appears to be more sensitive regarding how and where additional wastewater is added through time. Stormwater inflow to the system can be especially challenging to this type of system. Thus, diligence must be practiced once the system is installed to ensure proper collection of wastewater for all connected entities.

4.2 KEY RECOMMENDATIONS

Based on the foregoing conclusions offered for consideration, URS developed a set of key recommendations regarding the completion of the sewerage effort for this project. The following recommendations should be reviewed, carefully considered, and discussed to reach mutual agreement regarding how to proceed forward and complete the sewer system for south Stock Island.

- URS recommends that the County, members of the public that will be directly affected by the completion of the sewerage effort, and KWRU review the results presented in this report and decide what would be the most appropriate means to complete the remaining work associated with sewerage the large properties. The final solution selected for the individual properties may be a mixture of Strategies #1A and #1B. (Further exploration of Strategy #2 is not recommended for the reasons stated previously in this report.) Important considerations that should be taken into account when deciding whether Strategy #1A or #1B should be selected and applied to each affected property include the following:
 - > With all other considerations being equal, the most cost-effective solution should be implemented to finalize the sewerage effort. If this consideration proves to be the most important consideration, Strategy #1A would be adopted.
 - > The selection of Strategy #1A, while being the most overall cost effective alternative of those considered, does not minimize capital costs that would be invested by the majority of the private property owners. Per the cost summary presented above in Table 4-3, selection of Strategy #1B could potentially save the collective property owners over \$200,000 in capital costs. Furthermore, the

potential exist that additional cost savings to one or more property owners may be possible if some of the on-site sewer infrastructure were shifted into the ROW, i.e., manholes prior to valve pits. The estimated costs for each strategy should be evaluated on a site by site basis before selecting the most appropriate sewer option for each site.

- Strategy #1A may be attractive to some of the private property owners, since the Utility would be responsible for the operation, maintenance, and repair of all of the on-site vacuum sewer infrastructure, thereby minimizing how much on-site sewer infrastructure that the property owner would need to maintain (i.e., only gravity laterals leading to individual vacuum valve pits). If vacuum systems are extended on-site, the Utility would need to have one or more easements established to allow access to the on-site components of the vacuum sewer system. (Property owners should not assume responsibility of any portion of the vacuum collection system.)
- If Strategy #1A is used to sewer a large property and one or more easements are to be established, the terms of the easement should be well defined to allow the Utility to have access to the vacuum system components, while protecting to the degree practical the property owner's rights.
- If Strategy #1A is adopted for a property, the property owner will likely be required to pay for the on-site infrastructure associated with the sewer system. Upon completion of system construction (and legal establishment of access easements), this infrastructure would likely be transferred to the Utility to operate and maintain. Aside from normal user fees assessed by the Utility per the terms of their wastewater tariff approved by the Florida PSC, the property owner should not have pay any additional fees to the Utility for the maintenance of the on-site components associated with the vacuum sewer system. Gravity service laterals that feed individual vacuum valve pits would remain the responsibility of the property owner.
- Strategy #1B may be attractive to some of the private property owners by eliminating or minimizing the need to establish easements within their properties. The establishment of easements could impact how individual property owners use and/or occupy their lands. However, if Strategy #1B is adopted for one or more private properties, those property owners themselves would need to maintain the gravity collection system that would be on their properties, inclusive of all repairs and other related work.
- URS recommends that the individual property owners faced with reconfiguring their on-site wastewater collection systems band together, combine their resources, and develop one set of construction plans and other construction documentation to allow competitive bids from multiple contractors for all of the work that must be conducted on the various properties. The property owners may realize lower costs associated with this approach, since they would be taking advantage of the economy of scale offered by larger projects.

Whether this can be done or not, the property owners are obligated to have construction documents developed to a sufficient level of detail so that the on-site wastewater collection systems can be constructed, tested, and connected to the Utility System. Any decommissioning activities associated with existing septic systems and package treatment plants will also be the responsibility of the individual property owners per current laws and regulations.

- In order to validate the conceptual configuration of the vacuum collection system recommended herein, the Utility System should conduct their own engineering evaluation of the system to confirm what modifications need to be made to serve all of the properties and current wastewater generators within the study area as proposed in this study. Since the modifications to the existing vacuum sewer system that are proposed in this report are strictly conceptual in nature, a detailed engineering analysis should be conducted to confirm all recommended modifications and adjustments to the system. Information and data compiled and summarized in this report can be used to assist in any future evaluation, however, wastewater flows from each property must be validated during the detailed engineering process to ensure that the system is properly configured. Upon completion of the engineering review of the conceptual-level design of the sewer system configuration as presented herein, the Utility System should proceed with developing construction plans and proceed with modifying the vacuum system within the County ROW to accommodate necessary connections to their system.
- The Utility System will need to confirm and carefully track the quantity of wastewater collected by the vacuum collection system as additional connections are made to it. Of concern is the ability of the existing plant to adequately treat all of the wastewater that could potentially be generated in the study area as well as that generated outside the area. Since completion of the recent sewerage effort will likely cause a relatively quick increase in the quantity of wastewater routed to the treatment plant, the Utility System should already be in the process of conducting the necessary studies and developing sufficient expansion plans for the WWTP. The time to initiate and begin executing all of the activities associated with a plant expansion event is at hand, and should not be delayed until the plant reaches its current permitted capacity of 499,000 gpd.
- It is also recommended that the County provide whatever financial assistance that can be legally offered to any property affected by this project to defray the upfront capital costs associated with (1) on-site infrastructure improvements and (2) connection fees to the Utility System. The primary purpose of this recommendation is to mitigate to the extent possible any further delays on the part of the property owners to make final connections to the Utility System as a consequence of limited capital resources of the individual property owners. Financial assistance from the County through low interest loans, and possibly even grant moneys, would facilitate the completion of the sewerage effort for the larger properties within the study area.

4.3 UPDATED ROADMAP TIMELINE TO COMPLETE SEWERING EFFORT

The following section provides updated information related to the conceptual roadmap that was previously developed in late 2003, and described in **Section 1.0** of this report. The timeline that was developed in 2003 was intended to provide a framework for the completion of the sewerage effort associated with this project. Since completion of the initial timeline last year, certain delays have occurred in authorizing the activities associated with Task 2 of the roadmap as well as completing the reporting effort associated with this study. Revisions to the timeline to complete the various activities associated with Task 3 of the roadmap are discussed and presented below.

4.3.1 Summary of Requisite Pending Activities

Approval of this report from the County will officially serve to end activities associated with Task 2 of the roadmap. Subsequently, County officials working in conjunction with the local Utility System and members of the public should enter into a series of discussions in order to agree upon one of the conceptual sewer configurations presented in this report. During these discussions, a sufficient timeframe should be provided to allow each property owner to proceed forward with final engineering design work associated with the on-site portions of the sewer collection system. If certain components or portions of the existing on-site system are to be used, the property owner should anticipate and conduct a sufficient testing program to confirm the integrity of any existing infrastructure that may be used. The timeframe established above for the final engineering design effort should take into account any associated testing work required for the on-site systems. The results from these discussions should serve to sufficiently plan and establish a final schedule for the remaining work tasks associated with completing the sewerage effort for the various unconnected properties.

Once agreements have been established regarding how each property will be served by the Utility System and a suitable timeframe for the final engineering design process is developed, all requisite service agreements and other applicable documents should be filed and executed with the Utility System. Each property owner should proceed with contracting a qualified, licensed engineering firm to develop final design plans and construction documents for the on-site sewer system components. Any testing requirements associated with the on-site systems should be identified and conducted concurrently with the final engineering design process. It is strongly recommended that each property owner work directly with the Utility System during the final engineering design process to ensure that plans and any testing of on-site sewer components will meet the minimum required standards of the Utility System. This latter recommendation would involve the review of plans and testing results by the Utility System at appropriate times as plans are being developed.

The next step in the roadmap will be to secure the services of one or more licensed contractors to proceed with implementing the work illustrated on the construction documents. URS strongly recommends to the various property owners that they combine the plans developed for each property into one construction package for purposes of contractor bidding and selection. This recommendation is offered as a means to reduce the overall construction cost of the final sewerage effort by taking advantage of better unit costing realized through a larger construction

effort. If individual contractors are hired by each property owner, each owner would incur similar charges, such as mobilization charges, which could be minimized if all work were included under one contract with one contractor. Whether or not the property owners are capable of achieving this approach for the on-site construction work, the on-site work required to complete the sewerage of these properties must occur next. This work would include the installation of new infrastructure on-site that would be consistent with the selected sewer plan. Once all work has been installed, tested, inspected, and approved, final connections to the Utility System should occur.

Concurrent to the work described above for the individual properties, the Utility System should actively perform all work necessary to support the final sewer connections for the various properties on south Stock Island. This work should be consistent with the final sewerage plan that is accepted and agreed to above, and would include engineering design work associated with the necessary modifications to the system within County right-of-ways as well as any construction work related to these modifications. It should be noted that until all modifications are made within the right-of-way to support the properties through the endorsed sewer plan, the sewer system may not be considered available to the private properties to allow them to achieve final connections to the system. Thus, the Utility System has a responsibility to support the final sewerage effort for the individual properties by making the necessary modifications to their system with the County per the final, approved plan.

Once all work has been completed both within the County right-of-ways as well as on the individual properties, final connections to the sewer system can occur. At that time, the bulk of the sewerage effort for south Stock Island should be properly addressed and completed. However, as noted in the maps provided in this report, the extension of the vacuum mains (or force mains along with pump stations) into other areas of south Stock Island will be necessary to serve other properties. The Utility System should confirm with the County and remaining public on south Stock Island the timing to serve these additional properties. These final connections to the Utility System should result in the majority of all properties on south Stock Island being served. Beyond this activity, the Utility System will need to continue to monitor growth within the area and make whatever system adjustments are necessary to maintain proper sewage collection from all properties. As noted in this report, additional valve pits and even buffer tanks may be needed to collect additional volumes of wastewater as land use density increases and/or land re-development projects occur. New pump stations and force mains may also be necessary to address larger wastewater quantities than those estimated herein and/or to ensure proper collection of wastewater from remotely located properties relative to the vacuum system.

Table 4-4 summarizes an updated conceptual timeframe for the various activities described above. It should be noted that a final timeframe must be established based on discussions and meetings held between the County, the Utility System, and members of the public as mentioned above. This documentation should provide a reasonable framework and guidance in order to allow the sewerage effort to be completed as quickly as possible.

Table 4-4 Summary of Updated Conceptual Roadmap Activities and Timeframes

1	Generate Draft/Final Engineering Report Versions	October 2004	November 2004
2	Presentation of Report to BOCC	November 29, 2004	
3	BOCC Approval of Final Engineering Report	December 2004	
4	Contracting for Engineering Design Services	January 2005	January 2005
5	Testing and Special Studies ⁽¹⁾	January 2005	February 2005
6	Development of Final Sewer Construction Plans ⁽²⁾	February 2005	March 2005
7	Construction Bidding and Selection Phase ⁽²⁾	April 2005	May 2005
8	Modifications/Additions to ROW Infrastructure	April 2005	December 2006
9	Final Sewer System Construction Phase ⁽³⁾	June 2005	December 2005
10	File Sewer Connection Applications with Utility	November 2005	December 2005
11	Decommissioning of Package Plants/Septic Systems	December 2005	January 2006
12	Final Connections to Utility System	January 2006	February 2006

- (1) This line item includes on-site testing, surveys, and other related engineering design services necessary to prepare construction plans.
- (2) Final engineering design work to configure on-site collection systems and prepare construction documents. Similar activities required for all work that must be performed within the County R-O-W.
- (3) Assumes one month for contractor mobilization and a six month construction phase.
- (4) Additional connections to the Utility System will be required to serve all properties within the study area.
- (5) All dates in table are only possible goals to guide the completion of the completion of the sewerage effort. Whenever possible, opportunities should be explored to accelerate the completion of this effort, including pre-contracting and engineering design for the on-site systems prior to final BOCC approval, etc.

Based on the revised timeline, completion of the sewerage effort for south Stock Island should be complete near the end of 2005. However, financing issues on the part of the individual property owners and/or the Utility System may cause further delays if not anticipated and planned for.

4.3.2 Expansion Requirements for WWTP

The Utility System's WWTP is currently flow rated at 499,000 gpd (0.499 MGD). An average wastewater generation rate of approximately 422,000 gpd was estimated for the current condition for south Stock Island in its entirety. However, it is generally known that the WWTP also accepts and treats wastewater routed to it from north Stock Island, the corrections facility, and possibly other wastewater generators in the local area. The total volume of wastewater generated by these other entities was not established in this study. Therefore, specific requirements and timeframes related to a potential plant expansion event were not outlined herein.

It is anticipated that the other wastewater volumes outside of south Stock Island once combined with the total estimated wastewater volume for south Stock Island will exceed the current capacity of the Utility System's WWTP. If so, proper plans should be prepared to allow the plant to be hydraulically expanded by a reasonable degree. The actual amount of additional plant

capacity must be established by the Utility System and should be adequate to serve the potential wastewater volumes that could be generated within the next 20 to 30 years. The future wastewater generation estimates presented in this report can be used at least in part to confirm how much additional plant capacity should be available to properly support all of south Stock Island, i.e., 618,000 gpd on average flow conditions. However, all additional flow contributions to the plant, inclusive of increases from existing connections and potential new connections must be considered before establishing the total capacity required for the WWTP.

Once the anticipated plant capacity is established, proper engineering design must be conducted to prepare plans and specifications for the plant expansion event. These plans should give due consideration to all requisite treatment requirements mandated by the state of Florida and Monroe County. One of the more significant requirements for the WWTP will be to upgrade it to meet advanced wastewater treatment standards. These standards include specific limits for Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), total Nitrogen, total Phosphorus, and total Coliforms. Thus, plans for specific unit treatment processes and operations must be considered, developed, and included in the construction documents for the plant expansion event. Other ancillary requirements related to a plant expansion event that may be desirable or necessary include new influent flow equalization, increased solids thickening and dewatering capacity for sludge generated by the WWTP, improved and/or expanded disinfection and dechlorination capacity, and additional backup power supply for the expanded facilities of the plant.

Attachment 4



KEYS ENVIRONMENTAL INC.
6630 FRONT STREET • KEY WEST, FL 33040
PHONE (305) 522-0052 • FAX (305) 522-0052
www.KeysEnvironmental.com

*File
copy*

March 11, 2005

Mr. Thomas J. Willi
 Monroe County Administrator
 1100 Simonton St., Room 2-205
 Key West, FL 33040

Mr. Administrator,

As you are aware, there are some contingency items that remain outstanding from the South Stock Island Sewer Expansion Project. These items include several properties on Second Street. A portion of the R.O.W. that was previously undeclared has recently been claimed by Monroe County (See attached). As a result of the County's recent action, it may be necessary to extend the laterals across the recently declared County R.O.W. to the property line, as it is currently defined. Other items include properties that are not currently served and are contingency items from the project. K.W. Resort Utilities is actively bidding the work as directed by the County Administrator during the CTF meeting. The Utility and its engineers have met with B&L Beneway, Higgins, BAT Construction, Haskins Plumbing, Gary's Plumbing, Frank's Plumbing, and Tony Herse Plumbing. Field meetings will conclude next week and it is expected that all bids will be submitted by the first week of April. Currently the following properties are not served according to Monroe County Ordinance (No. 04-2000):

Maloney Ave.	Second Street	Fifth Street
126070	133060	125360
126080	133070	
126120	133080	
	133090	
	133100	
	133120	

K.W. Resort Utility shall inform the County in writing when the above properties are served per Monroe County Ordinance. In the interim these property owners should be informed that they are not in violation at the present, but that it is the County's intention to serve them in the near future. Regarding these properties, Utility staff would be happy to meet with plumbers or residents to discuss their planned points of connection so that they may begin planning and procuring price quotes.

Respectfully,

Christopher Johnson
 President, Keys Environmental Inc.

CAJ/CAJ



BOARD OF COUNTY COMMISSIONERS

Mayor Dixie M. Spehar, District 1
Mayor Pro Tem Charles "Sonny" McCoy, District 3
George Neugent, District 2
David P. Rice, District 4
Murray E. Nelson, District 5

Engineering Division
1100 Simonton Street
Key West, FL 33040



May 4, 2005

Mr. Chris Johnson, President
Keys Environmental Inc.
6630 Front Street
Key West, FL 33040

RE: Stock Island Sewer Extension

Dear Mr. Johnson:

On 11/29/04 the BOCC approved Alternate 1A of the URS report but also allowed other work to proceed subject to the property owner paying for work above and beyond that identified in Alternate 1A.

After reviewing the proposed work specified in your letter to Mr. Willi dated May 4, 2005 I find only one location approved by the BOCC for funding, i.e. El Mar Trailer Park vacuum pit and short vacuum line.

However, lateral extensions on Second St. were part of the original scope. I understand that due to a survey discrepancy the lines ended within the pavement and need to be extended. Therefore, this work can be funded. A new proposal for these two locations is required specifying unit costs and quantities. Also, Monroe County is not allowed to pay in advance. Finally, since Monroe County's contract is with KW Resort Utility and not Keys Environmental Inc. work would have to go thru them. As an alternative, Monroe County may be willing to contract directly with the plumbing contractors to have the work done.

Please feel free to contact me directly with your comments.

Sincerely,

David S. Koppel, P.E.
County Engineer

DSK/jl
SISewerExtensionChrisJohnson.DOC

Cc: Tom Willi

Match line

10/12/05

FAXED 10:00 AM

CS

WORK LOCATIONS

① Oropesa Warehouse Bldg. 6475 2nd St 1 EDU

② Key West Oxygen/ Victorian Vehicles 2 EDU

③ El Mar TRAILER PARK 3 EDU

④ Metro Self Storage 1 EDU

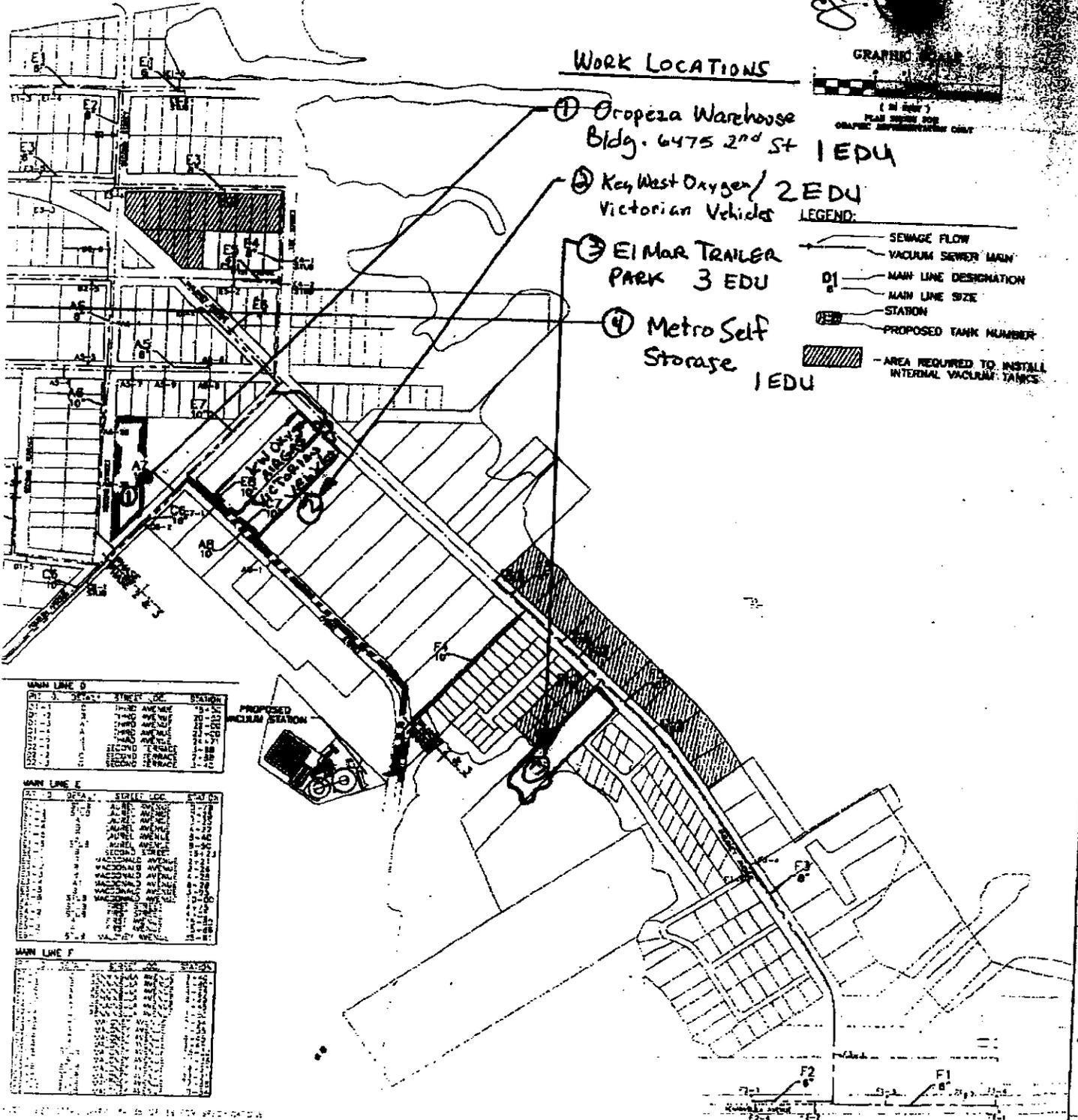
GRAPHIC SCALE



(IN FEET)
PLEASE REFER TO
GRAPHIC REPRESENTATION ONLY

LEGEND:

- SEWAGE FLOW
- VACUUM SEWER MAIN
- MAIN LINE DESIGNATION
- MAIN LINE SIZE
- STATION
- PROPOSED TANK NUMBER
- AREA REQUIRED TO INSTALL INTERNAL VACUUM TANKS



MAIN LINE D

ST. NO.	STREET LOC.	STATION
1	1st St	10+00
2	2nd St	10+50
3	3rd St	11+00
4	4th St	11+50
5	5th St	12+00
6	6th St	12+50
7	7th St	13+00
8	8th St	13+50
9	9th St	14+00
10	10th St	14+50
11	11th St	15+00
12	12th St	15+50
13	13th St	16+00
14	14th St	16+50
15	15th St	17+00
16	16th St	17+50
17	17th St	18+00
18	18th St	18+50
19	19th St	19+00
20	20th St	19+50
21	21st St	20+00
22	22nd St	20+50
23	23rd St	21+00
24	24th St	21+50
25	25th St	22+00
26	26th St	22+50
27	27th St	23+00
28	28th St	23+50
29	29th St	24+00
30	30th St	24+50
31	31st St	25+00
32	32nd St	25+50
33	33rd St	26+00
34	34th St	26+50
35	35th St	27+00
36	36th St	27+50
37	37th St	28+00
38	38th St	28+50
39	39th St	29+00
40	40th St	29+50
41	41st St	30+00
42	42nd St	30+50
43	43rd St	31+00
44	44th St	31+50
45	45th St	32+00
46	46th St	32+50
47	47th St	33+00
48	48th St	33+50
49	49th St	34+00
50	50th St	34+50
51	51st St	35+00
52	52nd St	35+50
53	53rd St	36+00
54	54th St	36+50
55	55th St	37+00
56	56th St	37+50
57	57th St	38+00
58	58th St	38+50
59	59th St	39+00
60	60th St	39+50
61	61st St	40+00
62	62nd St	40+50
63	63rd St	41+00
64	64th St	41+50
65	65th St	42+00
66	66th St	42+50
67	67th St	43+00
68	68th St	43+50
69	69th St	44+00
70	70th St	44+50
71	71st St	45+00
72	72nd St	45+50
73	73rd St	46+00
74	74th St	46+50
75	75th St	47+00
76	76th St	47+50
77	77th St	48+00
78	78th St	48+50
79	79th St	49+00
80	80th St	49+50
81	81st St	50+00
82	82nd St	50+50
83	83rd St	51+00
84	84th St	51+50
85	85th St	52+00
86	86th St	52+50
87	87th St	53+00
88	88th St	53+50
89	89th St	54+00
90	90th St	54+50
91	91st St	55+00
92	92nd St	55+50
93	93rd St	56+00
94	94th St	56+50
95	95th St	57+00
96	96th St	57+50
97	97th St	58+00
98	98th St	58+50
99	99th St	59+00
100	100th St	59+50

MAIN LINE E

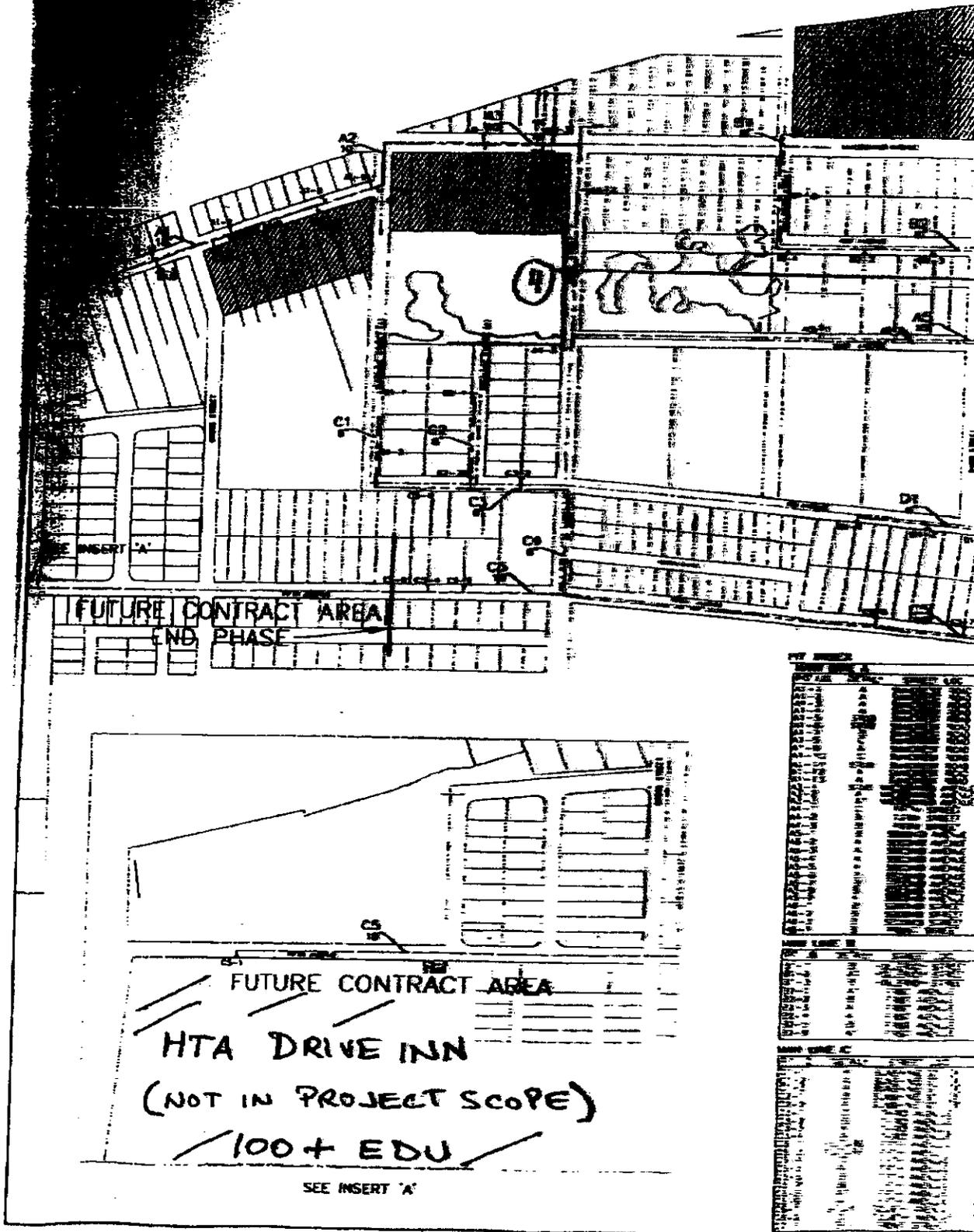
ST. NO.	STREET LOC.	STATION
1	1st St	10+00
2	2nd St	10+50
3	3rd St	11+00
4	4th St	11+50
5	5th St	12+00
6	6th St	12+50
7	7th St	13+00
8	8th St	13+50
9	9th St	14+00
10	10th St	14+50
11	11th St	15+00
12	12th St	15+50
13	13th St	16+00
14	14th St	16+50
15	15th St	17+00
16	16th St	17+50
17	17th St	18+00
18	18th St	18+50
19	19th St	19+00
20	20th St	19+50
21	21st St	20+00
22	22nd St	20+50
23	23rd St	21+00
24	24th St	21+50
25	25th St	22+00
26	26th St	22+50
27	27th St	23+00
28	28th St	23+50
29	29th St	24+00
30	30th St	24+50
31	31st St	25+00
32	32nd St	25+50
33	33rd St	26+00
34	34th St	26+50
35	35th St	27+00
36	36th St	27+50
37	37th St	28+00
38	38th St	28+50
39	39th St	29+00
40	40th St	29+50
41	41st St	30+00
42	42nd St	30+50
43	43rd St	31+00
44	44th St	31+50
45	45th St	32+00
46	46th St	32+50
47	47th St	33+00
48	48th St	33+50
49	49th St	34+00
50	50th St	34+50
51	51st St	35+00
52	52nd St	35+50
53	53rd St	36+00
54	54th St	36+50
55	55th St	37+00
56	56th St	37+50
57	57th St	38+00
58	58th St	38+50
59	59th St	39+00
60	60th St	39+50
61	61st St	40+00
62	62nd St	40+50
63	63rd St	41+00
64	64th St	41+50
65	65th St	42+00
66	66th St	42+50
67	67th St	43+00
68	68th St	43+50
69	69th St	44+00
70	70th St	44+50
71	71st St	45+00
72	72nd St	45+50
73	73rd St	46+00
74	74th St	46+50
75	75th St	47+00
76	76th St	47+50
77	77th St	48+00
78	78th St	48+50
79	79th St	49+00
80	80th St	49+50
81	81st St	50+00
82	82nd St	50+50
83	83rd St	51+00
84	84th St	51+50
85	85th St	52+00
86	86th St	52+50
87	87th St	53+00
88	88th St	53+50
89	89th St	54+00
90	90th St	54+50
91	91st St	55+00
92	92nd St	55+50
93	93rd St	56+00
94	94th St	56+50
95	95th St	57+00
96	96th St	57+50
97	97th St	58+00
98	98th St	58+50
99	99th St	59+00
100	100th St	59+50

MAIN LINE F

ST. NO.	STREET LOC.	STATION
1	1st St	10+00
2	2nd St	10+50
3	3rd St	11+00
4	4th St	11+50
5	5th St	12+00
6	6th St	12+50
7	7th St	13+00
8	8th St	13+50
9	9th St	14+00
10	10th St	14+50
11	11th St	15+00
12	12th St	15+50
13	13th St	16+00
14	14th St	16+50
15	15th St	17+00
16	16th St	17+50
17	17th St	18+00
18	18th St	18+50
19	19th St	19+00
20	20th St	19+50
21	21st St	20+00
22	22nd St	20+50
23	23rd St	21+00
24	24th St	21+50
25	25th St	22+00
26	26th St	22+50
27	27th St	23+00
28	28th St	23+50
29	29th St	24+00
30	30th St	24+50
31	31st St	25+00
32	32nd St	25+50
33	33rd St	26+00
34	34th St	26+50
35	35th St	27+00
36	36th St	27+50
37	37th St	28+00
38	38th St	28+50
39	39th St	29+00
40	40th St	29+50
41	41st St	30+00
42	42nd St	30+50
43	43rd St	31+00
44	44th St	31+50
45	45th St	32+00
46	46th St	32+50
47	47th St	33+00
48	48th St	33+50
49	49th St	34+00
50	50th St	34+50
51	51st St	35+00
52	52nd St	35+50
53	53rd St	36+00
54	54th St	36+50
55	55th St	37+00
56	56th St	37+50
57	57th St	38+00
58	58th St	38+50
59	59th St	39+00
60	60th St	39+50
61	61st St	40+00
62	62nd St	40+50
63	63rd St	41+00
64	64th St	41+50
65	65th St	42+00
66	66th St	42+50
67	67th St	43+00
68	68th St	43+50
69	69th St	44+00
70	70th St	44+50
71	71st St	45+00
72	72nd St	45+50
73	73rd St	46+00
74	74th St	46+50
75	75th St	47+00
76	76th St	47+50
77	77th St	48+00
78	78th St	48+50
79	79th St	49+00
80	80th St	49+50
81	81st St	50+00
82	82nd St	50+50
83	83rd St	51+00
84	84th St	51+50
85	85th St	52+00
86	86th St	52+50
87	87th St	53+00
88	88th St	53+50
89	89th St	54+00
90	90th St	54+50
91	91st St	55+00
92	92nd St	55+50
93	93rd St	56+00
94	94th St	56+50
95	95th St	57+00
96	96th St	57+50
97	97th St	58+00
98	98th St	58+50
99	99th St	59+00
100	100th St	59+50

Match line

PLAN FOR GRAPHIC REPRESENTATION ONLY.
CONSTRUCTION PLAN SET AND SPECIFICATIONS FOR
LOCATION AND INSTALLATION OF VACUUM SEWER.



Attachment 5

**IN THE CIRCUIT COURT OF THE SIXTEENTH JUDICIAL CIRCUIT
OF FLORIDA IN AND FOR THE COUNTY OF MONROE**

FALL TERM 2004

FINAL REPORT FOR THE FALL TERM SESSION

OFFICERS AND MEMBERS OF THE 2004 FALL TERM GRAND JURY

Robert G. D'Anella, Foreperson

Warren Springer, Vice Foreperson

Beverly C. Bailes, Clerk

Rachelle Gates, Treasurer

Coke E. Bean

Randall Christ

Dawn Crane

Eileen M. Cummings

Ralph Graham

Edwin Marcellus Hacker

Richard Knowles

Worthy H. Maynard

Jeff Mitchell

John Orlando

Robert Page

Claudia Pennington

Ann Perina .

Gregory Quimby

Katharyn M. Savale

Dawn Shelton.

Barbara R. Stennett

Returned to:

The Honorable Sandra Taylor

Circuit Judge, 16th Judicial Circuit

State Attorney

Mark E. Kohl

Clerk of the Circuit Court

Danny Kolhage

MM

**IN THE CIRCUIT COURT OF THE 16TH
JUDICIAL CIRCUIT OF THE STATE OF
FLORIDA IN AND FOR MONROE COUNTY**

FINAL REPORT OF THE FALL TERM GRAND JURY

TO: THE HONORABLE SANDRA TAYLOR
Sixteenth Judicial Circuit

WE, the Grand Jurors, duly empaneled, sworn at this 2004 Fall Term of the Circuit Court of the Sixteenth Judicial Circuit of the State of Florida to inquire in and for the body of the County of Monroe, respectfully submit the following report:

1. PURPOSE/OBJECTIVE

In the summer on 2003, the Florida State Attorney's Office began receiving complaints from Monroe County citizens residing in the Stock Island area of Monroe County. Complaints were also received from County Commissioners David Rice and George Neugent. The complaints were concerning the construction of the sewer system on Stock Island. The complaints were that property owners had been assured by the Monroe County Commission of one cost at inception of the project and were latter told that their costs would escalate considerably in order to connect to the newly constructed system. There were accusations by citizens that the engineering plans were changed without the approval or knowledge of the Board of County Commissioners and this was the cause for the increase of hookup charges. In late August of 2003, the State Attorney, Mark Kohl, ordered an investigation in the project and the complaints from both citizens and government officials.

As a result of the complaints and subsequent investigation by the State Attorney, the concerns were presented to the Grand Jury. The Grand Jury has broad powers to make inquiries into civil administration, regardless of whether criminal or irregular conducted is charged. It has powers to investigate public offices to determine if they are being conducted according to law and good morals. It also has power to investigate the conduct of public affairs by public officials and employees, including the power to inquire whether those officials are incompetent or lax in the performance of their duties.

During the summer and fall terms of the grand jury, an investigation of the Stock Island sewer project was completed. The investigation included review of the engineering design process, award of contracts and performance of work by the Contractor. This process included but was not limited to the following activities:

- A. Interviews of affected Monroe County Citizens and business owners.
- B. Interviews of persons involved in the Monroe County Commissions appointed technical review and recommendation for the completed project.
- C. Interviews of independent engineering consultants retained by the Grand Jury.
- D. Reviews and analysis of engineering reports prepared by Monroe County and Grand Jury engineering consultants.
- E. Interviews of Monroe County Government employees and officials.
- F. Review and analysis of an Audit Report prepared by the County Clerks Office and related responses from County Officials and the Utility.

G. Review and analysis of numerous pieces of correspondence, meeting minutes etc. regarding the project.

H. Review and analysis of the State Attorney's investigative report.

This report is being prepared to notify the public of the results of the Grand Jury's investigation. The format for this report includes the identification of Grand Jury "Findings", "Observations" and "Recommendations". The "Findings" identify the most serious issues and areas of noncompliance with the contract, County Ordinances/Procedures and good practices. Most "Findings" will also be accompanied by a "Recommendation". The "Observations" section will identify secondary and less serious issues. The "Recommendation" section will identify the necessary corrective action to correct the issue and corrective actions to prevent recurrence on future activities.

II. GRAND JURY FINDINGS:

FINDING # 1 - The "Capacity Reservation and Infrastructure Contract" Section C entitled "Payments to the Utility" states in part... "The County Engineer must review the Invoice and within 5 business days, inspect the work completed and materials delivered and inform the Utility in writing of any error or omission in the invoice and what must be done to correct the deficiency. If the invoice is satisfactory, he shall forward the invoice to the County Clerk for payment".

Contrary to the requirements of the contract the County Engineer, David Koppel (or designee), did not perform the required physical inspections of completed work activities and materials delivered to the job prior to approval of invoices for payment. The finding is based upon testimony of Mr. Koppel to the State Attorney's office and other witnesses who appeared before the Grand Jury.

FINDING # 2 - The "Capacity Reservation and Infrastructure Contract" Section D states in part "The Utility warrants that it has not employed, retained or otherwise had act on its' behalf any former County officer or employeeFor breach or violation of this provision the County may in its discretion, terminate this contract without liability and may also in its discretion, deduct from the contract or purchase price, or otherwise recover, the full amount of any fee commission, percentage, gift, or consideration paid to the former County officer or employee". Monroe County Ordinance 10-1990, Section 2-528 states additional requirements in this regard.

Contrary to the requirement of county ordinances and the contract, Mr. John L. London, former Monroe County Commissioner, received checks from the Main Contractor KW Resort Utilities totaling \$147,500.00. The State Attorney's investigation found that Mr. London received monthly checks in the amount of \$2,500.00 from the period of November 1998 until October 2003. The State Attorney's investigative report concluded in part.. "there was complicity in the breach of the contract and ordinances on the part of individual county commissioners in that they allowed themselves to be influenced by John L. London in the implementation of this contract". The purpose of this finding is not to censure Mr. London whose case is currently under review by the Florida State Ethics Commission. This Finding identifies the County Commissions' failure to recover the \$147,500.00 from KW Resort Utilities as allowed by the Contract. Failure to recover this money sends a signal to future Contractors that they can pay officials without punishment. It should be noted that the State Attorney's investigation included a subpoena to KW Resort Utilities for all records regarding funds paid to Mr. London including employment applications, contracts, W-2 forms etc. The only records that KW Resorts Utility could provide were cancelled checks. Further investigation found that the checks written to Mr. London were from an account with the name KW Utilities. There is no record of registration for such a company with the Department of State.

Ad.

FINDING # 3 - The Grand Jury has found that the County Commission and other government officials were negligent in their failure to evaluate and assess potential financial burden being placed on some property owners being served by the new vacuum sewer system. The Grand Jury concluded that the County did not do its' home work in this regard prior to rushing into an agreement with the Utility. The County's Engineering Consultant, URS Corporation, filed a report dated November 22, 2004 entitled, "Engineering Report Wastewater Collection System Evaluation, South Stock Island". The report was filed after completion of the contract. The report concluded in part that there could be an excessive financial burden on large property owners as a result of three possible components. These components included:

1. Connection Fees - The KW Resort Utilities wastewater tariff, as approved by the Florida Public Utilities Commission, assesses a one-time connection fee in the amount of \$2,700 per ERC, where an ERC is defined a one single family residential service connection. The fee is considered reasonable for a individual property owner. However, where multiple unit properties, such as mobile home parks or small businesses are concerned, the connection fees are proportionate to the total number of units (houses, trailers etc.) on each property. For example, a larger property containing 100 low income mobile home rentals, the legal owner would be assessed a connection fee of \$270,000. The report further concluded that the owner could potentially collect connection fees from individual residents of the units. However, concerns such as low income levels of residents to pay connection relate fees, vacancy of multiple units and insufficient capital availability of the property owner could lead to unacceptable financial burdens for both the property owner and low income renters.

2. On-Site Construction Costs - The burden of upgrading on-site systems or installing new systems compatible with the Utilities vacuum system currently falls on the property owner. Interviews of property owners and the URS Report found that these additional costs have ranged from \$10,000 to the low \$100,000s. To facilitate this construction, the property owners also face

additional costs including engineering design, surveys and testing services. Also, it was noted the KW Resort Utility was assessing additional "inspection fees" on the property owner before the on-site collection systems can connect to the central sewer system.

3. Decommissioning Costs - Large property owners would also be responsible for costs involved in the decommissioning and cleanup of existing treatment plants and septic tanks on their property.

The URS Report concluded that the combined costs associated with the above requirements could potentially result in a substantial burden to some of the larger properties. Several property owners have indicated to the Grand Jury that if forced to shoulder the full financial burden they may have to sell their property. Many of these properties are currently sites for low-income housing.

FINDING # 4 - The County Commission's process for the review and approval of the sewer project plans, drawings and contract appear to be flawed. Based upon review of the URS Report and the Grand Jury Consultant, Boyle Engineering's Report it was confirmed that a set of drawings (date stamped 5/21/02) was submitted to the County for review late in the design phase. These plans were substantially different from the plans that were previously submitted for project permitting and later for contractor bidding and construction. These plans were provided to the County by the Utility

during a meeting in the County Administrators office on or about May 24, 2002. Mr. Kenneth Williams of the CH2MHILL was also in attendance at the meeting. CH2MHILL has been Monroe County's wastewater consultant since 1996. During this meeting Mr. Doug Carter of the Utility presented the plans noted above dated 5/21/02. Mr. Williams was presented a set of these plans for review. Mr. Williams completed his review and provided his comments in a letter dated July 5, 2002 to the Monroe County Director of Growth Management, Tim McGarry. In the letter Mr. Williams outlined several concerns with four properties on Stock Island including

Leo's Campground, Stock Island Trailer Park, Overseas Trailer Park and Coral Hammocks. The letter noted that the plans called for each of these properties to install internal vacuum systems. Mr. Williams letter questioned who would be responsible for the cost of installing this equipment and noted that the bid proposal did not include pricing for buffer tanks. It was further noted that there were other smaller trailer parks, some housing areas, and other areas that do not have vacuum sewer facilities adjacent to the properties for easy connection to the new vacuum sewer system. Mr. William's letter asked how will these areas be connected. The letter documented eight specific comments and concerns with the plans.

During interviews by the State Attorney's Office, Mr. Williams stated that he was assured by County Officials that his letter was included in a package of backup materials given to the County Commissioners for review prior to their next meeting. Mr. Williams noted that he was not contacted by any member of the County Commission regarding his comments and concerns.

A meeting of the Board of County Commissioners was convened on July 17, 2002. A video tape of the meeting was reviewed and analyzed by the State Attorney's office. In this meeting the County Administrator, James Roberts, requested and received "conceptual" approval of the project plan by the County Commission. The Commission also agreed to issue a contract for \$4.606 million dollars to KW Resort Utilities. There was no review or approval of the plans at this meeting. There also was no discussion of the letter from CH2MHILL Engineer Kenneth Williams regarding the plans of 5/21/02.

A special meeting of the County Commission was called for July 31, 2002. The only agenda item was the approval of the contract with KW Resort Utilities for construction of the Stock Island waste water infrastructure. The Project Plans and Contract were presented to the Commission for approval by the County Administrator, James Roberts. Mr. Roberts noted to the Commissioners that the plans they were approving were the same as those previously submitted (date stamped May 21, 2002), however the date had been changed to May 30, 2002. This presentation by the County Administrator was false. The URS Report states that, in fact, the

May 21, 2002 plans previously submitted to the Commissioners, numerous buffer tanks were depicted on the plan-and-profile sheets at various locations along the vacuum headers (total of 29 buffer tanks and 14 dual buffer tanks). In contrast, the set of plans dated May 30, 2002 submitted at this special meeting depicted only 15 single buffer tanks and no dual buffer tanks. The contract and plans were approved at this meeting without adequate review, resolution of open comments, review final design plans and most importantly the impact these changes might make on the citizens of Stock Island.

The Grand Jury has concluded that it appears that the County Commission and responsible county officials did not have adequate control of this process. The Commission never did address the CH2MHILL comments nor does it appear that they reviewed the new plans prior to approval of the contract. Their failure to control this process may have also contributed to the financial burdens now being experienced by the citizens of Stock Island.

FINDING # 5 - Upon completion of construction of the Stock Island waste water infrastructure, Monroe County has agreed under the terms of the contract to relinquish ownership of this infrastructure to the KW Resort Utility. The sewer project was funded 100% (\$4.606 million dollars) by Monroe County tax dollars. In return, the Utility agreed to reserve treatment plant capacity at its treatment plant, for the treatment of 1,500 Equivalent Development Units (EDU's). However, analysis by the Grand Jury's consultant noted that only 860 EDU's could be serviced by the infrastructure included under the terms of this contract.

During Grand Jury testimony by expert witnesses, it was stated by these witnesses independently, that it was unprecedented in their experiences to have a public project funded by the public monies turned over to a private entity such as KW Resort Utilities.

FINDING # 6 - Monroe County also entered into a separate contract with KW Resort Utilities on August 16, 2001. Under the terms of contract KW Resort Utilities agreed to provide central sewage collection services to the Jail and Detention Center and other public buildings on Stock

Island. The county has conveyed to the Utility at no charge the lift station serving the Detention Facility Treatment Plant and the lift station serving the Public Buildings and the sewer main from the lift station to the Detention Facility Treatment Plant. The County also contracted with the Utility to construct and convey ownership of an additional lift station to the existing sewer main serving the Detention Facility. The Utility wanted to connect the Detention Facility in order to have the use of additional gray water to use in irrigation of the golf course. It should be noted that the primary owner of the Utility also owns and operates the Key West Golf Course. Once again, it was noted that public properties and equipment were being conveyed to a private company.

FINDING #7 - The County agreed to pay the Utility a capacity reservation fee in the amount of \$2,700 per equivalent residential connection (ERC). The initial reservation fee was \$1,225,800. Three equal payments of \$408,600 were made to the utility with the final payment made in April 2004.

Section 7a of the County's contract with the Utility states in part... "When the Utility begins substantial physical construction to expand the capacity of its' wastewater treat plant or to extend its wastewater collection infrastructure to serve additional areas in South Stock Island or other island, the escrow agent will release the funds to the Service Company in the following manner: the payments will be made monthly equal amount based on the expected completion date of the expansion as set forth in the Service Company's construction documents. Release of said funds shall be made by escrow agent upon presentation of construction invoices (including costs of real estate acquisition, purchase or installation of pipes and lift stations, and professional services; provided that such costs are exclusively attributable to such expansion of capacity or extension of collection infrastructure to be paid by the Service Company along with a statement from the Service Company describing the construction of which the invoices seek payment".

At the request of the Monroe County Clerk of the Circuit Court, the County Internal Audit Department completed an audit of the contracts with KW Resort Utilities on March 19, 2004.

The Grand Jury heard testimony from the Audit Department and performed a review and analysis of their Audit Report. While this report identified numerous findings, the Grand Jury was especially alarmed by two of the findings as described below:

1. KW Resort Utility did not have an escrow agent or escrow agreement for the capacity reservation fees paid by Monroe County for the Detention Center project of \$1,225,800 as required by the Contract. The funds were deposited by the county into a interest bearing account in Key West, Florida. Contrary to the requirements of the contract for review and approval of invoices by an escrow agent, the capacity reservation funds were withdrawn at the sole discretion of KW Resort Utilities.

The Grand Jury found that the actions of both the County Commission and County Officials were negligent in their control of public funds. The County Administrators response to this finding was weak in that it suggested that an additional county employee be added to monitor such projects in the future. The Grand Jury disagrees and is of the opinion that the current organizational structure provides for such oversight. Simply put, someone did not do their job, whether it be intentional or in error.

2. The Audit found that the Utility had charged construction and legal fees totaling \$347,000 representing 9.9% of the construction value. The fees were paid to Smith, Hemmisch & Burke and Green Fairways, Inc., the providers of legal and construction administration. The auditor also found direct relationship between KW Resort Utility and these companies. Contrary to contract requirements, the Utility could not provide documentary evidence supporting the expenditures.

The Audit Department recommended to the Clerk's Finance Department that payment should be withheld from the application for payments at the time of the audit. The Clerk's Finance Department in turn did subtract \$308,483 from payment # 11. Based on information provided to the Grand Jury, the utility is currently contesting withholding of these funds.

The Grand Jury found that the County Commission and County Officials were negligent and/or incompetent in their control of public funds. (Refer to Finding #1)

The Grand Jury would like to compliment the work of the County Clerk's Finance Department and Internal Audits Department for their hard work and tenacity in identifying and following up on the findings.

We want to thank the many citizens that appeared before the Grand Jury and gave personal testimony. It was very important and citizens should feel free to approach the Grand Jury and present their grievances.

On a similar note, we would like to comment that the County Administrator and Commission's responses to the findings were weak and lacked detail. The responses should have specific correct actions to resolve each specific issue, corrections actions to prevent recurrence along with a time table and appropriate verification.

III. GRAND JURY OBSERVATIONS:

OBSERVATION # 1 - Based upon testimony of the Grand Jury Consultant, Boyle Engineering and the County's Consultant, URS, the Capacity Reservation and Infrastructure Contracts were lacking in both technical detail and performance standards.

OBSERVATION # 2 - Based upon review of various documents and testimony of a County Official it was determined that the necessary Code Inspections (i.e plumbing, electrical etc.) were not performed as work progressed. The official noted that to the best of his recollection some inspection was done after the fact.

IV. RECOMMENDATIONS:

RECOMMENDATION # 1 - The County Commission shall prepare a detailed written response to each of the Grand Jury Findings and Observations. Each response should address the root cause, corrective actions taken to resolve the finding/observation, corrective actions to prevent recurrence on future projects along with a detailed schedule for completion of these actions. The response shall be provided to the Grand Jury within 30 days of issuance of this report. The responses will be provided to the Grand Jury for review, approval and followup verification/investigation as necessary. These corrective actions should be fully implemented prior to issuance of any future sewer related project contracts.

RECOMMENDATION #2 - The County Commission should retain ownership of all sewer related infrastructure provided by public funds.

RECOMMENDATION # 3 - The County Clerks Internal Audit Department should perform a comprehensive audit at the completion of the Sewer Projects by KW Resort Utilities. The results of the audit shall be reported to the County Commission and Grand Jury.

RECOMMENDATION# 4 - The County Commission and Officials should make every effort to recover from KW Resort Utilities the \$147,500 paid to former commissioner John L. London which was in violation of the contract and County Ordinances.

RECOMMENDATION # 5 - The County Commission should appoint a volunteer civilian oversight committee. The committee would have unrestricted access to all contract, financial and other related documentation on future sewer projects. The oversight committee would be independent of the County Commission and would report to the County Administrator and the Citizens of Monroe County. The committee should be made of up of citizens representing the full length of the County. Every effort should be made to assure that the volunteers have a varied experience base in engineering/construction, legal and accounting. The Grand Jury believes that

this independent oversight committee can provide the necessary visibility and assurances to the public that the County is acting in the best interest of all citizens of Monroe County.

RECOMMENDATION # 6 - The County Commission should consider the development and implementation of quality management system such as ISO Q9001-2000 (ISO 9001) entitled "Quality Management Systems Requirements". The implementation of a quality management system within the various county departments and commission would enhance their effectiveness and would aid in the identity, linkage and management of the numerous complex activities of the county and future sewer projects.

ISO 9001-2000 specifies requirements for a quality management system where an organization needs to demonstrate its' ability to consistently provide the services and/or product that meets requirements of local, state and federal regulatory requirements and the needs of the public. The quality management system should as a minimum address areas such organizational interfaces; documentation including procedures necessary to ensure effective planning, operation and control of processes and document control to approve documents (i.e. drawings, plans, invoices, contracts, purchase orders etc.) including approval and use of the latest documents.

V. CONCLUSIONS:

The Grand jury has concluded that the only criminal violations discovered during its' investigation have been violations of county ordinances by John L. London. These violations were deemed second degree misdemeanors by the State Attorney. The Statute of Limitations has expired barring any prosecution of these violations.

The Grand Jury did find the County Commission and Officials negligent and incompetent in many aspects of the planning, approval and execution of the Stock Island Sewer Projects. These areas include but are not limited to:

A. The Grand Jury has found that the County Engineer was incompetent in the performance of his duties. The County Engineer did not perform inspections of on-going construction and material deliveries prior to payment of invoices as delineated in the contract. These inspections would have also provided a level of assurance to the County and its' Citizens that all works were completed in accordance with approved plans. The Grand Jury found the contract very clear in this regard and could only conclude that the County Engineer either decided it was not important to inspect the work, did not read the contract, or he was directed not to. The County Administrator and County Commission, who is ultimately responsible, was negligent in not taking appropriate actions to assure that the requirements of the contract were met prior to approval of payment to the KW Resort Utility.

B. The Grand Jury has found the County Commission negligent in their failure to at least attempt recovery of the \$147,500 paid to former County Commission, John L. London as stipulated in the contract.

C. The Grand Jury has found the County Administrator and County Commission negligent in their responsibility to effectively review the plans submitted by the Contractor, KW Resort Utility. The County also failed to review the comments submitted by their wastewater consultant, CH2MHILL. The Grand Jury concluded that these failures most likely resulted in the excessive financial burdens being placed on some property owners on Stock Island.

D. The County Commission was negligent in their failure to effectively communicate with the citizens of Stock Island as to their potential financial burdens. The Grand Jury concluded that it appears that the County Commission rushed into the approval of the contract. They did not properly analyze the potential impact to the citizens of Monroe County. It should be noted that after the fact the County Commission did hire URS Corporation to complete this type of analysis which should have been completed prior to approval of the contracts.

E. The Grand Jury has found that the County Commission and County Administrator were negligent in their failure to properly control public funds. This failure includes their lack of oversight to assure that the appropriate escrow accounts were established and inspection of works and materials was completed prior to payment.

F. The Grand Jury has concluded that the County Commission does not have the best interest of the public in mind when turning over public sewerage infrastructure to KW Resort Utility, a privately owned company.

G. The Grand Jury concluded that the County Commission and Officials appears to have waived the required in-process building inspections (i.e. electrical, civil, plumbing, mechanical) normally assigned to other construction projects in the County. (Note: A Grand Jury Witness noted that an effort to perform some of these inspections were completed at the end of the project)

Respectfully submitted this 30th day of March 2005,



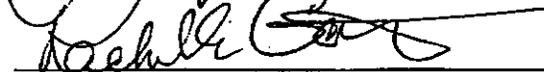
Robert G. D'Anella, Foreperson



Warren Springer, Vice Foreperson



Beverly C. Bailes, Clerk



Rachelle Gates, Treasurer



J. Jefferson Overby
Chief Assistant State Attorney



Attachment 6



U.S. Water Services Corporation
4939 Cross Bayou Blvd
New Port Richey, Florida, 34652

Water and Wastewater Utility Operation, Maintenance, Management, Engineering, Construction

LETTER OF TRANSMITTAL

January 15, 2007

Key West Resort Utility
Attn: Doug Carter
General Manager
P.O. Box 2125
Key West, Florida 33045

RE: Proposal for Contract Operations and Maintenance of Key West Resort Utility
Wastewater, Collection and Reuse Distribution Systems.

Dear Mr. Carter:

U.S. Water Services would like to thank you for the opportunity to meet with you last Thursday and to present this proposal to operate and maintain the Key West Resort Utility Wastewater Treatment Facility. We welcome the challenge to implement a standard of service within your service territory that provides exemplary operation and maintenance services cultivated on the fundamentals of a solid management plan and commit to meeting contract obligations in a timely manner. U.S. Water has assessed the current needs of the Utility in relation to the operation of the facility and possesses an excellent understanding of the Scope of Work identified.

U.S. Water Services Corporation is a privately owned corporation based in the State of Florida. U.S. Water staff has been working in the Florida Keys since 1998 and has grown into Florida's largest privately held operations company and provides operations services to over 450 plants statewide. Our continued presence in the Keys has allowed U.S. Water to gain a complete understanding of local labor issues and shortages. Unlike typical operations companies, U.S. Water is diverse in its structure. U.S. Water business lines include a full service Engineering Group, statewide Maintenance Group and a Contracting Services Group which complement the abilities of U.S. Water Services as an operation and maintenance company. Our Engineers assist our contracted operations clients with process optimization, troubleshooting and provide highly efficient solutions. Employing former FDEP senior staff, Mo Kader, P.E. and Dr. Jay Thabaraj, who are both authorities in permitting and regulatory compliance, allow us to tackle any environmental solution with swift positive results. The Maintenance Group is capable of providing an unlimited scope of services ranging from vacuum system repairs to emergency onsite facilities repair, while our Contracting Services Group specializes in larger projects associated with underground utility installation and rehabilitation, and the rehabilitation or construction of treatment works facilities. U.S. Water

Services Corporation in addition to operating water treatment facilities on behalf of our clients also owns several utilities. As system owners we are extremely familiar with the Florida Public Service Commission and the development of rate cases, system audits and other items required by PSC when a Utility seeks a rate increase.

The U.S. Water Team selected for this Operations Contract, include Lee Penick, Keys Area Manager, Donny Jaynes, Keys Chief Operator, Chad Ashley, Maintenance Technician and additional technical staff is unmatched in experience pertaining to field operations and maintenance. Throughout the State of Florida U.S. Water is known for our ability to accommodate diverse client needs, resolve operations problems and maintain compliance with governmental regulations.

U.S. Water is highly experienced with the technologies implemented in the Key West Resort Utility System as well as the new systems currently being installed and are currently providing services to other similar clients. The personnel U.S. Water will dedicate to the Key West Resort Utility project team have been involved at both the management and operations levels throughout their recent careers. The Team members are experienced with technologies that exist at your facility and include experience in meeting Advanced Wastewater Treatment (AWT) standards. Currently U.S. Water provides similar services to the Village of Islamorada a brand new AWT facility we were able to bring into full compliance with the operating permit the second month of operation following startup of the facility. In addition to Islamorada, U.S. Water also provides operational services to the following AWT or BAT facilities, Little Venice and Bay Point WWTP owned by the Florida Key Aqueduct Authority, Key Largo Wastewater Treatment District, The City of Everglades City and the Boy Scouts of America. In addition to your new AWT facility you also have a reuse system for effluent disposal. U.S. Water has designed and operates numerous reuse systems throughout the State. U.S. Water is currently designing an upgrade to the North Key Largo Utilities reuse system and we operate golf course reuse systems for Panther Woods GC, Ocean Reef GC, Crystal River GC and other systems in Florida .

As mentioned, U.S. Water employs one of the largest maintenance departments in the State of Florida specific to water and wastewater operations. Maintenance personnel are readily available in the area to complement the proposed U.S. Water staff and provide the Utility with solid protection should emergencies arise. Our track record in providing Emergency Hurricane response is unmatched. During hurricane Wilma U.S. Water's client the City of Everglades City was severely damaged knocking out both water and wastewater services. U.S. Water had staff onsite 2 hours after the hurricane passed assessing damage and coordinating the delivery of generators and repair crews to the City. Within four hours U.S. Water had ten maintenance staff members onsite restoring full water service and within eight hours full wastewater services were restored. Everglades City, Mayor Sammy Hamilton stated *"U.S. Water provided the citizens of Everglades City with outstanding emergency services allowing the citizens to have full city utility services while many surrounding communities were out of services for many days.... We were fortunate to have U.S. Water as our utility contractor."*

Thank you for allowing our company to participate in this important proposal process. We appreciate all consideration on our behalf.

Authorized Persons to make representations on behalf of US Water Services Co. is as follows:

Gary Deremer, President
R. Scott Lewis, Director of Operations
4939 Cross Bayou Blvd., New Port Richey Florida
Phone: 727-848-8292 Fax: 727-848-7701

Sincerely,

R. Scott Lewis
Director of Operations
U.S. Water Services Corporation

US Water Services Corporation
Federal ID: 20-0008821



Key West Resort Utility Operations Plan

USWC has a strong commitment to setting the industry standards for facility operation and maintenance, safety and overall system performance. In addition guarantying safe, compliant wastewater effluent, USWC also customizes its approach so as to foster long term relationships with clients. For Key West Resort Utility our specific goals are as follows:

- Infrastructure protection through an effective preventative maintenance program. Tracking and recording of these efforts through the use of our computerized maintenance management system (CMMS).
- Uninterrupted service through the use of USWC's first class preventative and predictive maintenance systems.
- Maintain compliance with all safety, environmental and effluent quality requirements.

Methodology

Various Operation and Maintenance plans, as defined further in this proposal, will be developed and incorporated.

- Utility Maintenance Plan
- Customer Service Plan
- Utility Safety Plan
- Staffing Plan

USWC's approach to facility operation and maintenance is to insure that effluent quality, disposal, delivery and storage capabilities of reuse water are all incorporated into the Management and Operation Plan. USWC will assess the existing Key West Resort Utility, (KWRU) management and operations systems blending them with USWC's standards to develop a site specific plan that makes the overall operation of the facility efficient and reliable. Our overall strategy is a proactive management of the infrastructure for KWRU.

The rationale of our infrastructure management plan is to insure the long term viability of all system components. Our focus is not only on large new capital projects but also concentrates on the maintenance and repair of current infrastructure.

The investment in the wastewater treatment, collection and reuse water distribution systems and the utility as a whole by KWRU is very significant. That is why it is critically important that the Project Manager selected by USWC for this project have a strong background in Utility Management. The KWRU system will be under the direct control of USWC's Project Manager, who will have full line authority for day-to-day operations.

Utility Maintenance Plan

In these times of budget cutbacks and cost reductions many utility owners are hard pressed to meet the corrective and preventative maintenance requirements of their systems. They are so preoccupied keeping the system operating day-to-day that preventative maintenance can be deferred. Most of the wastewater systems in the country are rapidly aging or past their useful life and this lack of preventative maintenance only exacerbates the deterioration of the system. New federal regulations for safety and security requirements further stress the utility owners operating and capital budgets.

The heart of our quality management plan is the Computerized Maintenance Management System (CMMS). This key management tool allows the Project Manager to ensure that all infrastructure assets are safeguarded and maintained. The CMMS is vital to managing the infrastructure assets through their entire useful life. The system allows the manager to maintain budget requirements by performing more preventative then corrective maintenance. Our established CMMS system that we propose to use will include the following key features:

- Work Order System – Preventive and corrective work orders generated to document each task with an assigned priority, cost and other pertinent data.
- Project Planning and Scheduling – All capital projects, replacement equipment and existing equipment will have a maintenance schedule assigned.
- Equipment History – The current repair and service history needed to make repair verses replacement decisions.
- Present condition of the system and its appurtenances
- Scheduling routine, urgent and emergency repair
- Preventative maintenance schedules to maintain peak operational efficiency

Customer Service Plan

One of USWC's strengths is our devotion to customer service. Customer service and satisfaction is one of the most critical measures of performance. In our program we have the following key elements:

- ◆ Exceed Customer Expectations
- ◆ Make the customer number one "Central to the Business" our reason for being in business.
- ◆ Provide 365 days per year and 24-hour/7-day-a-week customer service
- ◆ Respond to service requests in a timely fashion and within prescribed response times.
- ◆ Effective meter reading, maintenance and calibration program

Utility Safety Plan

At USWC our personnel are our most valuable assets. As such the safety of our employees is a fundamental pillar of our quality management approach to utility operations. USWC strives to always provide a safe and healthy work environment for our staff, subcontractors and the community as a whole.

USWC as part of its transition will take its existing Safety Manual and integrate site specific policies and procedures. Training is provided to the staff to familiarize them with various aspects of the plan. The most current copy of the Safety Manual is always kept at the facilities office for staff review. USWC's Safety Officer will review the Safety Plan on an annual basis at a minimum or as required due to operational conditions. The Safety Officer will also collect and post OSHA 300 logs as required.

Transition Plan

The overall success of this proposal is heavily tied to a successful transition of personnel and equipment. In addition the past experience of the utility contractor in the overall management of an entire utility is critical. USWC senior staff brings the collective experience of over 100 years in utility management and transitions to this project. USWC has converted numerous municipal utilities to USWC operations or ownership. It is U.S. Water's philosophy that during the transition of a facility to provide a seamless transfer of staff and facilities to USWC while meeting all regulatory requirements, depot operational needs and without a disruption of water or wastewater services. The overall project, including the transition will be managed by USWC's onsite Project Manager. He will coordinate USWC resources and will provide a wide range of technical and administrative support.

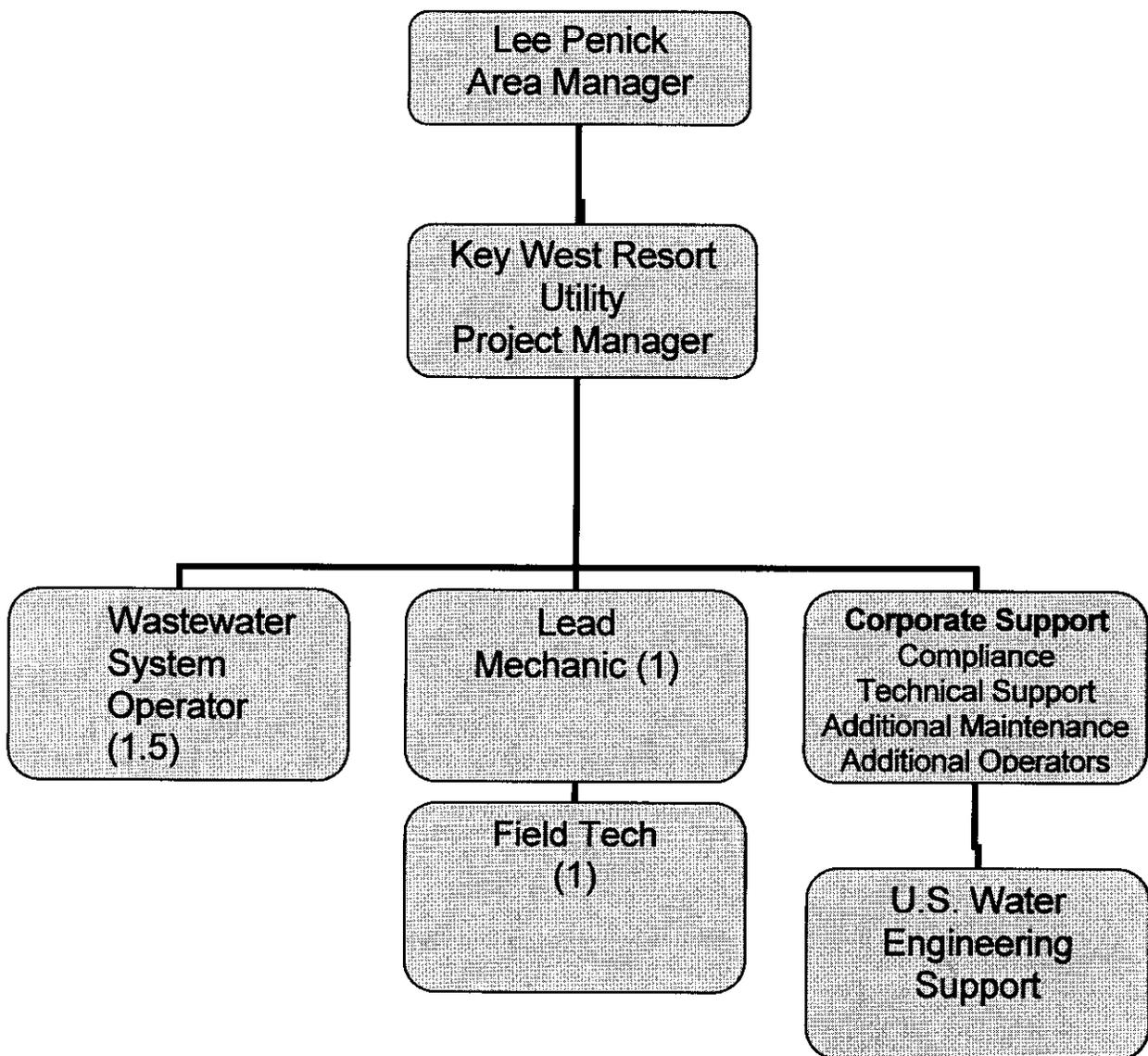
USWC's transition plan addresses the full range of technical and administrative services to be transitioned from the existing operational staff. We understand the need to ensure reliable and uninterrupted wastewater utility service to the KWRU. Our initial focus is to develop and support the existing staff and where needed supplement the staff with outside resources. We are keenly aware that during any transition it is extremely important to be sensitive the needs of the existing staff. We realize that any change related to a person's job can result in concerns and questions for the employee and their family. Therefore, our transition plan is based on the principles of:

- ✚ Treating each and every individual with respect
- ✚ Dealing with employee concerns on an individual basis
- ✚ Being prepared to deal with their concerns as quickly and completely as possible

During the transition USW will interview all of the incumbent employees and will make every effort to find a role in the new operations for all staff who wish to remain with the wastewater facilities. We understand that KWRU wishes to retain the services of there current lead operator and USWC will make every effort to accommodate this request.

Staffing Plan

USWC has devised our staffing plan to provide high quality service with an eye towards financial savings. Our proposed staffing levels are detailed below on the organizational chart.



PRICE PROPOSAL

U.S. Water Services Corporation (USWC) has developed an O&M model and a methodology to establish an operational cost for the Key West Resort Utility (KWRU) wastewater utility system. Our evaluation of the costs of the management, operation and maintenance and assumptions USWC has made are laid out in the following sections.

Project Scope:

- Provide project labor for the operations and maintenance of the KWRU wastewater treatment and collection system and reuse distribution system. Labor costs only include normal working hours from 08:00 to 17:00. Work requested to be performed outside of those hours or emergency work will be billed to the KWRU as an additional expense at appropriate labor rates.
- The costs for chemicals and residuals management are to be billed to KWRU on a per occurrence basis with an appropriate allowance overhead and margin.
- KWRU will provide to USWC the use of existing rolling stock for the completion of project duties. During the transition USWC would request to negotiate the vehicle situation with KWRU to allow for the purchase and disposal of the existing rolling stock and allow USWC to purchase equipment that fits the uniform state wide corporate structure of USWC.
- USWC is providing a labor only scope all other costs associated with this project is the sole responsibility of KWRU.

Pricing Formula:

USWC has divided its monthly fee into three specific groups as follows: Personnel Services, Professional Fees & Utilities and Other.

Personnel Services includes all hourly wages, overtime, benefits and taxes for employees assigned to the project.

Professional Fees & Utilities includes operating supplies needed to for the operation of the facilities, (i.e. uniforms, compliance sampling, fuel, and other sundry items.)

Other includes all other costs covered by this proposal not listed in the above groups.

The total monthly cost proposed for this project is \$33,171.34

Price Adjustments:

The contract price will be adjusted annually every April 1st by use of the CPI as found for the Southeast United States or by 5% whichever is greater. If the scope of services is changes due to the addition of new facilities or appurtenances or regulatory requirements a new contract price will be negotiated with the KWRU on a case by case basis.

Attachment 7

01/15/2003

2003/21

WASTEWATER ISSUES

3-6
Agenda

Bill Smith, representing Key West Resort Utilities addressed the Board. After discussion motion was made by Commissioner McCoy and seconded by Commissioner Nelson granting conceptual approval to extend the Contract between Monroe County and Key West Resort Utilities to provide an engineering/survey for the Rockland, Big Coppitt and Geiger Key wastewater project. Chief Assistant County Attorney Rob Wolfe, and Clerk of Court Danny L. Kolhage addressed the Board. Roll call vote was unanimous.

DIVISION OF GROWTH MANAGEMENT

Karen K. Cabanas, Esq. of the firm Morgan and Hendrick referred the Board to her written Growth Management Litigation Report, dated January 13, 2003.

COUNTY ATTORNEY

Mr. Wolfe discussed with the Board a request by Islamorada, Village of Islands to rejoin the Upper Keys Health Care Taxing District. This item was referred to Staff.

MISCELLANEOUS

Mayor Spehar discussed having Board workshops that would not be televised and would not include public input. Mr. Collins, Mr. Roberts, and Mr. Kolhage addressed the Board. Mayor Spehar requested that at the February meeting of the Board in Key Largo there be a Board workshop to begin at 9:00 am, with the regular meeting at 10:00 a.m.

There being no further business to come before the Board, the meeting was adjourned.

Danny L. Kolhage, Clerk
and ex-officio Clerk to the Board
of County Commissioners
Monroe County, Florida

Isabel C. DeSantis
Isabel C. DeSantis, Deputy Clerk

Post-It® Fax Note		7671	Date	8/1/03	# of pages	1
To	<i>Mayor Carter</i>		From	<i>Alvin M. Spehar</i>		
Co./Dept.			Co.			
Phone #			Phone #	<i>292-3140</i>		
Fax #	<i>292-1212</i>		Fax #	<i>292-3466</i>		

Attachment 8

KW RESORT UTILITIES CORP.
PO Box 2125
Key West, Florida 33045
Telephone (305) 294-9578
Facsimile (305) 294-1212

July 31, 2003

VIA FACSIMILE 305-292-3577

Commissioner Sonny McCoy
Monroe County Board of County Commissioners
530 Whitehead Street
Key West, Florida 33040

Re: Big Coppitt Key Wastewater Service Area

Dear Commissioner McCoy:

I am in receipt of the Florida Keys Aqueduct Authority letter dated July 30, 2003 regarding the Big Coppitt Wastewater Service Area. KW Resort Utilities is ready, willing, and able to service Big Coppitt including Rockland and Geiger Keys based upon our estimate dated June 30, 2003. As you know we have just substantially completed the installation of the vacuum collection system on South Stock Island and are prepared to do additional work.

With respect to the FCAA Board needed requirements 1 through 7, I have the following comments:

- 1.) **A Guaranteed Maximum Capital Cost.** We would be prepared to provide said guarantee with appropriate bonding requirements, but only after we have performed the surveying, engineering, permitting, and public bidding of that project. We requested in January 2003, a \$981,000 grant from the county to perform those services for the project. The Board approved that request at that time based upon our letter dated January 10, 2003 a copy of which is attached. The crux of the issue is that we need the funds now to proceed, not to study this issue, but to actually engineer, permit, bid and then provide the guarantees required by the Aqueduct Authority. I note that the surveying, most of the engineering and permitting are potable, they can be used by the FCAA if we don't proceed.
- 2.) **Adequate Planned Public Input and Public Outreach.** KW Resort Utilities would provide more than adequate public outreach and obtain public input by providing a minimum of two workshops in the location area, a web page explaining the job and giving full details and in addition provide a telephone hotline for any customers interested in the project.

- 3.) **Completion of a Pre-design Facility Report.** We would object to this requirement as at this time as at this time we are ready to guarantee that we will provide the wastewater treatment required by this project by expanding our existing plant and completing a transmission line from Rockland Key to our plant on South Stock Island. Therefore feel that a pre design facility report is a waste of money.
- 4.) **Financial Plan Indicating All Proposed Fees and Charges.** We will be happy to provide a summary of our proposed fees and charges. Our current proposed monthly flat rate fee for Residential Sewer Services is \$35.89 per month, which would carry over to the new service area; our current connection charge is \$2,700.00 per month and we currently charge an inspection fee equal to 10 percent of the on-site improvement cost with a minimum charge of \$150.00. This fee is for contract administration and costs associated with the actual inspection of the connection to our service lines.
- 5.) **Funding Commitment by KWRU.** Our funding commitment is to provide the wastewater treatment services needed for this service area and the transmission facilities from Rockland Key to our treatment plant at whatever cost they may be. The grant of funds is for the collection system. This is the same formula used on South Stock Island.
- 6.) **Commitment by BOCC for 20 Years Bonding for Connection Charges.** This is solely within the control of Board of County Commissioners and based upon the systems developed for South Stock Island it appears that the twenty- year financing of the system is readily available.
- 7.) **Funding commitment by BOCC of project balance.** The more difficult item is the funding commitment for the balance of the project cost. I leave that in the BOCC's capable hands.

We look forward to meeting with you to successfully complete this project, which we estimate can be completed within two years of the commencement date of the surveying and engineering.

Sincerely yours,

William L. Smith, Jr.
President

WLS/rms



Florida Keys Aqueduct Authority

Post Office Box 1239
1100 Kennedy Drive
Key West, Florida 33041-1239
Telephone (305) 296-2454

July 30, 2003

Commissioner Sonny McCoy
Monroe County Board of County Commissioners
530 Whitehead Street
Key West, FL 33040

Re: Big Coppitt Key Wastewater Service Area

Dear Commissioner McCoy:

On Thursday, July 24th, the FKAA Board of Directors met and discussed the concept of Key West Resort Utilities expanding its PSC regulated franchise area on Stock Island to include the Big Coppitt wastewater service area.

The position of the FKAA Board of Directors is to ensure that the most cost-effective wastewater service system available is provided. If it is determined that KWRU is the most cost-effective solution and there are certain technical, financial, and public relations guarantees met, the FKAA Board would not object to KWRU expanding its franchise to Big Coppitt.

The FKAA Board would need guarantees for the following items prior to KWRU expanding its franchise area:

1. A guaranteed maximum capital cost
2. Adequate planned public input and public outreach *workshop, web page, hotline*
3. Completion of a pre-design facility report
4. Financial plan indicating all proposed fees and charges
5. Funding commitment by KWRU (approx. \$4,250,000.00)
6. 20 year financing of System Development Charges (hook-up fees)
7. Funding commitment by BOCC of project balance (currently estimated at \$9,480,000.00)

Information regarding the estimated construction cost, and the funding commitments required of KWRU and Monroe County to make it a viable project was obtained from an estimate prepared by KWRU dated June 30, 2003. (copy attached).

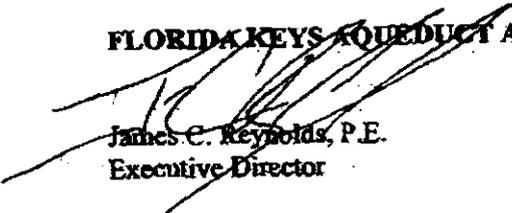
It is the understanding of the FKAA that a privately owned utility franchise may not be eligible to receive any of the pending \$100 million federal grant when it becomes available. Therefore, unless the county is committed to funding the balance of the Big Coppitt costs for KWRU, the FKAA must ensure that Big Coppitt remains eligible to benefit from Federal grants.

Commissioner Sonny McCoy
July 30, 2003
Page 2

I look forward to meeting with you to discuss the above list in greater detail and to work towards a successful, economical project.

Sincerely,

FLORIDA KEYS AQUEDUCT AUTHORITY



James C. Reynolds, P.E.
Executive Director

/jr

cc: FKAA Board of Directors
Board of Monroe County Commissioners
Jim Roberts, County Administrator
Tim McGarry, Director of Growth Management
George Garrett, Director of Marine Resources

KW RESORT UTILITIES

P.O. Box 2125
 Key West, Florida 33045
 Telephone (305) 294-9578
 Facsimile (305) 294-1212

BIG COPPITT, ROCKLAND & GEIGER KEYS
COST ESTIMATE
JUNE 30, 2003

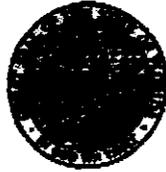
Collection System	\$10,500,000
Wastewater Plant AWT & Force Main to South Stock Island	4,250,000
Surveying, Engineering & Permitting	1,000,000
Administration & Legal	950,000
	<hr/>
	\$16,700,000
	<hr/>

SOURCES OF FUNDS

Area Customers 1100 X \$2700	\$2,970,000
South Stock Island Funds 1500 X \$2100	3,150,000
Balance of \$6,000,000 Funds (\$6,000,000 - \$4,200,000 Cost SSI)	1,800,000
KW Resort Utilities Contribution (Plant & Force Main)	4,250,000
	<hr/>
	\$12,170,000
	<hr/>
Funds to Complete	\$4,530,000
	<hr/>

Monthly residential sewer fee currently is \$35.89 and will be extended to above customers.

Attachment 9



MEMBERS:
 JAMES H. JACGER, CHAIRMAN
 JAMES DEASON
 JOSE L. BAEZ
 "RUDY" BRADLEY
 M. DAVIDSON

Public Service Commission

March 21, 2003

John Jenkins, Esq.
 Rose, Sundstrom, & Bentley, LLP
 2548 Blairstone Pines Drive
 Tallahassee, FL 32301

Re: Utility Agreement for K W Resort Utilities Corp.

Dear Mr. Jenkins,

We have received your letter dated March 19, 2003, accompanying the latest revision of the Utility Agreement for K W Resort Utilities Corp. After reviewing this agreement, we are satisfied that the concerns expressed by area developers, as well as those of Commission staff, have been adequately addressed. We would recommend that this Utility Agreement be used for all current and future connections, and hope that you would distribute this latest version to all interested parties. Thank you for your help in resolving this matter.

The opinions contained in this document are those of Commission staff and do not bind the Commission's decision on any future vote on this matter. If you have any questions regarding the above Utility Agreement, please contact me at (850) 413-6934.

Sincerely,

Troy Rendell
 Public Utilities Supervisor

TR:ts

cc: Doug Carter, K W Resort Utilities
 Division of Economic Regulation (Willis, Sargent)
 Office of the General Counsel (Jaeger)
 Interested parties of February 17, 2003 telephone conference, via facsimile and mail

UTILITY AGREEMENT

THIS UTILITY AGREEMENT (Agreement), dated as of the _____ day of April 2003, by and between Key West Resort Utilities, a Florida corporation, having its office(s) at 6450 College Road, Key West Florida 33040, (Service Company) and, Harbor Shores Condominium Unit Owners Association Inc., (Harbor Shores), having its office(s) at 6800 Maloney Ave., Key West, Florida 33040. (Developer).

R E C I T A L S

- A. Developer is the owner of certain real property more particularly described on Exhibit A, attached hereto and made a part hereof (the Property).
- B. Developer proposes to construct, own, operate and maintain sewage collection system on the Property to service new construction located on the Property.
- C. Service Company owns, operates, manages and controls a Central Sewage System and is willing to provide sanitary sewer services pursuant to this Agreement.
- D. Developer requests that Service Company provide central wastewater service to the Property as indicated on the plans prepared by Weiler Engineering for The South Stock Island sewer expansion. (Copy of plan sheet included as an exhibit).

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00), and the mutual covenants and agreements hereinafter set forth, and intending to be legally bound thereby, it is agreed as follows:

1. **Definitions**

Business Day shall mean any day of the year in which commercial banks are not required or authorized to close in New York, New York.

Capacity Reservation Fee as such term is defined in Section 6 hereof.

Central Sewage System shall mean the central collection, transmission, treatment and disposal system and appurtenant facilities owned and operated by the Service Company.

Connection as such term is defined in Section 6 hereof.

Customer shall mean any residential or commercial customer of Service Company.

Equivalent Residential Connections (ERC), shall be defined as one individual residential connection or, for commercial and other uses, the estimated flow based on the use and Chapter 64E-6 F.A.C., divided by the most recently approved Capacity Analysis rate per residential connection (currently 250 gallons per day per residential connection).

Plans and Specifications as such term is defined in Section hereof.

Point of Delivery shall mean the point where the Central Sewage System connects to the pipes of the Customer, or as determined by Service Company when the on-site System is not conveyed to Service Company.

Property as such term is defined in the Recitals hereof.

Property Installations or System shall mean any service lines located on individual lots or parcels of the Property or to buildings located on the Property that connect to the Central Sewage System, and may include facilities located outside the Property, required to be installed by Developer, to connect facilities on the Property to the Central Sewage System.

Service Company's Affiliates shall mean any disclosed or undisclosed officer, director, employee, trustee shareholder, partner, principal, parent, subsidiary or other affiliate of Service Company.

Tariff shall mean Service Company's existing and future schedules of rates and charges for sewer service.

2. New System Construction

- (a) Prior to the construction and installation of the System, Developer shall, at its sole cost and expense, cause to be prepared and provide to Service Company plans and specifications of the system (Plans and specifications), which Plans and Specifications shall be prepared by engineers reasonably acceptable to Service company, and in accordance with all policies and practices of Service Company and all applicable laws and regulations and standards adopted by the Department of Environmental Protection and Monroe County.
- (b) Service Company shall approve or disapprove of the Plans and Specifications within

thirty days (30) of receipt thereof by written notice to Developer.

- (c) Upon Developer's receipt of Service Company's written notice of disapproval of the Plans and Specifications, Developer shall promptly revise the Plans and Specifications in accordance with any requirements set forth by Service Company in its written notice of disapproval, and re-submit such revised Plan and specifications to Service Company for approval or disapproval. Service Company shall approve or disapprove of any revised Plans and Specifications with five (5) business days of receipt thereof by written notice to Developer.
- (d) Upon Developer's receipt of Service Company's written notice of approval of the Plans and Specifications, Developer may proceed with the construction and installation of the System. Developer shall notify Service Company seventy-two (72) hours prior to beginning construction. All work shall be completed and inspected by licensed and insured contractors and engineers reasonably acceptable to Service Company. In accordance with Chapter 62-604 F.A.C., Developer shall provide, at its sole cost, a Professional Engineer Registered in Florida to provide on-site observation during construction and testing and to certify that the System is constructed in compliance with the approved Plans and Specifications. All materials employed by Developer for the System shall be reasonably acceptable to Service Company. No portion or element of the System shall be covered or concealed until inspected by Service Company. Developer shall notify Service Company of Developer's readiness for inspection of the System, and Service Company shall inspect the System within two (2) business days after each such notice. Any portion of the System not inspected by Service Company within said time period, shall be deemed to have been accepted by Service Company. In the event that Service Company determines through any such inspection that any portion of the System does not fully comply with the Plans and specific conditions or applicable laws and regulations, Service Company shall notify Developer in writing of such noncompliance not more than two (2) business days after any such inspection and Developer shall immediately modify the System to insure that the System fully complies with the Plans and Specifications and applicable laws and regulations.
- (e) In the event Service Company discovers that any portion or element of the System has been installed, covered or concealed without the prior approval of Service Company, Developer shall, upon written demand by Service Company, immediately dismantle or excavate such portion of the System at its sole cost and expense.

3. **System Records**

Prior to Service Company's acceptance of all or any portion of the System for service, operation and maintenance or for service only, Developer shall deliver the following records and documents to Service Company:

- (a) Copies of all invoices and/or contracts for the construction and installation.
- (b) An affidavit signed by the Developer stating that there are no parts or portions of the System which are not included in the invoices and contracts noted in subsection (a) above, that said invoices and contracts accurately and fully reflect the total cost of the System and that the System is free and clear of all liens and encumbrances.
- (c) Lien waivers from all contractors, subcontractors, material people, and any other parties that provided labor, services or materials in connection with the construction of the System.
- (d) A reproducible Mylar and two (2) sets of blue line copies, accurately depicting all of the System as constructed and installed, and signed and sealed by the engineer and surveyor of record for the System.
- (e) Copies of the results of all tests conducted on the System.
- (f) Any other records or documents required by applicable law or required under the Tariff.
- (g) A certificate of completion of the System signed and sealed by the engineer of record.
- (h) A copy of the Department of Environmental Protection permit to construct the System and all inspection reports and approvals issued by the Engineer and the Department of Environmental Protection and any other applicable governmental authority or agency.
- (i) Developer shall furnish a two (2) year written warranty and a two (2) year maintenance bond, guaranteeing Service Company against any defects in materials and workmanship of the System for the period of two (2) years after the date of acceptance of the System by the Service Company.
- (j) A bill of sale, in recording form, conveying all right, title and interest in and to the System, to Service Company free of any and all liens and encumbrances for that portion of the System located on the Service Company side of the Point of Delivery.

4. Property Rights

In those cases in which Service Company accepts all or any portion of the System for service, operation and maintenance, Developer shall convey the following property rights and interests for that portion of the System to Service Company:

- (a) A non-exclusive easement, in the form attached as Exhibit "B", for that portion of the Property of sufficient size to enable Service Company ingress and egress and to operate, maintain and replace such portions of the System not located within public rights-of-way. The foregoing easement shall be in effect for a period of time not less than the period during which the Service Company shall use the System to provide service to Customers.
- (b) A non-exclusive easement, in the form attached as Exhibit "B", of sufficient size to enable ingress, egress and access by Service company personnel or vehicles to any lift or pump station located on the Property. The foregoing easement shall be in effect for a period of time not less than the period during which the Service Company shall use the System to provide service to Customers.
- (c) Notwithstanding the foregoing easements, Developer retains all rights and privileges to utilize the Property in any manner it deems appropriate provided such use is not inconsistent with the purposes intended for such easements.

5. Existing Systems

Developer may connect an existing gravity or low pressure system (Existing System) to Service Company's vacuum system provided the Existing System meets the following criteria:

- (a) The Existing System must meet all county plumbing codes and have in full force and effect a Department of Environmental Protection permit to operate said system, if required by Department of Environmental Protection. Developer agrees to maintain said permit if any, at it's cost and expense.
- (b) The Existing System must be free from any intrusion of water from ground or surface resources.
- (c) Developer must make a non-refundable deposit with Service Company of \$_____ to

pay for the inspection and testing of the Existing System by Service Company's agents and engineers.

- (d) Provision for Existing Systems requiring hydraulic lift to Right-of-Way – The Developer, at its discretion, may propose to utilize an existing gravity system that delivers sewage flows to the County Right-of-Way via a hydraulic system with the following conditions: Total flow from any one source that is delivered via hydraulic assistance shall not exceed 3 GPM. Where an Existing System proposes to transmit flows in excess of 3 GPM, the Existing System must be designed with multiple output points not to exceed 3 GPM each to be separated by a horizontal distance of 100 feet or greater as measured along the Service Company's vacuum main. The Developer's hydraulic system must be configured with an electronic shut-off to ensure that flows do not continue during an emergency failure of the Service Company's vacuum system. The Developer agrees to maintain a gravity system that does not incur excessive amounts of infiltration and inflow (I/I). An excessive amount of I/I is defined as flows exceeding 150% of the average daily flows for a 12-hour period. The utility reserves the right to discontinue service to the Developer in the event that the utility determines that excessive amounts of I/I are being received from the Developer.
- (e) In the event that an Existing System, after connection to the Central Sewage System, needs repair (other than non-emergency repairs) then Developer agrees to make said repairs within 30 days of notice by Service Company. In the event of failure by Developer to make repairs to its system within said time period the Service Company shall be permitted to discontinue service to the Existing System.

In the event of the need for emergency repairs to an Existing System, Service Company shall be authorized to make said repairs (but shall not be obligated) and upon presentation of a bill to Developer for said repairs said bill shall be immediately due and payable.

- (f) Developer agrees to provide Service Company with:
- (1) a copy of its Department of Environmental Protection Permit, if required;
 - (2) a survey accurately depicting the location of the Existing System as constructed and installed and signed and sealed by a surveyor; and,

Service Company shall have the right, but not the obligation, to accept ownership of the Existing System. Should Service Company accept ownership, Developer shall comply with

the Property Rights requirements set forth in § 4 herein.

Upon acceptance by Service Company, Developer agrees that Service Company, or its agents, shall have access at all reasonable hours to the Existing System on the Property for the purpose of inspection, repair, meter reading, disconnecting service, reconnecting service, and in doing so will not be liable for trespass. This shall include the right of access to areas outside individual units on the Property.

6. Rates, Fees, Charges

- (a) All Customers will pay the applicable fees, rates and charges as set forth in the Tariff. Nothing contained in this Agreement shall serve to prohibit Service Company's right to bill or collect its rates and charges from Customers, nor to require compliance with any provision of its Tariff.
- (b) Developer shall pay to Service Company a reservation fee (Capacity Reservation Fee), in the amount of Two Thousand Seven Hundred (\$2,700.00) dollars per E.R.C. connection to be reserved by Developer to serve the residential or commercial structures to be constructed in or upon the Property (individually, a Connection, collectively, the Connections). Prior to execution of this agreement, Developer shall supply Service Company access and information necessary to determine number of ERC's proposed. Information may include plans, occupational licenses, etc. for:

Total EDU's

- (c) The Capacity Reservation Fee for each connection shall be payable by Developer to Service Company as follows:
 - (i) 1/3 (\$TBD) upon execution of this agreement
 - (ii) 2/3 (\$TBD) upon connection of the first house or office building to the system
- (d) In the event of additional development on the property or a change in use Developer shall provide Service Company with a site plan and schedule of proposed development of the Property setting forth the amount of Connections for which capacity shall be additionally reserved under this Agreement. Service Company hereby agrees to reserve such capacity for the benefit for Developer subject to the provisions of this Section 6, provided, however, that such reservations shall not be effective until Service Company has received the initial installment of the Capacity

Reservation Fee in accordance with Section 6(c)(i) hereof, and provided, further, that Service Company shall have the right to cancel such reservations in the event of Developer's failure to comply with the terms of this Agreement. In the event there is additional water usage over and above the amount reserved in paragraph 6b above, (based on an annual review) the developer shall remit additional capacity reservation fees to Service Company 30 days after notice by Service Company of additional fees due.

- (e) Developer shall pay to Service Company, for engineering services and applicable administrative fees necessary to review and approve construction plans and documents and for periodic inspection during construction and testing in the amount of \$ _____. Said payment is to be made 15 days after submission of plans and documents.
- (f) In the event of default by Developer and the payment of fees hereunder, Service Company may cancel this agreement by giving 30 (thirty) days written notice of default and retain all payments hereunder as liquidated damages.
- (g) Developer agrees that in the event of a change of use or any change that might affect the flows (i.e. Addition of a restaurant) Service Company will be notified and the applicable Capacity Reservation fees will be paid prior to discharge to the Central Sewage System.

7. Absolute Conveyance

Developer understands, agrees and acknowledges that Developer's conveyance of any and all easements, real property or personal property (including, without limitation, the System), or payment of any funds hereunder (including, without limitation, the Capacity Reservation Fee and Connection Charges), shall, upon acceptance by Service Company, be absolute, complete and unqualified, and that neither Developer nor any party claiming by or through Developer shall have any right to such easements, real or personal property, or funds, or any benefit which Service Company may derive from such conveyance or payments in any form or manner.

8. Delivery of Service; Operation and Maintenance

- (a) Upon Developer's full performance of its obligations under this Agreement, Service Company shall provide service to the Point of Delivery in accordance with the terms of this Agreement, all applicable laws and regulations and shall operate and maintain the Central Sewage System to the Point of Delivery in accordance with the terms and

provisions of this Agreement. Said service shall be provided on or about September 1st, 2003.

- (b) Developer shall, at its sole cost and expense, own, operate and maintain any part of the System that has not been conveyed to Service Company pursuant to the terms and conditions of this Agreement.
- (c) Developer acknowledges that certain water quality standards must be met prior to influent entering the wastewater treatment plant (primarily chloride levels and excessive flows) and agrees to allow Service Company to monitor flows and water quality at Service Company's discretion at a point on the Developer's side of the Point of Delivery. If it is determined that substandard influent or excessive flows are entering the Central Sewage System via Developer's System, Developer agrees to isolate the source and to repair or replace the portion or portions of the faulty System in a manner acceptable to Service Company in accordance with this agreement.
- (d) In the event any portion of the Property is developed as a condominium, the condominium association shall be required to execute a maintenance agreement with respect to any portion of the System not conveyed to Service Company. Such maintenance agreement shall provide that if the condominium association fails to adequately maintain and repair the System, Service Company shall have the right to maintain and repair such System at the sole cost and expense of the condominium association.

9. Repair of System

In the event of any damage to or destruction of any portion of the Central Sewage System due to any acts or omissions by Developer, any Customer or their respective agents, representatives, employees, invitees or licensees, Service Company shall repair or replace such damaged or destroyed facilities at the sole cost and expense of responsible party. Developer shall operate, maintain and repair all other portions of the System not conveyed to Service Company at its sole cost and expense.

10. Term

This Agreement shall become effective as of the date first written above, and shall continue for so long as Service Company provides sewer service to the public.

11. **Default**

In the event of a default by either party of its duties and obligations hereunder, the non-defaulting party shall provide written notice to the defaulting party specifying the nature of the default and the defaulting party shall have five (5) days to cure any default of a monetary nature and thirty (30) days for any other default. If the default has not been cured within the applicable period (time being of the essence), the non-defaulting party shall be entitled to exercise all remedies available at law or in equity, including but not limited to, the right to damages, injunctive relief and specific performance. Service Company may, at its sole option, discontinue and suspend the delivery of service to the System in accordance with all requirements of applicable law and the Tariff if Developer fails to timely pay all fees, rates and charges pursuant to the terms of this Agreement.

12. **Excuse from Performance**

- (a) **Force Majeure.** If Service Company is prevented from or delayed in performing any act required to be performed by Service Company hereunder, and such prevention or delay is caused by strikes, labor disputes, inability to obtain labor, materials or equipment, storms, earthquakes, electric power failures, land subsidence, acts of God, acts of public enemy, wars, blockades, riots, acts of armed forces, delays by carriers, inability to obtain rights-of-way, acts of public authority, regulatory agencies, or courts, or any other cause, whether the same kind is enumerated herein, not within the control of Service Company (Force Majeure), the performance of such act shall be excused for a period equal to the period of prevention or delay.
- (b) **Governmental Acts** If for any reason during the term of this Agreement, other than the fault of Developer, any federal, state or local authorities or agencies fail to issue necessary permits, grant necessary approvals or require any change in the operation of the Central Sewage System or the System (Governmental Acts), then, to the extent that such Governmental Acts shall affect the ability of any party to perform any of the terms of this Agreement in whole or in part, the affected party shall be excused from the performance thereof and a new agreement shall be negotiated, if possible, by the parties hereto in conformity with such permits, approvals or requirements. Notwithstanding the foregoing, neither Developer nor Service Company shall be obligated to accept any new agreement if it substantially adds to its burdens and obligations hereunder.
- (c) **Emergency Situations** Service Company shall not be held liable for damages to Developer and Developer hereby agrees not to hold Service Company liable for damages for failure to deliver service to the Property upon the occurrence of any of

the following events:

1. A lack of service due to loss of flow or process or distribution failure;
2. Equipment or material failure in the Central Sewage System or the System, including storage, pumping and piping provided the Service Company has utilized its best efforts to maintain the Central Sewage System in good operating condition; and
3. Force Majeure, unforeseeable failure or breakdown of pumping, transmission or other facilities, any and all governmental requirements, acts or action of any government, public or governmental authority, commission or board, agency, agent, official or officer, the enactment of any statute, ordinance, resolution, regulation, rule or ruling, order, decree or judgment, restraining order or injunction of any court, including, without limitation, Governmental Acts.

(d) Notwithstanding any excuse of performance due to the occurrence of any of the foregoing events, Developer shall not be excused from payment of any fees, charges and rates due to Service Company under the terms of this Agreement (including without limitation, the Capacity Reservation Fee and Connection Charges).

13. Successors and Assigns

This Agreement and the easements granted hereby, shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

14. Indemnification

Developer shall indemnify, defend and hold Service Company and Service Company's Affiliates harmless from and against any and all claims, demands, causes of action, losses, damages, liabilities, costs and reasonable expenses, including, without limitation, attorneys fees and disbursements, suffered or incurred by Service Company or any of Service Company's Affiliates and arising out of or in connection with use, occupancy, or operation of the System, the Property, or the activities, errors, or omissions of Developer, its agents, employees, servants, licensees, invitees, or contractors on or about the Property, pursuant to terms and conditions of this Agreement. Developer's duty to indemnify shall also include, but not be limited to, indemnification from and against any fine, penalty, liability, or cost to Service Company arising out of Developer's violation or breach of any law, ordinance, governmental regulation, this Agreement requirement or permit applicable to the System or

Developer's activities on or about the Property. The provisions of this Section 13 shall survive the termination of this Agreement. Developers civil engineering firm shall maintain errors and omission@ insurance in an amount of \$1,000,000.

15. Insurance

For up to one year following conveyance of the System to Service Company Developer shall maintain or cause to be maintained a policy of commercial general liability insurance with a broad form contractual liability endorsement covering Developer's indemnification obligations contained in this Agreement, and with a combined single limit of not less than \$1,000,000 general liability, insuring Service Company and Service Company's Affiliates, as additional insured in such forms and with an insurance company reasonably acceptable to Service Company, and shall deliver a copy of such insurance policy together with a certificate of insurance to Service Company prior to or upon execution of this Agreement. All such insurance shall be written on an occurrence form.

Assign any and all warranties, and maintenance, completion and performance bonds and the right to enforce same to the Service Company which Developer obtains from any contractor constructing the System. Developer shall obtain a written warranty, completion, and performance and maintenance bonds from its contractor for a minimum period of twenty four (24) months. If Developer does not obtain such written warranty and performance and maintenance bonds from its contractor and deliver same to Service Company, then in such event, Developer agrees to warrant the construction of the System for a period of twenty four (24) months from the date of acceptance by the Service Company.

16. Notices

All notices, demands, requests or other communications by either party under this Agreement shall be in writing and sent by (a) first class U.S. certified or registered mail, return receipt requested, with postage prepaid, or (b) overnight delivery service or courier, or (c) telefacsimile or similar facsimile transmission with receipt confirmed as follows:

If to Service Company:

Mr. Doug Carter, General Manager
6450 Junior College Road
Key West, Florida 33040
Fax (305) 294-1212

With a copy to:

Mr. Jeff Weiler, P.E.
Weiler Engineering
20020 Veterans Blvd.
Port Charlotte, Florida 33954
Fax (941) 764-8915

If to Developer:

Key West, Florida 33040

17. Tariff

This Agreement is subject to all of the terms and provision of the Tariff. In the event of any conflict between the Tariff and the terms of this Agreement, the Tariff shall govern and control.

18. Miscellaneous Provisions

- (a) This Agreement shall not be altered, amended, changed, waived, terminated or otherwise modified in any respect or particular, and no consent or approval required pursuant to this Agreement shall be effective, unless the same shall be in writing and signed by or on behalf of the party to be charged.
- (b) All prior statements, understandings, representations and agreements between the parties, oral or written, are superseded by and merged in this Agreement, which alone fully and completely expresses the agreement between them in connection with this transaction and which is entered into after full investigation, neither party relying upon any statement, understanding, representation or agreement made by the other not embodied in this Agreement. This Agreement shall be given a fair and reasonable construction in accordance with the intentions of the parties hereto, and without regard to or aid of canons requiring construction against Service Company or the party drafting this Agreement.
- (c) No failure or delay of either party in the exercise of any right or remedy given to such party hereunder or the waiver by any party of any condition hereunder for its benefit (unless the time specified herein for exercise of such right or remedy has expired) shall constitute a waiver of any other or further right or remedy nor shall any single or

partial exercise of any right or remedy preclude other or further exercise thereof or any other right or remedy. No waiver by either party of any breach hereunder or failure or refusal by the other party to comply with its obligations shall be deemed a waiver of any other or subsequent breach, failure or refusal to so comply.

- (d) This Agreement may be executed in one or more counterparts, each of which so executed and delivered shall be deemed an original, but all of which taken together shall constitute but one and the same instrument. It shall not be necessary for the same counterpart of this Agreement to be executed by all of the parties hereto.
- (e) Each of the exhibits and schedules referred to herein and attached hereto is incorporated herein by this reference.
- (f) The caption headings in this Agreement are for convenience only and are not intended to be a part of this Agreement and shall not be construed to modify, explain or alter any of the terms, covenants or conditions herein contained.
- (g) This Agreement shall be interpreted and enforced in accordance with the laws of the state in which the Property is located without reference to principles of conflicts of laws. In the event that the Florida Public Service commission loses or relinquishes its authority to regulate Service Company, then all references to such regulatory authority will relate to the agency of government or political subdivision imposing said regulations. If no such regulation exists, then this Agreement shall be governed by applicable principles of law.
- (h) Each of the parties to this Agreement agrees that at any time after the execution hereof, it will, on request of the other party, execute and deliver such other documents and further assurances as may reasonably be required by such other party in order to carry out the intent of this Agreement.
- (i) If any provision of this Agreement shall be unenforceable or invalid, the same shall not affect the remaining provisions of this Agreement and to this end the provisions of this Agreement are intended to be and shall be severed. Notwithstanding the foregoing sentence, if (I) any provision of this Agreement is finally determined by a court of competent jurisdiction to be unenforceable or invalid in whole or in part, (ii) the opportunity for all appeals of such determination have expired, and (iii) such unenforceability or invalidity alters the substance of this Agreement (taken as a whole) so as to deny either party, in a material way, the realization of the intended benefit of its bargain, such party may terminate this Agreement within thirty (30) days after the final determination by notice to the other. If such party so elects to

terminate this Agreement, then this Agreement shall be terminated and neither party shall have any further rights, obligations or liabilities hereunder, except for any rights, obligations or liabilities which by this specific terms of this Agreement survive the termination of this Agreement.

- (j) In the event of any litigation arising out of or connected in any manner with this Agreement, the non-prevailing party shall pay the costs of the prevailing party, including its reasonable counsel and paralegal fees incurred in connection therewith through and including all other legal expenses and the costs of any appeals and appellate costs relating thereto. Wherever in this Agreement it is stated that one party shall be responsible for the attorneys fees and expenses of another party, the same shall automatically be deemed to include the fees and expenses in connection with all appeals and appellate proceedings relating or incidental thereto. This subsection (j) shall survive the termination of this Agreement.
- (k) This Agreement shall not be deemed to confer in favor of any third parties any rights whatsoever as third-party beneficiaries, the parties hereto intending by the provisions hereof to confer no such benefits or status.
- (l) Developer agrees that Service Company may, at its sole discretion, require certain allocations to the proposed collection and transmission systems for future connections. Developer further agrees that Service Company may, at its sole discretion, extend the sewer line for any reason. It is understood that there will be no reimbursement or additional credit.

IN WITNESS WHEREOF, Service Company and Developer have executed this Agreement as of the day and year first above written.

SERVICE COMPANY:

Key West Resort Utilities Corporation

By: _____

Print Name: _____

Title: _____

Address: Key West Resort Utilities
Corporation
6450 Junior College Road

DEVELOPER:

By: _____

Print Name: _____

Title: _____

Address: _____

STATE OF FLORIDA)
) ss:
COUNTY OF MONROE)

The foregoing instrument was acknowledged before me this _____ day of _____, 200__, by _____, as _____, a Florida corporation, on behalf of said corporation. He/she is personally known to me or who has produced _____ as identification.

My Commission Expires:

STATE OF FLORIDA)
) ss:
COUNTY OF MONROE)

The foregoing instrument was acknowledged before me this _____ day of _____, 200__, by _____, as _____, a Florida corporation, on behalf of said corporation. He/she is personally known to me or who has produced _____ as identification.

My Commission Expires:

Attachment 10

TO: APRIL



Item Detail

Check 1 of 1

Status: Paid ✓

Trans Date	Account	Amount	Check Number	Description
09/29/2006		\$707,000.00	000000101393	Check

053101121
07/25/2006
000006600103990

This is a LEGAL COPY of your check. You can use it the same way you would use the original check.

066601009900000
9002/92/60 LR2R00FES01



BOARD OF COUNTY COMMISSIONERS
MONROE COUNTY KEY WEST, FLORIDA

101393
DATE 09/26/06

PAY THE SUM OF **\$\$\$707,000.00** DOLLARS AND **00/100** CENTS. AMOUNT **\$\$\$707,000.00**

TO THE ORDER OF
KEY WEST RESORT UTILITIES CORP
PO BOX 2125
KEY WEST FL 33045-2125

101393

DCSCAN

09
08
06
05
04
03
02
01

PK=01

1251
05210715 AC 09282655

REDACTED

DO NOT ENDORSE OR WRITE BELOW THIS LINE.

KEY WEST RESORT UTILITY

Doug Carter
General Manager

Post Office Box 2125 Phone (305) 294-5382
Key West, Florida 33045 Fax (305) 294-1212

Attachment 11

DANNY L. KOLHAGEN, CLERK

Parcel ID Number: 00133760-000102

DEED DOC STAMPS 2205.00
08/26/2004 DEF CLK

Warranty Deed

This Instrument, Made this 23rd day of August, 2004 A.D. Between Jeffrey E. Allen and Monica Allen, husband and wife.

of the County of Monroe, State of Florida, GRANTORS, and Christopher Johnson and Leslie Johnson, husband and wife and Donald Zeman and Ginger Zeman, husband and wife whose address is: 1212 Von Phister Street, Key West, FL 33040

of the County of Monroe, State of Florida, grantees.

Witnesseth that the GRANTORS, for and in consideration of the sum of TEN DOLLARS (\$10) DOLLARS, and other good and valuable consideration to GRANTORS in hand paid by GRANTEEES, the receipt whereof is hereby acknowledged, have granted, conveyed and sold to the said GRANTEEES and GRANTEEES heirs, executors and assigns forever, the following described land, thence lying and being in the County of MONROE, State of Florida, to wit:

Condominium Unit No. 2, HARBOR SHORES CONDOMINIUM, according to the Declaration of Condominium, as recorded in Official Records Book 982, at Page 1824, of the Public Records of Monroe County, Florida. Along with 1987 Mobile Home, RP Number 266061, Identification Number 481604707 situated thereon.

MONROE COUNTY
OFFICIAL RECORDS

and the grantees do hereby fully warrant the title to said land, and will defend the same against lawful claims of all persons whomsoever. In Witness Whereof, the grantees have hereunto set their hands and seals the day and year first above written. Signed, sealed and delivered in our presence:

Printed Name: _____
Witness

Jeffrey E. Allen (Seal)
P.O. Address: 6906 Midway Avenue #2, Key West, FL 33040

Betsy Russo
Printed Name: BETSY RUSSO
Witness

Monica E. Allen (Seal)
P.O. Address: 6906 Midway Avenue #2, Key West, FL 33040

STATE OF Florida
COUNTY OF Monroe

The foregoing instrument was acknowledged before me this 23rd day of August, 2004 by Jeffrey E. Allen and Monica Allen, husband and wife

who are personally known to me or who have produced their Florida driver's license as Identification



Mary Elizabeth Tuso
MY COMMISSION # 009775 EXPIRES
March 31, 2005
SIGNED AND NOTARIZED BY: MARY ELIZABETH TUSO

Mary E. Elizabeth Tuso
Printed Name: _____
Notary Public
My Commission Expires _____

Grantor(s)		Grantee(s)
ALLEN JEFFREY E	→	JOHNSON CHRISTOPHER
ALLEN MONICA	→	JOHNSON LESLIE
ALLEN MONICA R		ZEMAN DONALD
		ZEMAN GINGER

Property Address	Return Address
	SPOTTSWOOD, SPOTTSWOOD & SPOTTSWOOD P O FOX 1900 KEY WEST, FL 33041

Legal Description		
Block(s)	Lot(s)	Unit(s)
Subdivision:	NAME NOT AVAILABLE	
Comments:	CONDO UN 2 HARBOR SHORES CONDO IN OR BK 982 PG 1824	
Parcel:	NONE AVAILABLE	
Book No:	NONE AVAILABLE	
Page No:	NONE AVAILABLE	

Unit #2

Print Close Window

2409 North Roosevelt Boulevard
Key West, Florida 33040
(305) 296-2967

Return to: Grantee

File No.: 1064-544720

WARRANTY DEED

This indenture made on July 15, 2004 A.D., by

Connie L. Long

whose address is: P.O. Box 606, Glenrock, WY 82637,
hereinafter called the "grantor", to

Jeffrey E. Allen and Monica R. Allen, husband and wife

whose address is: 819 Peacock Plaza #809, Key West, FL 33040
hereinafter called the "grantee":

(Which terms "Grantor" and "Grantee" shall include singular or plural, corporation or individual, and either sex, and shall include heirs, legal representatives, successors and assigns of the same)

Witnesseth, that the grantor, for and in consideration of the sum of Ten Dollars, (\$10.00) and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in Monroe County, Florida, to-wit:

Unit 1, of HARBOR SHORES CONDOMINIUM, a Condominium, according to the Declaration of Condominium recorded in Official Records Book 982, Page 1824, and all valid amendments thereto, of the Public Records of Monroe County, Florida; Together with an undivided interest in the common elements as set forth in the exhibits to the said Declaration of Condominium, as recorded, exemplified, referred to and set forth in said Declaration of Condominium and exhibits thereto. Together with that certain mobile home with VI#3144LA36172A and 3144LA36172B; Make is IMPA

Parcel Identification Number: **00133760-000001 ak#8699204**

Subject to all reservations, covenants, conditions, restrictions and easements of record and to all applicable zoning ordinances and/or restrictions imposed by governmental authorities, if any.

Together with a 1973 IMPA Mobile Home, I.D. # 3144LA36172A and 3144LA36172B, as part of the real property herein conveyed.

General Information

Document #: 1446214
Amount: \$255,000.00
Filed: 5-24-2004
Executed:

Type: WARRANTY DEED
Book: 2007
Page: 1513

Grantor(s)

JENKINS PHILLIP E
JENKINS PHIL

Grantee(s)

ALLEN JEFFREY E
ALLEN MONICA R

Property Address

Return Address

SPOTTSWOOD

Legal Description

Block(s) Lot(s) Unit(s)

Subdivision: NAME NOT AVAILABLE

Comments: UN 2 HARBOR SHORES CONDO IN OR BK 982 PG 1824

Parcel: NONE AVAILABLE

Book No: NONE AVAILABLE

Page No: NONE AVAILABLE

Print

Close Window

Myrtle Beach, Florida 33040
(305) 296-8851

Folio Number: 00133760-000116

SPACE ABOVE THIS LINE FOR RECORDING DATA

WARRANTY DEED

THIS INDENTURE, made this 3rd day of August, 2004, between, **MYRNA LOY BRAUNAGEL**, a single woman, who's address is: 136 Starlane Lane Bay Coppitt, 1 party of the first part, Grantor, and **JEFFREY E. ALLEN** and **MONICA R. ALLEN**, husband and 3304 wife, Grantee.

("Grantor" and "Grantee" are used for singular or plural, as context requires)

WITNESSETH, that said Grantor, for and in consideration of the sum of \$10.00 and other good and valuable considerations to said Grantor in hand paid by said Grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said Grantee, and Grantee's heirs and assigns forever, the following described lot, piece or parcel of land, situate, lying and being in the County of Monroe, State of Florida, to wit:

Unit No. 10, **HARBOR SHORES CONDOMINIUM**, according to the Declaration of Condominium thereof recorded in Official Records Book 982, Page 1824, of the Public Records of Monroe County, Florida.

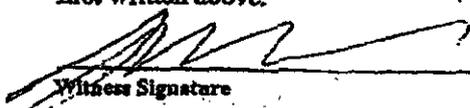
Mobile Home Title Number: 11638749 RP# R0266103

Mobile Home Title Number: 11638750 RE# R0266104

SUBJECT TO: Property taxes for the year 2004 and subsequent years.

AND GRANTOR does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, Grantor has signed and sealed these presents the day and year first written above.



Witness Signature

Tam Mason

Printed Name



Witness Signature

Miss Malgad

Printed Name



MYRNA LOY BRAUNAGEL

General Information

Document #: 1446759

Amount: \$849,000.00

Filed: 5-25-2004

Executed:

Type: WARRANTY DEED

Book: 2008

Page: 1668

Grantor(s)

ALLEN JEFFREY E
ALLEN MONICA R

Grantee(s)

CARTER DOUGLAS
CARTER KAREN M

Property Address

Return Address

STONES CARDENAS

Legal Description

Block(s) Lot(s) Unit(s)

Subdivision: NAME NOT AVAILABLE

Comments: LT 19 BLK 4 KEY HAVEN 10TH ADDN IN FLAT BOOK 5 PAGE 114

Parcel: NONE AVAILABLE

Book No: NONE AVAILABLE

Page No: NONE AVAILABLE

Print

Close Window

File No. 410480557

Property Appraiser's Parcel I.D. (folio) Number(s)
00133760-000148

PERSONAL REPRESENTATIVE'S DEED

THIS PERSONAL REPRESENTATIVE'S DEED made and executed September 9, 2004, by JOHN TITUS Personal Representative of the Estate of Marjorie Stevely hereinafter called the grantor, to JEFFREY E. ALLEN and MONICA ALLEN, his wife and CHRISTOPHER JOHNSON and LESLIE JOHNSON, his wife, tenants in common whose post office address is . . . hereinafter called the grantee:

*819 Peacock Plaza, Suite 809, Key West, FL 33040

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

WITNESSETH: That the grantor, for and in consideration of the sum of \$10.00 and other valuable consideration, receipt whereof is hereby acknowledged; hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situated in Monroe County, Florida, viz:

Unit No. 50, HARBOR SHORES CONDOMINIUM, according to the Declaration thereof, recorded in Official Records Book 982, Page 1824 of the Public Records of Monroe County, Florida, including an undivided interest in the common elements of said Condominium as set forth in the Declaration thereof.

subject to easements, restrictions, reservations, and limitations of record, if any.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in any wise appertaining. TO HAVE AND TO HOLD the same in Fee Simple forever.

AND the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in Fee Simple; that the grantor has good right and lawful authority to sell and convey said land; that all court orders and laws of Florida have been followed and complied with in all respects; and that said land is free of all encumbrances, except taxes accruing subsequent to: December 31, 2003

IN WITNESS WHEREOF, the said grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered in our presence:

Kristin M. DeVoe
(Witness Signature)

KRISTIN M. DeVoe

Gary Knapp
(Witness Signature)

GARY KNAPP

ESTATE OF MARJORIE E. STEVELY

BY: John Titus
John Titus, Personal Representative

Address:
116 BAY VILLAGE DR
ROCHESTER NY 14609

STATE OF NEW YORK
COUNTY OF MONROE

The foregoing instrument was acknowledged before me this 9 day of September, 2004, by JOHN TITUS individually and as Personal Representative of the Estate of Marjorie Stevely who is/are personally known to me or who has/have produced Id as identification.

Kristin M. DeVoe
Printed Name: Kristin M. DeVoe
Notary Public
My commission expires: 3/3/07

KRISTIN M. DEVOE
Notary Public, State of New York
No. 01DES088109
Qualified in Monroe County
Commission Expires March 3, 2007

DOCUMENT # 1970220
Amount: \$345,000.00
Filed: 9-24-2004
Executed:

Type: DEED
Book: 2045
Page: 55

Grantor(s)

Grantee(s)

STEVELY, MARJORIE E EST	→	JOHNSON, LESLIE
STEVELY, MARJORIE EST		ALLEN, JEFFREY E
TITUS, JOHN PERSONAL REP		ALLEN, MONICA
	→	JOHNSON, CHRISTOPHER

Property Address

Return Address

Legal Description

Block(s) Lot(s) Unit(s)

50

→ Subdivision: HARBOR SHORES CONDO
Comments: OR BK 982 PG 1824
Parcel: 00133760 000148
Book No: NONE AVAILABLE
Page No: NONE AVAILABLE

Unit #50

Print

Close Window

Attachment 12

Thomas J. Willi

County Administrator
1100 Stanton St. Suite 206
Key West, FL 33040
(305) 282-4441

Please note: Florida has a very broad public records law. Most written communications to or from the County regarding County business are public records available to the public and made upon request. Your e-mail communication may be subject to public disclosure.

~~From: Bill Barry [mailto:Wmbarry47@aol.com]~~

~~Sent: Thursday, March 24, 2005 9:39 AM~~

~~To: ronda.norman@monroecounty.fl.gov~~

~~ChrisWilli@monroecounty-fl.gov; bill@lawfirm.org; doug@lawfirm.com; chrisjohnson@kwrnu.com~~

~~chris@bellcouth.net~~

~~Subject: \$837,500 Affordable Housing MCHACDSP Connection Funding Oct. 2005 Deadline~~

To: Ronda Norman
copy: Tom Willi, Mark Bell, Doug Carter, Chris Johnson

From: Bill Barry

Re: \$837,500 Funding & Addition of Mark Bell to MCHACDSP

Ronda:

There is \$837,500 of Community Development / Block & Ship grant money earmarked for qualified low income households for Stock Island wastewater system connection assistance: THIS MONEY SUNSETS OCT. 2005.

Mark Bell, Director of the Community Development and Special Programs Office for the Monroe County Housing Authority is responsible for the grant program (MCHACDSP).

Bell advises that well over a hundred low income households on Stock Island that are earmarked for this money which must be allocated for connection expense on or before Oct. 2005.

To prevent our community from losing these important assistance funds the qualified applicants and their plumber must meet with Bell and complete required County Clerk's Office documentation. Bell has enforcement powers to motivate such a meeting.

Bell advises he needs only 5 to 10 working days to secure the assistance check once the meeting has taken place and the County Clerk's documentation has been properly completed. He has a list of the applicants who qualify and apparently need the funding to connect to the wastewater system.

*Recommend Code Enforcement, KWRU and MCHACDSP jointly target the qualified low income households in order to secure the \$837,500 connection funding assistance that is due to expire in 6 months (Oct. 2005).

3/28/2005

FROM :

FRX NO. : 2923008

Jul. 06 2005 06:42PM P3
Page 3 of 3

We should add the funding assistance item to our forthcoming CTF meeting -- as well as adding Mark Bell to the CTF and inviting him to the next meeting.

Regards,

Bill Barry
wmbarry47@aol.com
Cell: 305 304 1284

3/28/2005

Attachment 13

Agenda

9:00 A.M., Tues. Feb. 8, 2005

County Administrator's

Meeting With

Dir. & Staff Members of MC Code Enforcement & MC Health Dept.,
Representative from the MC Attorney's Office & KW Resort Utilities, Inc.

Meeting Purpose:

Stock Island Wastewater Connection & Coordination

- A) Connection of Stock Island property owners to the central wastewater treatment system
- B) Coordination between MC Code Enforcement, MC Health Dept., MC Attorney's Office & KW Resort Utilities, Corp.

Location:

Historic Gato Cigar Factory Building
1100 Simonton Street, Key West
Conference Room Downstairs

Morning

- 8:30 - 9:10** Coffee & bagels
- 9:10** Welcoming, Introductions & Opening Remarks by County Administrator, Tom Willi
- 9:30** Dr. Susana May, Director MC Health Dept.
Compliance & Communication Procedure of the MC Health Dept. regarding the SI WW Connection.
Q & A following.
- 9:50** Ron Norman, Director MC Code Enforcement Dept.
Compliance, Enforcement & Communication Procedure of the MC Code Enforcement Dept. for SI WW Connection.
Q & A following.
- 10:10** Pedro Mercado, County Attorney, MC Attorney's Office
Coordination with the MC Attorney's Office concerning SI WW Connection Compliance & Enforcement
Q & A following.
- 10:20** KW Resort Utilities, Corp., Doug Carter, GM KWRU
Plan to Support, Communicate & Coordinate with MC Code Dept. & MC Health Dept. for the SI WW Connection Project
Q & A following.
- 10:30** County Administrator, Tom Willi Closing Remarks

Attachment 14



Florida Statute
Sect 48

MONROE COUNTY CODE ENFORCEMENT
Monroe County Government Center
2798 Overseas Highway
Marathon, FL 33050
Tel: (305) 289-2509
Fax: (305) 289-2596



BOARD OF COUNTY COMMISSIONERS
Mayor Charles "Sonny" McCoy, District 3
Mayor Pro Tem Murray E. Nelson, District 5
George Neugent, District 2
Dixie M. Spehar, District 1
David P. Rice, District 4

Anderson Process Server
#296-7642, 304-1894
B. Anderson

March 20, 2006

Key West Resort Utilities
P.O. Box 2125
Key West, Florida 33045

Attn: Christopher Johnson

Redro,
292-3470
What is proper service

Re: 30 day notice to connect to available central sewer system letter.

Dear Mr. Johnson:

I am in the process of sending out notices of hearing for cases involving Harbor Shores. Unfortunately, I have come across seventeen (17) cases which do not have service on the above stated letter. Without proper service, we are unable to prosecute these cases. Please find attached the list of owners and their unit numbers. Once you have proper service on these cases, please forward the original green card signed by the owner, and a copy of the letter that went with that green card, to my attention so that it may be included in the file.

Once thirty (30) days notice has passed, we can then begin prosecution on these cases.

If you have any questions, please feel free to contact me. I can be reached at 305-289-2509.

Sincerely,

Karen L. Bass, Liaison to the Special Magistrate
Monroe County Code Enforcement

cc: William Barry

Bill,
I am taking care
at this -
Thanks
Doug

Send 3/15/05
via cert. sig. required

CASE #	OWNER NAME	UNIT #
CE05050250 did not pick up	Allen, Jeffrey & Monica ✓	#1 Return from P.O. 3/31/05
CE05050252 sent to #10 Myrna	Villone, David & Kim 3/24/05 ✓	#10 Did not pick up
CE05050094	Ogg, Marlene Marie ✓	#14 Returned by P.O. 4/2/05
CE05050096	Fleck, Sharon ✓	#16 Returned by P.O. 4/2/05
CE05050125	Richardson, Joseph & Debra ✓	#25 " " 4/2/05
CE05050126	Harbor Blvd. LLC (owner & officer are to be noticed for this) ✓	#27 " " 4/2/05
CE05050130 Rec'd in C.A.	Conroy, Brenda K ✓	#31 " " 4/2/05
CE05050136	Simpson, Daniel & Cooper, Melody ✓	#35 Return by P.O. 3/31/05
CE05050163	Wigington, Steven & Kimberly ✓	#39 " " 3/31/05
CE05050164 Robert, Carl Brown	Hoyt, R. Ashley ✓	#41 " " 3/31/05
CE05050188	Corbin, Wilma & W. Robertson ✓	#43 " " 3/31/05
CE05050193	Lutz, Elizabeth & Dauna Metz ✓	#48 " " 4/2/05
CE05050198	Bubbus, David & Diane ✓	#53 " " 3/31/05
CE05050200	Scarabino, Henry ✓	#56 not returned by P.O. 4/18/05
CE05050225	Provost, Rebecca S. ✓	#103 Returned by P.O. 4/2/05
CE05050234	Russell, John K. ✓	#109 " " 4/2/05
CE05050235	Hunt, Wayne & Sharon ✓	#110 " " 4/2/05

(Sergeant Fletcher)

13k credit

6-7 pages

KW RESORT UTILITIES
P.O. Box 2125
Key West, Florida 33045
Telephone (305) 294-9578
Facsimile (305) 294-1212

04/19/2004

Judi

Karen L. Bass
Liaison to the Special Magistrate
Monroe County Code Enforcement
Monroe County Government Center
2798 Overseas Highway
Marathon, FL 33050

Re: Harbor Shores 30 day notice to connect to available central sewer system letter

Ms. Bass:

Per your correspondence of March 20, 2006, proper service has occurred in 16 of 17 cases via the Monroe County Sheriff's Office -- Civil Division, Anderson Process Service, or certified mail. Enclosed is the original process service document or green card, a copy of the 30 day notice to connect to available central sewer system letter and application for KW Resort Utilities Corp. wastewater service. For the one case not served the process service document from the Monroe County Sheriff's Office and Anderson Process Service, with comments, and the correspondence not served from KW Resort Utilities Corp. is enclosed.

Per your correspondence of March 23, 2006, proper service has occurred in 4 of 4 cases via the Monroe County's Sheriff Office -- Civil Division, Anderson Process Service, or certified mail. Enclosed is the original process service document or green card, a copy of the 30 day notice to connect to available central sewer system letter and application for KW Resort Utilities Corp. wastewater service.

If you have any questions I may be reached at 305-294-9578 or 305-294-5232.

Sincerely,



Doug Carter
General Manager
KW Resort Utilities Corp.

cc: Rhonda Norman, Monroe County Code Enforcement
Suzanne A. Hutton, Monroe County Attorney

As you know, prior to Code Enforcement sending a Notice of Violation to a property owner for failure to connect to the system, we were required to have verification that the utility had in fact "notified the property owner of availability" as per Monroe County Code 15.5-21(a).

In order for us to move forward with the code cases, we required the utility to provide "proof of service" of the letters of availability. In most of the cases, this documentation was not available and in order to meet this requirement, the utility sent via certified mail, letters of availability to the property owners and provided these documents to our office.

Once we had the required documents from the utility and per Monroe County Code 6.3-10, we sent via certified mail, the Notices of Violation to the property owners.

In the interest of time and cost effectiveness, in the cases where proper service via certified mail was not achieved through USPS, hand delivery by the Sheriff's office was utilized as per Monroe County Code 6.3-10(a)(2).

Below, I have included copies of the Monroe County Codes which I had spoken to in this correspondence.

Sec. 6.3-10. Notices.

(a) All notices required by this chapter shall be provided to the alleged violator by:

(1) Certified mail, return receipt requested, provided if such notice is sent under this paragraph to the owner of the property in question at the address listed in the tax collector's office for tax notices, and at any other address provided to the director of code enforcement by such owner and is returned unclaimed or refused, notice may be provided by posting as described in paragraphs (c)(1) and (2) of this section, and by first class mail directed to the addresses furnished to the director of code enforcement with a properly executed proof of mailing or affidavit confirming the first class mailing;

(2) Hand delivery by the sheriff or other law enforcement officer, code inspector, or other person designated by the board of county commissioners;

(3) Leaving the notice at the violator's usual place of residence with any person residing therein who is fifteen (15) years of age or older and informing such person of the contents of the notice; or

(4) In the case of commercial premises, leaving the notice with the manager or other person in charge.

(b) In addition to providing notice as set forth in subsection (a), at the option of the code enforcement special master, notice may also be served by publication as follows:

(1) Such notice shall be published once during each week for four (4) consecutive weeks (four (4) publications being sufficient) in a newspaper of general circulation in Monroe County. The newspaper shall meet such requirements as are prescribed under F.S. Ch. 50, for legal and official advertisements.

(2) Proof of publication shall be made as provided in F.S. §§ 50.041 and 50.051.

(c) In lieu of publication as described in paragraph (b), the notice may be posted as follows:

(1) A notice may be posted at least ten (10) days prior to the hearing, or prior to the expiration of any deadline contained in the notice, in at least two (2) locations, one (1) of which shall be the property upon which the violation is alleged to exist and the other which shall be at the front door of a courthouse in the county.

(2) Proof of posting shall be by affidavit of the person posting the notice, which affidavit shall include a copy of the notice posted and the date and places of its posting.

(d) Notice by publication or posting may run concurrently with, or may follow, an attempt or attempts to provide notice by hand delivery or by mail as required under subsection (a). Evidence that an attempt has been made to hand deliver or mail notice as provided in subsection (a), together with proof of publication or posting as provided in subsections (b) and (c) shall be sufficient to show that the notice requirements of this chapter have been met, without regard to whether or not the alleged violator actually received notice.

(Ord. No. 50-2000, § 3)

Sec. 15.5-21. Connection of existing on-site sewage treatment and disposals systems to central sewerage system.

(a) The owner of an onsite sewage treatment and disposal system must connect the system or the building's plumbing to an available publicly owned or investor-owned sewerage system within thirty (30) days after written notification by the owner of the publicly owned or investor-owned sewerage system that the system is available for connection. The publicly owned or investor-owned sewerage system must notify the owner of the onsite sewage treatment and disposal system of the availability of the central sewerage system. No less than one (1) year prior to the

date the sewerage system will become available, the publicly owned or investor-owned sewerage system shall notify the affected owner of the onsite sewage treatment and disposal system of the anticipated availability of the sewerage system and shall also notify the owner that the owner will be required to connect to the sewerage system within thirty (30) days of the actual availability. The owner shall have the option of prepaying the amortized value of required connection charges in equal monthly installments over a period not to exceed two (2) years from the date of the initial notification of anticipated availability.

(b) Subsequent to the effective date of this chapter, the county commission may, subject to approval of the FCAA, adopt a resolution providing that the owner of an onsite sewage treatment and disposal system may pay any connection fees charged by an investor-owned sewerage system in monthly installments without interest over a period of time not to exceed five (5) years from the date the sewerage system becomes available if the county determines that the owner has demonstrated financial hardship. The resolution must contain, at a minimum, the following:

- (1) The designation of the county employee(s) or officer(s) empowered to make the hardship determination; and
- (2) The criteria for making the determination which take into account the owner's net worth, income, and financial needs.

(Ord. No. 4-2000, § 2)

If you have any concerns or questions, please let me know.

Regards,
Ronda

Ronda L. Norman, CPM

Ronda L. Norman, Sr. Director, CPM
Monroe County Code Enforcement
Marathon Government Center
2798 Overseas Highway
Marathon, FL 33050

T: 305.289.2810

F: 305.289.2536

Email: norman-ronda@monroecounty-fl.gov

Website: www.monroecounty-fl.gov

HELP US HELP YOU!

Please take a moment to complete our Customer Satisfaction Survey:

http://monroecofl.virtualtownhall.net/Pages/MonroeCoFL_WebDocs/css

Your feedback is important to us!

PLEASE NOTE: Florida has a very broad public records law. Most written communications to or from the County regarding County business are public record, available to the public and media upon request. Your e-mail communication may be subject to public disclosure.

doug carter

From: Marty Deterding [martyd@RSBattorneys.com]
Sent: Thursday, October 09, 2008 2:03 PM
To: doug carter; Paul Dechario
Cc: John Wharton
Subject: RE: MOnroe County Sewer Hook Ups, letter from Rhonda Norman (Head of COde Enforcement)

That looks very good

F. Marshall Deterding, Esquire
Rose, Sundstrom & Bentley, LLP
2548 Blairstone Pines Drive
Tallahassee, Florida 32301

(850) 877-6555 Phone
(850) 656-4029 Fax

NOTICE: This e-mail message and any attachment to this e-mail message contains confidential information that is legally privileged. If you are not the intended recipient, you must not review, retransmit, convert to hard copy, copy, use or disseminate this e-mail or any attachments to it. If you have received this e-mail in error, please notify us immediately by return e-mail or by telephone at 888-877-6555 and delete the original and all copies of this transmission (including any attachments).

Thank you.

From: doug carter [mailto:doug@keywestgolf.com]
Sent: Thursday, October 09, 2008 1:54 PM
To: Marty Deterding; 'Paul Dechario'
Subject: FW: MOnroe County Sewer Hook Ups, letter from Rhonda Norman (Head of COde Enforcement)

fyi

From: doug carter [mailto:doug@keywestgolf.com]
Sent: Thursday, October 09, 2008 12:47 PM
To: 'William L. Smith Jr.'; 'chriskw@bellsouth.net'
Subject: FW: MOnroe County Sewer Hook Ups, letter from Rhonda Norman

I will use this for the notice portion of Wiggington's response.

Doug

From: Norman-Ronda [mailto:Norman-Ronda@monroecounty-fl.gov]
Sent: Thursday, October 09, 2008 12:23 PM
To: doug@keywestgolf.com
Cc: Mercado-Pedro; Dowling-Nancy
Subject: MOnroe County Sewer Hook Ups

Hi Doug,

10/9/2008

doug carter

From: Norman-Ronda [Norman-Ronda@monroecounty-fl.gov]
Sent: Thursday, October 09, 2008 12:23 PM
To: doug@keywestgolf.com
Cc: Mercado-Pedro; Dowling-Nancy
Subject: MOnroe County Sewer Hook Ups

Hi Doug,

As you know, prior to Code Enforcement sending a Notice of Violation to a property owner for failure to connect to the system, we were required to have verification that the utility had in fact "notified the property owner of availability" as per Monroe County Code 15.5-21(a).

In order for us to move forward with the code cases, we required the utility to provide "proof of service" of the letters of availability. In most of the cases, this documentation was not available and in order to meet this requirement, the utility sent via certified mail, letters of availability to the property owners and provided these documents to our office.

Once we had the required documents from the utility and per Monroe County Code 6.3-10, we sent via certified mail, the *Notices of Violation to the property owners.*

In the interest of time and cost effectiveness, in the cases where proper service via certified mail was not achieved through USPS, hand delivery by the Sheriff's office was utilized as per Monroe County Code 6.3-10(a)(2).

Below, I have included copies of the Monroe County Codes which I had spoken to in this correspondence.

Sec. 6.3-10. Notices.

(a) All notices required by this chapter shall be provided to the alleged violator by:

(1) Certified mail, return receipt requested, provided if such notice is sent under this paragraph to the owner of the property in question at the address listed in the tax collector's office for tax notices, and at any other address provided to the director of code enforcement by such owner and is returned unclaimed or refused, notice may be provided by posting as described in paragraphs (c)(1) and (2) of this section, and by first class mail directed to the addresses furnished to the director of code enforcement with a properly executed proof of mailing or affidavit confirming the first class mailing;

(2) Hand delivery by the sheriff or other law enforcement officer, code inspector, or other person designated by the board of county commissioners;

(3) Leaving the notice at the violator's usual place of residence with any person residing therein who is fifteen (15) years of age or older and informing such person of the contents of the notice; or

(4) In the case of commercial premises, leaving the notice with the manager or other person in charge.

(b) In addition to providing notice as set forth in subsection (a), at the option of the code enforcement special master, notice may also be served by publication as follows:

(1) Such notice shall be published once during each week for four (4) consecutive weeks (four (4) publications being sufficient) in a newspaper of general circulation in Monroe County. The newspaper shall meet such requirements as are prescribed under F.S. Ch. 50, for legal and official advertisements.

(2) Proof of publication shall be made as provided in F.S. §§ 50.041 and 50.051.

(c) In lieu of publication as described in paragraph (b), the notice may be posted as follows:

(1) A notice may be posted at least ten (10) days prior to the hearing, or prior to the expiration of any deadline contained in the notice, in at least two (2) locations, one (1) of which shall be the property upon which the violation is alleged to exist and the other which shall be at the front door of a courthouse in the county.

(2) Proof of posting shall be by affidavit of the person posting the notice, which affidavit shall include a copy of the notice posted and the date and places of its posting.

(d) Notice by publication or posting may run concurrently with, or may follow, an attempt or attempts to provide notice by hand delivery or by mail as required under subsection (a). Evidence that an attempt has been made to hand deliver or mail notice as provided in subsection (a), together with proof of publication or posting as provided in subsections (b) and (c) shall be sufficient to show that the notice requirements of this chapter have been met, without regard to

10/9/2008

whether or not the alleged violator actually received notice.
(Ord. No. 50-2000, § 3)

Sec. 15.5-21. Connection of existing on-site sewage treatment and disposals systems to central sewerage system.

(a) The owner of an onsite sewage treatment and disposal system must connect the system or the building's plumbing to an available publicly owned or investor-owned sewerage system within thirty (30) days after written notification by the owner of the publicly owned or investor-owned sewerage system that the system is available for connection. The publicly owned or investor-owned sewerage system must notify the owner of the onsite sewage treatment and disposal system of the availability of the central sewerage system. No less than one (1) year prior to the date the sewerage system will become available, the publicly owned or investor-owned sewerage system shall notify the affected owner of the onsite sewage treatment and disposal system of the anticipated availability of the sewerage system and shall also notify the owner that the owner will be required to connect to the sewerage system within thirty (30) days of the actual availability. The owner shall have the option of prepaying the amortized value of required connection charges in equal monthly installments over a period not to exceed two (2) years from the date of the initial notification of anticipated availability.

(b) Subsequent to the effective date of this chapter, the county commission may, subject to approval of the FCAA, adopt a resolution providing that the owner of an onsite sewage treatment and disposal system may pay any connection fees charged by an investor-owned sewerage system in monthly installments without interest over a period of time not to exceed five (5) years from the date the sewerage system becomes available if the county determines that the owner has demonstrated financial hardship. The resolution must contain, at a minimum, the following:

- (1) The designation of the county employee(s) or officer(s) empowered to make the hardship determination; and
- (2) The criteria for making the determination which take into account the owner's net worth, income, and financial needs.

(Ord. No. 4-2000, § 2)

If you have any concerns or questions, please let me know.

Regards,
Ronda

Ronda L. Norman, CPM

Ronda L. Norman, Sr. Director, CPM
Monroe County Code Enforcement
Marathon Government Center
2798 Overseas Highway
Marathon, FL 33050

T: 305.289.2810

F: 305.289.2536

Email: norman-ronda@monroecounty-fl.gov

Website: www.monroecounty-fl.gov

HELP US HELP YOU!

Please take a moment to complete our Customer Satisfaction Survey:

http://monroecofl.virtualltownhall.net/Pages/MonroeCoFL_WebDocs/css

Your feedback is important to us!

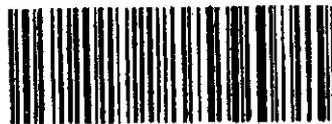
PLEASE NOTE: Florida has a very broad public records law. Most written communications to or from the County regarding County business are public record, available to the public and media upon request. Your e-mail communication may be subject to public disclosure.

10/9/2008

Attachment 15

KW Resort Utilities Corp.
P.O. Box 2125
Key West, FL 33045

CERTIFIED MAIL



7006 2510 0003 3958 5487

STEVEN & KIMBERLY WIGINGTON
6800 MALONEY AVE. UNIT 38
KEY WEST, FL. 33040
REF. 00133760-000136.

KW RESORT UTILITIES

P.O. Box 2125
Key West, Florida 33045
Telephone (305) 294-9578
Facsimile (305) 294-1212

Date : 03/15/2005

STEVEN & KIMBERLY WIGINGTON
6800 MALONEY AVE. UNIT 38
KEY WEST, FL. 33040
RE#- 00133760-000136.

To:

Re: 30-day notice to connect to available central sewer system

KW Resort Utilities Corporation, in conjunction with Monroe County, has now made available, centralized sanitary sewer service to the above listed address. The Monroe County Commission adopted ordinance (No. 04-2000) mandating that the owner of an on-site sewage treatment system must connect to an "available" publicly or privately owned sewage treatment system. The Utility confirms that it has the adequate permitted capacity to treat your wastewater.

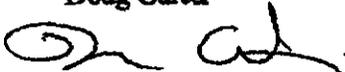
This letter shall serve as official notification to the above listed address that a centralized sewage system is available to your property and the Utility intends to invoke the appropriate Florida Statutes and Monroe County Ordinance requiring that you connect to the KW Resort Utilities' central sewage system within 30 days.

Enclosed within this notice, KW Resort Utility has provided the "application for wastewater service" which needs to be filled out and returned to the Utility to begin the sanitary sewer connection process.

Please contact KW Resort Utilities connection coordinator, Dan Wojo @ 305-295-3301.

Any questions please call,

Doug Carter



KW Resort Utility

Cc: Tom Willi (Monroe County Administrator)
Monroe County Board of County Commissioners
Rhonda Norman (Monroe County Code Enforcement)
Bobbi Sleighter (Monroe County Health Department)
Richard Collins (Monroe County Attorney)

**U.S. Postal Service
CERTIFIED MAIL RECEIPT**

(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL MAIL

MAIL

7001 2510 395A 5487
2945 959E E000 0152 1002

Postage \$	
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage \$	



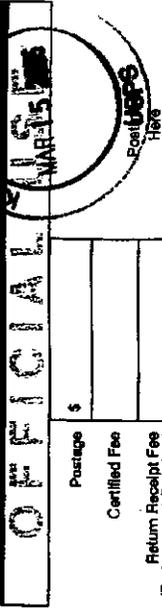
Sent To
Street, Apt. No.,
or PO Box No.
City, State, ZIP+

**STEVEN & KIMBERLY WIGINGTON
6800 MALONEY AVE. UNIT 38
KEY WEST, FL. 33040
RE#- 00133760-000136.**

<p>SENDER: COMPLETE THIS SECTION</p> <ul style="list-style-type: none"> Complete Items 1, 2, and 3. Also complete Item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. <p>1. Article Addressed to:</p> <p>STEVEN & KIMBERLY WIGINGTON 6800 MALONEY AVE. UNIT 38 KEY WEST, FL. 33040 RE#- 00133760-000136.</p>	<p>COMPLETE THIS SECTION ON DELIVERY</p> <p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> <i>Kim Wigington</i> <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <i>Kim Wigington</i> C. Date of Delivery <i>3/16/05</i></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
--	---

CERTIFIED MAIL RECEIPT

(Domestic Mail Only. No Insurance Coverage.)



Postage \$	
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees \$	

Sent To
 Street, Apt. No., or PO Box No.
 City, State, ZIP+4

STEVEN & KIMBERLY WINGTON
6800 MALONEY AVE. UNIT 39
KEY WEST, FL. 33040
RE#- 00133760-000137

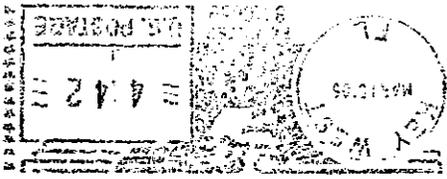
7001 2510 0003 958 5470

CERTIFIED MAIL

125
 1 Utilities Corp.
 FL 33045

1st NOTICE
 2nd NOTICE
 RETURNED

7001 2510 0003 958 5470



LM 3/16/05
 4015

STEVEN & KIMBERLY WINGTON
 6800 MALONEY AVE. UNIT 39
 KEY WEST, FL 33040
 RE#- 00133760-000137

MAR 21 2005
 MAR 31 2005

NAME
 1st Notice
 2nd Notice
 Return



KW RESORT UTILITIES

P.O. Box 2125
Key West, Florida 33045
Telephone (305) 294-9578
Facsimile (305) 294-1212

Sheriff delivered

*3/28/03
11:50AM
C Scott*

Date: March 24, 2006

To: Steven and Kimberly Wigington
6800 Maloney Avenue Unit 39
Key West FL 33040

(RE#00133760.000137)

Re: 30-day notice to connect to available central sewer system

KW Resort Utilities Corporation, in conjunction with Monroe County, has now made available, centralized sanitary sewer service to the above listed address. The Monroe County Commission adopted ordinance (No. 04-2000) mandating that the owner of an on-site sewage treatment system must connect to an "available" publicly or privately owned sewage treatment system. The Utility confirms that it has the adequate permitted capacity to treat your wastewater.

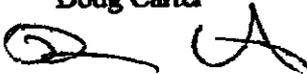
This letter shall serve as official notification to the above listed address that a centralized sewage system is available to your property and the Utility intends to invoke the appropriate Florida Statutes and Monroe County Ordinance requiring that you connect to the KW Resort Utilities' central sewage system within 30 days.

Enclosed within this notice, KW Resort Utility has provided the "application for wastewater service" which needs to be filled out and returned to the Utility to begin the sanitary sewer connection process.

Please contact KW Resort Utilities connection coordinator, Dan Wojo @ 305-295-3301.

Any questions please call,

Doug Carter



KW Resort Utility

Attachment 16

Ervin A. Higgs, CFA
Property Appraiser
Monroe County, Florida

office (305) 292-3420
 fax (305) 292-3501

Property Record View

Alternate Key: 1157643 Parcel ID: 00123510-000000

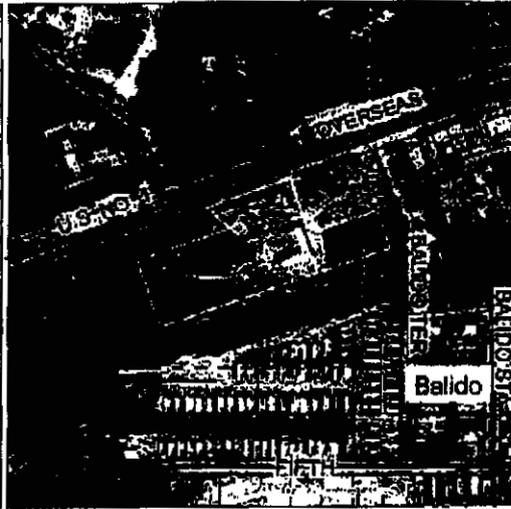
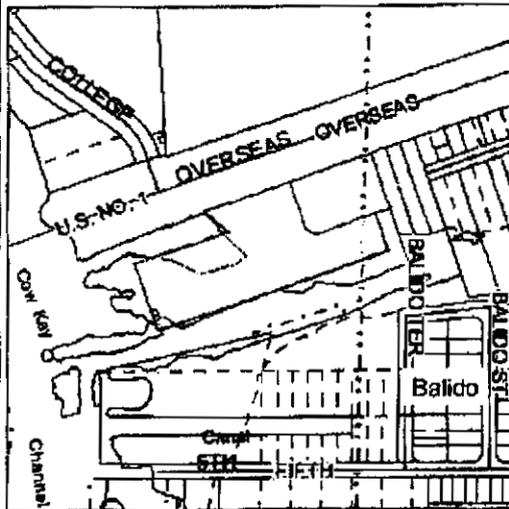
Ownership Details

Mailing Address:
 LIBBEN CO
 190 LAFAYETTE
 DENVER, CO 80218

Property Details

PC Code: 27 - MARINAS
 Millage Group: 110A
 Affordable Housing: No
 Section-Township-Range: 34-07-25
 Property Location: 5110 OVERSEAS HWY SOUTH STOCK ISLAND
 Legal Description: 34/05 07 25 FT BAY BOTTOM WEST OF & ADJACENT TO LOT 24 OF SUNKREST PB1-107 STOCK ISLAND Q58-307 CO JUDGES 877 OR1132-2348(MH)

Parcel Map



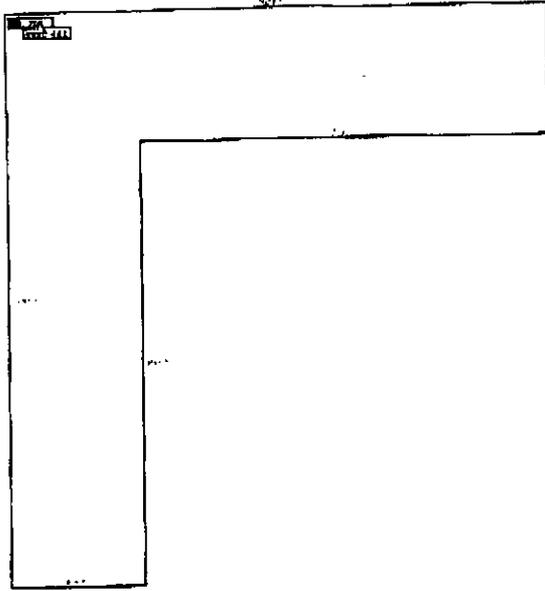
Land Details

Land Use Code	Frontage	Depth	Land Area
10HW - COMM/HWY/WATER	0	0	10,900.00 SF
100D - COMMERCIAL DRY	0	0	1.08 AC
000T - TRANSITIONAL LANDS	0	0	1.84 AC
9500 - SUBMERGED	0	0	0.62 AC

Building Summary

Number of Buildings: 5
 Number of Commercial Buildings: 5
 Total Living Area: 10773
 Year Built: 1963

Building 3 Details



Sections:

Nbr	Type	Ext Wall	# Stories	Year Built	Atlic A/C	Basement %	Finished Basement %	Area
1	FLA		1	1998				4,850

Misc Improvement Details

Nbr	Type	# Units	Length	Width	Year Built	Roll Year	Grade	Life
1	DK4:WOOD DOCKS	4,930 SF	866	5	1998	1999	3	40
2	UB2:UTILITY BLDG	160 SF	16	10	1981	1982	3	50
3	UB2:UTILITY BLDG	80 SF	10	8	1981	1982	3	50
4	FN2:FENCES	490 SF	80	6	1981	1982	2	30
5	CL2:CH LINK FENCE	1,800 SF	300	6	1979	1983	1	30
6	CA2:CARPORT	224 SF	14	16	1988	1990	1	50
7	AP2:ASPHALT PAVING	12,000 SF	80	200	1979	1980	1	25
8	CA2:CARPORT	336 SF	28	12	1990	1991	2	50
9	BR2:BOAT RAMP	400 SF	20	20	1974	1975	1	60
10	PT3:PATIO	1,266 SF	211	6	2000	2004	2	50
11	CL2:CH LINK FENCE	1,044 SF	174	6	2000	2004	1	30
12	RW2:RETAINING WALL	522 SF	174	3	2000	2004	1	50

Appraiser Notes

3/23/07 HURRICANE HOLE MARINA 45 SLIPS, *3LOADING, 3 FUEL, 3 TEMP ON THEIR LONG DOCK. UA-1 MARINA REEF RAIDERS DIVE SHOP MIKE HORNS OLD BUILDING REMOVED THE DISCOUNTS ON THE LAND VALUE FOR HE Y2K TAX ROLL. AFTER COMPARING THE SALE FOR RE-00132540-001 IT SHOULD HAVE BEEN REMOVED FOR THE 1999 TAX ROLL. 039 2000-12-07 ADDED THE NEWBATH HOUSE AS BLDG.4 OF 4 FOR THE 2001 TAX ROLL. ALSO UPDATED THE WOOD DOCKS. DUG 2001-09-04 *ALMOST THERE CHARTER* IS BEIN USED FROM A UB2-02 DUG 2002/5/30 SR, YPP ACCOUNTS; 890211 - SUB AQUATIC ADVENTURES - JODI SCHAEFER 8970743 - PIGGS DOWN ISLAND CHARTER - PATRICK CATTERN 8991742 - DIVING TECHNIQUES KEY WEST 8935828 - KEY WEST DIVING SOCIETY - R. RYLES/AV. CHALFANT 9123717 - US #1 MARINA - WETHERINGTON 8927978 - OUTDOOR ADVENTURE TOUR - D. ARMSTRONG/S. KIRVEN 8971895 - CAPT PHILIP THOMPSON 5002280 - SUNSET WATERSPORTS - RICHARD WELTON 8005107 - HURRICANE HOLE - FRED SKOMP 8005151 - LIBBEN - BZ SIGN 9024247 - PLANET OCEAN ENTERPRISES INC

Building Permits

Blg	Number	Date Issued	Date Completed	Amount	Description	Notes
	00100337	03/19/2008		8,000	Commercial	CONSTRUCT NEW STAIR WAY
	08100068	01/08/2008		3,000	Commercial	FENCE
	08100072	01/17/2008		0	Commercial	INTERIOR REMODEL
	02102285	09/18/2002	08/25/2003	280,000	Commercial	commercial mls. Sales/Dive shop - 850 S.F.
	02100591	09/18/2002	08/25/2003	360,000	Commercial	2280 S.F. addition to a existing restaurant
	02102286	09/18/2002	08/25/2003	360,000	Commercial	work shop - 209 S.F.

Issue ↑
Dates

A-10428	04/01/1983	12/01/1983	26,280	Commercial	WOOD-DOCK	
A-10501	05/01/1983	12/01/1983	2,000	Commercial	ROOFING	
3	891744	06/28/1999	11/02/1999	3,800	Commercial	ROOFING
4	991352	08/09/1999	11/02/1999	13,000	Commercial	COMMERCIAL REMODEL
5	991178	12/01/1999	06/23/2000	35,000	Commercial	NEW BATH HOUSE
6	013826	10/17/2001	01/01/2002	300	Commercial	NEW AC
7	022284	07/05/2002	08/25/2003	39,000	Commercial	COMMERCIAL MISC & C.O.
8	02-2283	09/16/2002	08/25/2003	360,000	Commercial	COMMERCIAL MISC - retail store 576 S.F.
9	02-0891	09/16/2002	08/25/2003	380,000	Commercial	ADDITION TO REST

Parcel Value History

Certified Roll Values.

[View Taxes for this Parcel.](#)

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2008	1,225,848	105,034	868,526	3,599,609	3,599,609	0	3,599,609
2007	623,721	105,182	2,580,223	3,599,689	3,599,689	0	3,599,689
2006	865,419	90,146	2,373,049	3,328,638	3,328,638	0	3,328,638
2005	887,141	92,176	2,373,049	3,352,366	3,352,366	0	3,352,366
2004	887,047	94,932	873,670	1,855,649	1,855,649	0	1,855,649
2003	156,948	83,161	802,820	1,042,929	1,042,929	0	1,042,929
2002	192,245	85,813	802,820	1,080,878	1,080,878	0	1,080,878
2001	192,245	87,325	571,085	850,665	850,665	0	850,665
2000	134,835	52,463	571,085	758,423	758,423	0	758,423
1999	134,835	54,116	363,645	552,596	552,596	0	552,596
1998	89,890	50,486	363,645	510,021	510,021	0	510,021
1997	89,890	58,149	363,645	511,684	511,684	0	511,684
1996	81,719	80,880	363,645	505,944	505,944	0	505,944
1995	81,719	82,281	652,209	796,189	796,189	0	796,189
1994	81,719	65,093	652,209	799,023	799,023	0	799,023
1993	0	67,221	878,699	790,859	790,859	0	790,859
1992	0	81,429	878,699	790,859	790,859	0	790,859
1991	01,719	63,035	878,699	1,123,353	1,123,353	0	1,123,353
1990	81,733	65,400	665,474	812,607	812,607	0	812,607
1989	81,733	67,012	665,474	814,219	814,219	0	814,219
1988	75,582	49,142	587,442	792,176	792,176	0	792,176
1987	66,629	60,305	667,560	784,510	784,510	0	784,510
1986	68,917	51,966	605,616	724,499	724,499	0	724,499
1985	64,619	53,111	605,616	723,346	723,346	0	723,346
1984	62,858	54,786	377,593	485,237	485,237	0	485,237
1983	64,521	4,781	377,593	446,875	446,875	0	446,875
1982	51,205	4,781	196,891	252,857	252,857	0	252,857

Parcel Sales History

NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

There are no sales to display for this parcel.

This site is currently in BETA testing, any comments or feedback about this site are appreciated. Click the [Contact Us](#) link to submit comments or feedback to the website administrator. We appreciate your patience through this transition.

This page has been visited 68,040 times.

Attachment 17

From: Wood-Liz [Wood-Liz@monroecounty-fl.gov]
Sent: Thursday, December 07, 2006 9:20 AM
To: doug carter
Cc: Pearson-April; chriskw@bellsouth.net

Attachments: Wood-Liz@MonroeCounty-FL.Gov.vcf
Mr. Carter:

We would like to see the buffer tank in storage by KWRU be installed at the point necessary for the connection of a gravity line from Harbor Shores.

Please contemplate providing cost estimate for installation (reimbursable at amount of contractor invoice), engineering, and inspection (at 10% of cost).

Your assistance completing this project is most appreciated.

We will discuss the invoice for permitting.

Should you require formal letter please advise.

Elizabeth Wood
Senior Administrator, Sewer Projects
The Historic Gato Cigar Factory
1100 Simonton Street, Room 2-216
Key West, FL 33040
305-292-4525 office
305-295-4321 fax
wood-liz@monroecounty-fl.gov

HELP US HELP YOU!

Please take a moment to complete our Customer Satisfaction Survey:

<http://monrosurvey.virtualtownhall.net/survey.php?9acc14ae1b>

Please note: Florida has a very broad public records law. Most written communications to or from the County regarding County business are public records available to the public and media upon request. Your e-mail communication may be subject to public disclosure.

Attachment 18

4/21/03

Attention: Kim Wigington

Harbor Shores Condominium Unit Owners Association Inc.
6800 Maloney Avenue
Key West, Florida 33040

Dear Kim:

At the Monroe County Commission meeting on February 19th, 2003 Mayor Spehar officially announced that a buffer tank would be set aside for the use of The Harbor Shores Condominium Association.

After meeting with your Condominium Board and Monroe County staff on April 14th, 2003, the County Engineers and the Utility Engineers feel that the best location for this buffer tank would be on Harbor Shores property. It is apparent that your association needs to hire an engineer and complete preliminary engineering work to evaluate the best buffer tank location for Harbor Shores residents. Hopefully your engineer's conclusion will help establish a comfort level with the County and Utility suggestions.

After the Utility and Association engineers agree to a reasonable buffer tank location, and proper easements are provided, KW Resort Utility, at its own expense, shall install the buffer tank to the designated location. Any other work that is needed on private property will be at the cost of the Association.

If you have any question or comments, please call.

Doug Carter
General Manager
KW Resort Utility

Attachment 19

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 		<p>A. Signature <i>William Robertson</i></p> <p>B. Received by (Printed Name) WILLIAM ROBERTSON</p> <p>C. Date of Delivery 1-24-04</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>	
<p>1. Article Addressed to:</p> <p><i>Harbor Shores Condominiums Association (President) 6800 MALONEY AVENUE KEY WEST, FL 33040</i></p>		<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>	
<p>2. Article Number (Transfer from service label)</p>		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	
<p>7003 1010 0001 3743 5942</p>			
PS Form 3811, August 2001		Domestic Return Receipt	
		102595-02-M-1540	

U.S. Postal Service
CERTIFIED MAIL - RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage \$	
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 5.25

Postmark: **KEY WEST FL 33040**
JAN 23 2004

To: *6800 SHORES Condo Assoc (President)*
Apt. No.:
St. No.: *6800 MALONEY AVENUE*
City: *KEY WEST FL 33040*

© 2003, June 2003 See Reverse for Instructions

1/22/04

Harbor Shores Connection Proposal

At the December 10th 2003 meeting of the Monroe County BOCC, Bill Smith of KW Resort Utilities Corp. (KWRU) offered to connect Harbor Shores to the vacuum sewer system for a total cost to the condominium association of \$305,710.00. This amount includes all work associated with: 1.) Design, permitting and construction of a vacuum sewer line and a dual buffer tank to collect wastewater from the existing gravity sewer system; 2.) Testing and repair of the existing gravity sewer system; 3.) FDEP-required abandonment of the existing wastewater treatment plant; 4.) Administration and oversight of the project; and 5.) Capacity reservation fees for 70 EDUs. Once connected to the KWRU sewer system, each homeowner will be required to pay a monthly sewer bill, currently \$36.21.

The Capacity Reservation Fee for 70 EDUs comprises \$189,000.00 of the \$305,710.00 total cost of connection. Monroe County has funding in place that will allow the Capacity Reservation Fee to be paid as part of the Property Tax bills over a 20-year period. To participate in this program, the property owners must enter into the County's Consent and Acknowledgement Agreement and provide 5% of the Capacity Reservation Fee at that time. The remaining 95% will be financed by the County at low interest rates, and will be paid in annual installments over the following 20 years. The residents of Harbor Shores are free to elect to participate in this Agreement with the County. Payment of the remaining \$116,710.00 will be made to KW Resort Utilities Corp., according to terms that will be negotiated between KW Resort Utilities Corp. and Harbor Shores.

As part of this proposal, KW Resort Utilities Corp. agrees to own and maintain all components of the vacuum sewer system and those portions of the gravity sewer system located within the condominium association's common areas, provided that an easement allowing access by KW Resort Utilities Corp. maintenance personnel is granted. The laterals located on individually owned properties would remain the property of the individual homeowners. Only those portions of the laterals that are located in the

easement will be owned and maintained by KW Resort Utilities Corp. However, in the initial testing and repair project, subcontractors hired by KW Resort Utilities Corp. will test the individually owned laterals and repair any leaks found at no expense to the property owner. Any future maintenance or repairs needed on individually owned laterals, after this initial testing and repair, would be the responsibility of the homeowner.

Vacuum Sewer System

The vacuum sewer system will be designed and permitted by KW Resort Utilities Corp.'s Engineer. It is anticipated that the design will include extension of a 6-inch vacuum main onto Harbor Shores property, through an easement in the common area. A dual buffer tank (*Note: A dual buffer tank is a single structure with dual sumps and dual vacuum valves as shown on sheet 34 of 36 in the WEC Phase 1 construction drawings*) will be located adjacent to the existing wastewater pumping station. When construction and testing is completed, the existing 8-inch gravity main will be re-routed from the pump station into the dual buffer tank. Property restoration will be performed in accordance with Monroe County and industry standards.

The permitting fee and the cost of a special purpose survey, if needed, are included in the total cost of the project. Harbor Shores will incur no additional cost.

Testing and Repair of Existing Gravity Collection System

The existing gravity collection system will be tested for water-tightness in accordance with the Monroe County connection ordinance. Testing may consist of hydrostatic testing, air testing, or a combination of the two. If leakage is detected in any test section, the source of the leak will be located by television inspection or other appropriate methods. Once located, the leak will be repaired in a manner consistent with industry standards and the section of infrastructure will then be retested to demonstrated water-tightness. Any leaks located on individual properties will, with the homeowner's permission, be repaired by KW Resort Utilities Corp.'s contractors. Restoration according to Monroe County and industry standards will follow any repairs.

Wastewater Treatment Plant Abandonment

Abandonment of the existing wastewater treatment plant will be performed in accordance with FDEP requirements. These requirements include emptying and cleaning of all tanks to be abandoned, followed by disinfections. The tanks will then be covered to prevent accumulation of rainwater. The abandonment does not include removal of equipment or tanks except to the extent necessary to perform the abandonment and to install covering. Once covered, the maintenance of the abandoned plant will be the responsibility of Harbor Shores Condominium association.

The FDEP-required abandonment of the two effluent disposal wells is also included in the total price quoted.

Requirement for Easement

It is anticipated that all wastewater infrastructure, with the exception of the homeowner's laterals, will be located in the condominium association's common areas. KW Resort Utilities Corp. will require an easement allowing access to the wastewater infrastructure for maintenance and repair purposes. The costs associated with processing the granting of this easement are included in the Administration and Oversight fees included in the total price quoted.

This proposal is good only until April 30th, 2004.

Doug Carter

KW Resort Utilities Corp

September 10, 2003

Harbor Shores Condominium Unit Owners Association Inc
6800 Maloney Ave.
Key West, Florida 33040

Re: Utility agreement dated Jan 29th, 2003

Upon your associations request after a Stock Island meeting KW Resort Utilities Corp. forwarded the association a sample contract for your review to help you through the sewer connection process.

Ms. Wiggington has made statements at public meetings concerning some typos in the above-mentioned agreement. She was correct; we have identified a couple areas where the name "Key West Resort Utilities" should be "KW Resort Utilities Corp."

Please be reminded that this agreement was handed out as a sample agreement and "The Agreement," which has some changes since the Jan. 29th agreement, will only be issued after an application provided by the Utility is received completely filled out by your association.

If you have any questions please call:

Thank you

Doug Carter
KW Resort Utilities Corp.

Attachment 20

UTILITY AGREEMENT

THIS UTILITY AGREEMENT (Agreement), dated as of the 20th day of March, 2007, by and between KW Resort Utilities Corp., a Florida corporation, having its office(s) at 6450 College Road, Key West, Florida 33040, (hereinafter "Service Company"), and Harbor Shores Condominium Unit Owners Association, Inc., having its office(s) at 6800 Maloney Avenue, Key West, Florida 33040 (hereinafter "Association")

RECITALS

- A. Association is a condominium association of single family homeowners of units of real property located at 6800 Maloney Avenue, Key West, Florida (hereinafter "Property").
- B. Service Company owns, operates, manages and controls a Central Sewage System and is willing to provide sanitary sewer services pursuant to this Agreement.
- C. Association requests that Service Company provide central wastewater service to the Property as indicated on the plans prepared by Weiler Engineering for The South Stock Island sewer expansion. (Copy of plan sheet included as an Exhibit "A" and is incorporated herein by reference).

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00), and the mutual covenants and agreements hereinafter set forth, and intending to be legally bound thereby, it is agreed as follows:

1. **Definitions**

Business Day shall mean any day of the year in which commercial banks are not required or authorized to close in New York, New York.

Capacity Reservation Fee as such term is defined in Section 5 hereof.

Central Sewage System shall mean the central collection, transmission, treatment and disposal system and appurtenant facilities owned and operated by the Service Company.

Connection as such term is defined in Section 5 hereof.

Equivalent Residential Connections (ERC), shall be defined as one individual residential connection or, for commercial and other uses, the estimated flow based on the use and Chapter 64E-6, F.A.C., divided by the most recently approved Capacity Analysis rate per residential connection (currently 250 gallons per day per residential connection) also known as E.D.U.

Plans and Specifications as such term is defined in Section hereof.

Point of Delivery shall mean the point where the pipes connect at the property line between the public right of way and private property. The Service Company shall own the gravity main from the property line out to and including the buffer tank and the remaining vacuum lines down stream. The customer shall own the pipes connecting thereto. Monroe County has retained ownership of the six-inch dedicated air intake and associated piping in the County's right of way.

Property as such term is defined in the Recitals hereof.

Property Installations or System shall include any connections necessary to connect facilities on the Property to the Central Sewage System, all to be installed by Association at its expense.

Service Company's Affiliates shall mean any disclosed or undisclosed officer, director, employee, trustee shareholder, partner, principal, parent, subsidiary or other affiliate of Service Company.

Tariff shall mean Service Company's existing and future schedules of rates and charges for sewer service.

2. **System Construction**

- (c) Service Company has approved the Plans and Specifications submitted by Association. Association may proceed with the construction and installation of the System at its expense. Association shall notify Service Company seventy-two (72) hours prior to beginning construction. Construction and Installation shall be completed within six (6) months of Service Company's written notice of approval of the Plans and Specifications. All work shall be inspected by licensed and insured contractors and engineers reasonably acceptable to Service Company and Service Company has accepted those contractors and engineers as shown on Exhibit "B". In accordance with Chapter 62-604 F.A.C., Association shall provide, at its sole cost, a Professional Engineer registered in Florida to provide on-site observation during construction and testing and to certify that the System is constructed in compliance with the approved Plans and Specifications. All materials employed by Association for the System shall be reasonably acceptable to Service Company. No portion or element of the System shall be covered or concealed until inspected by Service Company. Association shall notify Service Company of Association's readiness for inspection of the System, and Service Company shall inspect the System within two (2) business days after each such notice. Any portion of the System not inspected by Service Company within said time period shall be deemed to have been accepted by Service Company. In the event that Service Company determines through any such inspection that any portion of the System does not fully comply with the Plans and specific conditions or applicable laws and regulations, Service Company shall notify Association in writing of such non-compliance not more than two (2) business

days after any such inspection and Association shall within a reasonable time modify the System to insure that the System fully complies with the Plans and Specifications and applicable laws and regulations. Such inspection shall be in accordance with the provisions set forth in the attached Exhibit "C".

- (d) In the event Service Company discovers that any portion of element of the System has been installed, covered, or concealed without the prior approval of Service Company, Association shall, upon written demand by Service Company, immediately dismantle or excavate such portion of the System at its sole cost and expense.

3. **System Records**

Prior to Service Company's acceptance of all or any portion of the System for service, operation and maintenance or for service only, Association shall deliver the following records and documents to Service Company:

- (a) Copies of all invoices and/or contracts for the construction and installation.
- (b) An affidavit signed by the Association stating that there are no parts or portions of the System which are not included in the invoices and contracts noted in subsection (a) above, that said invoices and contracts accurately and fully reflect the total cost of the System and that the System is free and clear of all liens and encumbrances.
- (c) Lien waivers from all contracts, subcontractors, material people, and any other parties that provided labor, services or materials in connection with the construction of the System.
- (d) A reproducible Mylar and two (2) sets of blue line copies, accurately depicting all of the System as constructed and installed, and signed and sealed by the engineer and surveyor or record for the System.
- (e) Copies of the results of all tests conducted on the System.
- (f) Any other records or documents required by applicable law or required under the Tariff.
- (g) A certificate of completion of the System signed and sealed by the engineer of record.
- (h) A copy of the Department of Environmental Protection permit to construct the System and all inspection reports and approvals issued by the Engineer and the Department of Environmental Protection and any other applicable governmental authority or agency.

4. **Property Rights**

This section is intentionally omitted. N.A.

5. **Rates, Fees, Charges**

- (a) The Association will pay the applicable fees, rates and charges as set forth in the Tariff for the monthly sewer service after the sewer system is operational. The Service Company shall bill the Association for all regular charges for all condominium unit owners.
- (b) The Association shall not be responsible to the Service Company for the reservation fee. Only the individual unit owners shall pay to the Service Company such reservation fee in the amount of Two Thousand Seven Hundred (\$2,700.00) dollars per E.R.C. connection or accept consent and acknowledgment of Tax Collector's amended bill. (Capacity Reservation Fee), in the amount of Two Thousand Seven Hundred (\$2,700.00) dollars per E.R.C. Service Company agrees that all payments or other acceptable arrangements have been made for reservation fees. Before execution of this agreement, Association has previously supplied Service Company access and information necessary to determine number of ERC's proposed. From this information it has been determined: A Total of 69 ERC's X \$2,700. = \$186,300.
- (c) Intentionally omitted.
- (d) Association shall pay (5% of on-site construction work as set forth in Exhibit "D") to Service Company, for engineering review and administrative costs related to processing construction plans and documents submitted by Association pursuant to this Agreement. Association shall also pay Service Company within thirty (30) days of submission by Service Company to Association of invoices confirming time spent conducting such inspections related to the on-site construction at the rate of \$100.00 per hour.
- (f) Association agrees that in the event of a material change of use that affects flows (i.e. addition of a clubhouse) Service Company will be notified and the applicable Capacity Reservation Fees will be paid prior to discharge to the Central Sewage System.

6. **Payment Options**

Intentionally omitted.

7. **Absolute Conveyance**

Intentionally omitted.

8. **Delivery of Service; Operation and Maintenance**

- (a) Upon Association's full performance of its obligations under this Agreement, Service Company shall provide service to the Point of Delivery in accordance with the terms of this Agreement, all applicable laws and regulations and shall operate and maintain the Central Sewage System to the Point of Delivery in accordance with the terms and provisions of this Agreement. Said service shall be provided simultaneously with the disconnection of existing system after completion of Association's proper installation and payment of all fees.
- (b) Association shall, at its sole cost and expense, own, operate and maintain any part of the System that has not been conveyed to Service Company pursuant to the terms and conditions of this Agreement.
- (c) Association acknowledges that certain water quality standards must be met prior to influent entering the wastewater treatment plant (primarily chloride levels and excessive flows) and agrees to allow Service Company to monitor flows and water quality at Service Company's discretion at a point on the Association's side of the Point of Delivery. If it is determined that substandard influent or excessive flows are entering the Central Sewage System via Association's System, Association agrees to isolate the source and to repair or replace the portion or portions of the faulty System in a manner acceptable to Service Company in accordance with this Agreement.
- (d) Association shall be required to execute a service agreement with respect to any portion of the System not conveyed to Service Company. Such service agreement shall provide that if the Association fails to adequately repair the System, Service Company shall have the right to repair such System at the sole cost and expense of the Association after reasonable notice is given to Association by Service Company pursuant to this agreement and Association fails to make such repairs.

9. Intentionally omitted.

10. **Repair of System**

In the event of any damage to or destruction of any portion of the Central Sewage System due to any acts or omissions by Association, any Customer or their respective agents, representatives, employees, invitees or licensees, Service Company shall repair or replace such damaged or destroyed facilities at the sole cost and expense of responsible party. Association shall operate, maintain and repair all other portions of the System not conveyed to Service Company at its sole cost and expense.

11. **Term**

This Agreement shall become effective as of the date first written above, and shall continue for so long as Service Company provides sewer service to the public.

12. **Default**

In the event of a default by either party of its duties and obligations hereunder, the non-defaulting party shall provide written notice to the defaulting party specifying the nature of the default and the defaulting party shall have five (5) days to cure any default of a monetary nature and thirty (30) days for any other default. If the default has not been cured within the applicable period (time being of the essence), the non-defaulting party shall be entitled to exercise all remedies available at law or in equity, including but not limited to, the right to damages, injunctive relief and specific performance. Service Company may, at its sole option, discontinue and suspend the delivery of service to the System in accordance with all requirements of applicable law and the Tariff if Association fails to timely pay all fees, rates and charges pursuant to the terms of this Agreement.

13. **Excuse from Performance**

(a) Force Majeure.

If Service Company is prevented from or delayed in performing any act required to be performed by Service Company hereunder, and such prevention or delay is caused by strikes, labor disputes, inability to obtain labor, materials or equipment, storms, earthquakes, electric power failures, land subsidence, acts of God, acts of public enemy, wars, blockades, riots, acts of armed forces, delays by carriers, inability to obtain rights-of-way, acts of public authority, regulatory agencies, or courts, or any other cause, whether the same kind is enumerated herein, not within the control of Service Company (Force Majeure), the performance of such act shall be excused for a period equal to the period of prevention or delay.

(b) **Governmental Acts.**

If for any reason during the term of this Agreement, other than the fault of Association, any federal, state or local authorities or agencies fail to issue necessary permits, grant necessary approval or require any change in the operation of the Central Sewage System or the System (Governmental Acts), then, to the extent that such Governmental Acts shall affect the ability of any party to perform any of the terms of this Agreement in whole or in part, the affected party shall be excused from the performance thereof and a new agreement shall be negotiated, if possible, by the parties hereto in conformity which such permits, approval or requirements. Notwithstanding the foregoing,

neither Association nor Service Company shall be obligated to accept any new agreement if it substantially adds to its burdens and obligations hereunder.

(c) Emergency Situations.

Service Company shall not be held liable for damages to Association and Association hereby agrees not to hold Service Company liable for damages for failure to deliver service to the Property upon the occurrence of any of the following events:

1. A lack of service due to loss of flow or process or distribution failure; provided that Service Company has utilized its best efforts to maintain the Central Sewage System in good operating condition.
2. Equipment or material failure in the Central Sewage System or the System, including storage , pumping and piping provided the Service Company has utilized its best efforts to maintain the Central Sewage System in good operating condition; and
3. Force Majeure, unforeseeable failure or breakdown of pumping, transmission or other facilities, any and all governmental requirements, acts or action of any government, public or governmental authority, commission or board, agency, agent, official or officer, the enactment of any statute, ordinance, resolution, regulation, rule or ruling, order, decree or judgment, restraining order or injunction of any court, including, without limitation, Governmental Acts.

(d) Notwithstanding any excuse of performance due to the occurrence of any of the foregoing events, Association shall not be excused from payment of any fees, charges and rates due to Service Company under the terms of this Agreement.

14. Successors and Assigns

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

15. Indemnification

Service Company and Association agree:

- (1) to indemnify and hold the other harmless from negligent acts or omissions of itself, its officers, agents, invitees and users of the system, and
- (2) to indemnify and hold the others harmless from third-party suits against a party which result from the breach of the Agreement by the other party.

16. **Assignment of Warranties and Bonds**

Intentionally omitted.

17. **Notices**

All notices, demands, requests or other communications by either party under this Agreement shall be in writing and sent by (a) first class U.S. certified or registered mail, return receipt requested, with postage prepaid, or (b) overnight delivery service or courier, or (c) tele-facsimile or similar facsimile transmission with receipt confirmed as follows:

If to Service Company: Mr. Doug Carter, General Manager
 6450 Junior College Road
 Key West, FL 33040
 Facsimile (305) 294-1212

With a Copy To: Mr. Jeff Weiler, P.E.
Weiler Engineering
20020 Veterans Boulevard
Port Charlotte, FL 33954
Facsimile (941) 764-8915

If to Association: President
Harbor Shores Condominium Unit Owners Association,
Inc.
6800 Maloney Avenue,
Key West, Florida 33040

With a Copy To: Mitchell J. Cook
24171 Overseas Highway, Suite 2
Summerland Key, FL 33042

18. **Tariff**

This agreement shall be filed by Service Company with the Florida Public Service Commission within twenty (20) days after this Agreement is signed by both parties. This Agreement is subject to all of the terms and provisions of the Tariff. In the event of any conflict between the Tariff and the terms of this Agreement, the Agreement shall govern and control.

19. **Miscellaneous Provisions**

- (a) This Agreement shall not be altered, amended, changed, waived, terminated or otherwise modified in any respect or particular, and no consent or approval required pursuant to this Agreement shall be effective, unless the same shall be in writing and signed by or on behalf of the party to be charged.
- (b) All prior statements, understandings, representations and agreements between the parties, oral or written, are superseded by and merged in this Agreement, which alone fully and completely expresses the agreement between them in connection with this transaction and which is entered into after full investigation, neither party relying upon any statement, understanding, representation or agreement made by the other not embodied in this Agreement. This Agreement shall be given a fair and reasonable construction in accordance with the intentions of the parties hereto, and without regard to or aid of canons requiring construction against Service Company or the party drafting this Agreement.
- (c) No failure or delay of either party in the exercise of any right or remedy given to such party hereunder or the waiver by any party of any condition hereunder for its benefit (unless the time specified herein for exercise of such right or remedy has

expired) shall constitute a waiver of any other or further right or remedy nor shall any single or partial exercise of any right or remedy preclude other or further exercise thereof or any other right or remedy. No waiver by either party of any breach hereunder or failure or refusal by the other party to comply with its obligations shall be deemed a waiver of any other or subsequent breach, failure or refusal to so comply.

- (d) This Agreement may be executed in one or more counterparts, each of which so executed and delivered shall be deemed an original, but all of which taken together shall constitute but one and the same instrument. It shall not be necessary for the same counterpart of this Agreement to be executed by all of the parties hereto.
- (e) Each of the exhibits and schedules referred to herein and attached hereto is incorporated herein by this reference.
- (f) The caption headings in this Agreement are for convenience only and are not intended to be a part of this Agreement and shall not be construed to modify, explain or alter any of the terms, covenants or conditions herein contained.
- (g) This Agreement shall be interpreted and enforced in accordance with the laws of the state in which the Property is located without reference to principles of conflicts of laws. In the event that the Florida Public Service Commission loses or relinquishes its authority to regulate Service Company, then all references to such regulatory authority will relate to the agency of government or political subdivision imposing said regulations. If no such regulation exists, then this Agreement shall be governed by applicable principles of law.
- (h) Each of the parties to this Agreement agrees that at any time after the execution hereof, it will, on request of the other party, execute and deliver such other documents and further assurances as may reasonably be required by such other party in order to carry out the intent of this Agreement.
- (i) If any provision of this Agreement shall be unenforceable or invalid, the same shall not affect the remaining provisions of this Agreement and to this end the provisions of this Agreement are intended to be and shall be severed. Notwithstanding the foregoing sentence, if (i) any provision of this Agreement is finally determined by a court of competent jurisdiction to be unenforceable or invalid in whole or in part, (ii) the opportunity for all appeals of such determination have expired, and (iii) such enforceability or invalidity alters the substance of this Agreement (taken as a whole) so as to deny either party, in a material way, the realization of the intended benefit of its bargain, such party may terminate this Agreement within thirty (30) days after the final determination by notice to the other. If such party so elects to terminate this Agreement, then this Agreement shall be terminated and neither party shall have any further rights, obligations or liabilities hereunder, except for any rights, obligations or liabilities

which by this specific terms of this Agreement survive the termination of this Agreement.

- (j) In the event of any litigation arising out of or connected in any manner with this Agreement, the non-prevailing party shall pay the costs of the prevailing party, including its reasonable counsel and paralegal fees incurred in connection therewith through and including all other legal expenses and the costs of any appeals and appellate costs relating thereto. Wherever in this Agreement it is stated that one party shall be responsible for the attorneys fees and expenses of another party, the same shall automatically be deemed to include the fees and expenses in connection with all appeals and appellate proceedings relating or incidental thereto. This subsection (j) shall survive the termination of this Agreement.
- (k) This Agreement shall not be deemed to confer in favor of any third parties any rights whatsoever as third-party beneficiaries, the parties hereto intending by the provisions hereof to confer no such benefits or status.
- (l) All approved testing requirements are identified on Exhibit C.
- (m) Service Company agrees that is will not take any actions against Association that are not reasonable based on the facts and circumstances and association agrees that it will not take any actions against Service Company that are not reasonable.

IN WITNESS WHEREOF, Service Company and Association have executed this Agreement as of the day and year first above written.

SERVICE COMPANY:
KW Resort Utilities Corp.

ASSOCIATION:
Harbor Shores Condominium Unit Association, Inc.

By: _____
Print Name: _____

By: _____
Print Name: _____

Title: _____

Title: _____

Address: 6450 Junior College Road
Key West, FL 33040

Address: 6800 Maloney Avenue Office
Key West, Florida 33040

STATE OF FLORIDA)
COUNTY OF MONROE)

Attachment 21

September 10, 2003

Harbor Shores Condominium Unit Owners Association Inc
6800 Maloney Ave.
Key West, Florida 33040

Re: Utility agreement dated Jan 29th, 2003

Upon your associations request after a Stock Island meeting KW Resort Utilities Corp. forwarded the association a sample contract for your review to help you through the sewer connection process.

Ms. Wiggington has made statements at public meetings concerning some typos in the above-mentioned agreement. She was correct; we have identified a couple areas where the name "Key West Resort Utilities" should be "KW Resort Utilities Corp."

Please be reminded that this agreement was handed out as a sample agreement and "The Agreement," which has some changes since the Jan. 29th agreement, will only be issued after an application provided by the Utility is received completely filled out by your association.

If you have any questions please call:

Thank you

Doug Carter
KW Resort Utilities Corp.

Doug Carter
General Manager
KW Resort Utilities Corp.
6630 Front Street
Key West, FL 33040
Tel 305 294-9578 / Fax 305 294 1212
doug@keywestgolf.com

August 20, 2004

Emailed to: _____

Bill Robertson
Secretary
Harbor Shores Condominium Association
Stock Island, FL

Dear Bill:

Following the Aug. 11th Board of County Commissioners special meeting at the Harvey Government Center, two members of the Harbor Shores Condominium Association (HSCA), one being Kim Wiggington, inquired as to where we are in the KWRU connection process for the residents of HSC.

I advised Kim and the other member that KWRU has not heard from the HSCA attorney since he informed our Utility that certain issues pertaining to HSCA Rules had to first be clarified with the residents of HSC prior to proceeding with the connection process.

Kim and the other member were surprised to learn that the HSC connection process has been stalled due to their attorney's "Rules question" with the residents; they requested that I email you in an effort to keep the communication open between all the parties involved.

If I or KWRU can be of further assistance in getting the HSC connection process moving forward, please do not hesitate to contact us.

Sincerely,

Doug Carter
KW Resort Utilities Corp.

4/21/03

Attention: Kim Wigington

Harbor Shores Condominium Unit Owners Association Inc.
6800 Maloney Avenue
Key West, Florida 33040

Dear Kim:

At the Monroe County Commission meeting on February 19th, 2003 Mayor Spehar officially announced that a buffer tank would be set aside for the use of The Harbor Shores Condominium Association.

After meeting with your Condominium Board and Monroe County staff on April 14th, 2003, the County Engineers and the Utility Engineers feel that the best location for this buffer tank would be on Harbor Shores property. It is apparent that your association needs to hire an engineer and complete preliminary engineering work to evaluate the best buffer tank location for Harbor Shores residents. Hopefully your engineer's conclusion will help establish a comfort level with the County and Utility suggestions.

After the Utility and Association engineers agree to a reasonable buffer tank location, and proper easements are provided, KW Resort Utility, at its own expense, shall install the buffer tank to the designated location. Any other work that is needed on private property will be at the cost of the Association.

If you have any question or comments, please call.

Doug Carter
General Manager
KW Resort Utility

UTILITY AGREEMENT

THIS UTILITY AGREEMENT (Agreement), dated as of the day of April 2004, by and between Key West Resort Utilities, a Florida corporation, having its office(s) at 6450 College Road, Key West Florida 33040, (Service Company) and, Harbor Shores Condominium Association Inc., having its office(s) at 6800 Maloney Ave. Key West, FL 33040. (Developer).

R E C I T A L S

- A. Harbor Shores Condominium Association Inc. is the owner of certain real property more particularly described on Exhibit A, attached hereto and made a part hereof (the Property).
- B. Service Company owns, operates, manages and controls a Central Sewage System and buffer tanks on private property and is willing to provide sanitary sewer services pursuant to the Harbor Shores Connection Proposal dated January 21, 2004. (Exhibit B).
- C. Harbor Shores Condominium Association Inc. requests that Service Company provide central wastewater service to the Property as indicated on the plans prepared by Weiler Engineering for The South Stock Island sewer expansion. (Copy of plan sheet included as an exhibit).

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00), and the mutual covenants and agreements hereinafter set forth, and intending to be legally bound thereby, it is agreed as follows:

1. Definitions

Business Day shall mean any day of the year in which commercial banks are not required or authorized to close in New York, New York.

Capacity Reservation Fee as such term is defined in Section 6 hereof.

Central Sewage System shall mean the central collection, transmission, treatment and disposal system and appurtenant facilities owned and operated by the Service Company.

Connection as such term is defined in Section 6 hereof.

Customer shall mean any residential or commercial customer of Service Company.

Equivalent Residential Connections (ERC), shall be defined as one individual residential connection or, for commercial and other uses, the estimated flow based on the use and Chapter 64E-6 F.A.C., divided by 250 gallons per day per residential connection also known as E.D.U..

Plans and Specifications as such term is defined in Section hereof.

Point of Delivery shall mean the point where the pipes connect to the individual condominium owner's property. The Service Company shall own the buffer tank and all pipes located in the condominium common areas and the customer shall own the pipes connecting thereto. Utility must own the clean out to the buffer tank, and all of the remaining vacuum lines down stream

Property as such term is defined in the Recitals hereof.

Property Installations or System shall mean any service lines located on individual lots or parcels of the Property or to buildings located on the Property that connect to the Central-Sewage System, and may

include facilities located outside the Property, required to be installed by Harbor Shores Condominium Association Inc., to connect facilities on the Property to the Central Sewage System.

Service Company's Affiliates shall mean any disclosed or undisclosed officer, director, employee, trustee shareholder, partner, principal, parent, subsidiary or other affiliate of Service Company.

Tariff shall mean Service Company's existing and future schedules of rates and charges for sewer service.

2. New System Construction

(a) Service Company shall install on behalf of Harbor Shores Condominium Association Inc. all pipes necessary to connect the existing Harbor Shores Condominium Association Inc. sewage system to Services Company's vacuum collection system located in the public right of way on Maloney Avenue. Service Company shall inspect and repair all existing pipes connecting individual homes to the existing central sewer system. The testing and repair of the individual homeowners laterals located on homeowners property shall be a one time event and 60 days after connection all maintenance and repair of homeowners laterals shall be at the individual homeowners expense. See Exhibit "B" attached hereto for all additional services to be provided by Service Company.

(b) Service Company shall charge \$116,710 for the work performed. Payment shall be 1/3 (\$38,903.33) upon execution hereof and the balance of \$77,806.67 upon delivery of service to the association.

(c) Intentionally deleted

(d) Intentionally deleted

3. System Records

Prior to Service Company's acceptance of all or any portion of the System for service, operation and maintenance or for service only, Harbor Shores Condominium Association Inc. shall deliver the following records and documents to Service Company:

(a) Intentionally deleted

(b) An affidavit signed by the Harbor Shores Condominium Association Inc. stating that the System is free and clear of all liens and encumbrances.

(c) A copy of the Department of Environmental Protection permit to operate the System and all inspection reports and approvals issued by the Engineer and the Department of Environmental Protection and any other applicable governmental authority or agency.

(d) A bill of sale, in recording form, conveying all right, title and interest in and to the System, to Service Company free of any and all liens and encumbrances for that portion of the System located on the Service Company side of the Point of Delivery.

4. Property Rights

In those cases in which Service Company accepts all or any portion of the System for service, operation and maintenance, Harbor Shores Condominium Association Inc. shall convey the following property rights and interests for that portion of the System to Service Company:

- (a) A non-exclusive easement, in the form attached as Exhibit "C", for that portion of the Property of sufficient size to enable Service Company ingress and egress and to operate, maintain and replace such portions of the System not located within public rights-of-way. The foregoing easement shall be in effect for a period of time not less than the period during which the Service Company shall use the System to provide service to Customers.
- (b) A non-exclusive easement, in the form attached as Exhibit "C", of sufficient size to enable ingress, egress and access by Service company personnel or vehicles to any lift or pump station located on the Property. The foregoing easement shall be in effect for a period of time not less than the period during which the Service Company shall use the System to provide service to Customers.
- (c) Notwithstanding the foregoing easements, Harbor Shores Condominium Association Inc. retains all rights and privileges to utilize the Property in any manner it deems appropriate provided such use is not inconsistent with the purposes intended for such easements.

5. **Section Intentionally Deleted.**

6. **Rates, Fees, Charges**

- (a) All Customers will pay the applicable fees, rates and charges as set forth in the Tariff. Nothing contained in this Agreement shall serve to prohibit Service Company's right to bill or collect its rates and charges from Customers, nor to require compliance with any provision of its Tariff.
- (b) Harbor Shores Condominium Association Inc. shall pay to Service Company a reservation fee (Capacity Reservation Fee), in the amount of Two Thousand Seven Hundred (\$2,700.00) dollars per E.R.C. ~~connection~~ to be reserved by Harbor Shores Condominium Association Inc. to serve the residential or commercial structures to be constructed in or upon the Property (individually, a Connection, collectively, the Connections). Prior to execution of this agreement, Harbor Shores Condominium Association Inc. has previously supplied Service Company access and information necessary to determine number of ERC's proposed. From this information it has been determined:

70 Single family homes	70 ERC's
Total	70 ERC's (\$189,000)

- (c) Each individual homeowner may choose an option in Section 7 of this Agreement and to the extent they do so, Harbor Shores' obligation to pay the Capacity Reservation shall be reduced accordingly.

Service Company shall have the right to cancel such reservation in the event of Developer's failure to comply with the terms of this Agreement. In the event there is additional water usage over and above the amount reserved in paragraph 6b above, (based on an annual review) the Harbor Shores Condominium Association Inc. shall remit additional capacity reservation fees to Service Company 30 days after notice by Service Company of additional fees due.

- (e) **Section Intentionally Deleted.**

- (f) In the event of default by Harbor Shores Condominium Association Inc. and the payment of fees hereunder, Service Company may cancel this agreement by giving 30 (thirty) days written notice of default and retain all payments hereunder as liquidated damages.
- (g) Harbor Shores Condominium Association Inc. agrees that in the event of a change of use or any change that might affect the flows (i.e. Addition of a restaurant) Service Company will be notified and the applicable Capacity Reservation fees will be paid prior to discharge to the Central Sewage System.

7. **Payment Options:**

- (a) The Property Owner must pay the Utility the entire cost of the Capacity Reservation Fee; \$2700 as provided for in Paragraph 6(c) above; or
- (b) The Property Owner must pay five (5) percent of the Capacity Reservation Fee, said check being payable to Monroe County, Florida and execute a Consent and Acknowledgment Agreement delivering both to Utility upon execution of the Utility Agreement.

Property Owners who elect to finance the balance of the Capacity Reservation Fee will be required to execute a Consent and Acknowledgment Agreement along with this Utility Agreement. The Consent and Acknowledgment Agreement is undertaken in anticipation of the bonding of the Capacity Reservation Fee. The Consent and Acknowledgment Agreement sets forth the Property Owner's agreement to comply with the Wastewater Ordinance and acknowledges Property Owner's promise to pay the balance of the Capacity Reservation Fee to Monroe County pursuant to annual Wastewater Ordinance Assessments that will be levied by Monroe County for a period not to exceed twenty (20) years. The Wastewater Ordinance Assessments impose a lien against the subject property and provide a vehicle for Property Owners to finance the cost. Property Owner's electing to participate can expect to pay the remaining balance constituting ninety-five (95) percent of the Capacity Reservation Fee over a period of up to twenty (20) years plus interest each year in the form of the Wastewater Assessment. To take advantage of the bond financing program, the Property Owner must execute the Consent and Acknowledgment Agreement, which is attached to this Agreement, in addition to paying the five (5) percent Capacity Reservation Fee.

- (d) The payment options referenced in this paragraph are only options to pay the balance of the Capacity Reservation Fee and are separate and distinct from monthly costs for sewer service, which remain the sole responsibility of the Property Owner.

8. **Absolute Conveyance**

Harbor Shores Condominium Association Inc. understands, agrees and acknowledges that Harbor Shores Condominium Association Inc. conveyance of any and all easements, real property or personal property (including, without limitation, the System), or payment of any funds hereunder (including, without limitation, the Capacity Reservation Fee and Connection Charges), shall, upon acceptance by Service Company, be absolute, complete and unqualified, and that neither Harbor Shores Condominium Association Inc. nor any party claiming by or through Harbor Shores Condominium Association Inc. shall have any right to such easements, real or personal property, or funds, or any benefit which Service Company may derive from such conveyance or payments in any form or manner.

9. **Delivery of Service; Operation and Maintenance**

- (a) Upon Harbor Shores Condominium Association Inc.'s full performance of its obligations under this Agreement, Service Company shall provide service to the Point of Delivery in accordance with the terms of this Agreement, all applicable laws and regulations and shall operate and maintain the Central Sewage System to the Point of Delivery in accordance with the terms and provisions of this Agreement. Service Company shall use its best efforts to provide service on or about September 2004. Service Company shall not be responsible for any costs or damages, in the event service is not available at that time.
- (b) Harbor Shores Condominium Association Inc. or the individual condominium owners shall, at its sole cost and expense, own, operate and maintain any part of the System that has not been conveyed to Service Company pursuant to the terms and conditions of this Agreement.
- (c) Harbor Shores Condominium Association Inc. acknowledges that certain water quality standards must be met prior to influent entering the wastewater treatment plant (primarily chloride levels and excessive flows) and agrees to allow Service Company to monitor flows and water quality at Service Company's discretion at a point on the Harbor Shores Condominium Association Inc. or the individual condominium owners side of the Point of Delivery. If it is determined that substandard influent or excessive flows are entering the Central Sewage System via the System, Harbor Shores Condominium Association Inc. or the individual condominium owners agrees to isolate the source and to repair or replace the portion or portions of the faulty System in a manner acceptable to Service Company in accordance with this agreement.
- (d) **Section Intentionally Deleted.**

10. **Repair of System**

In the event of any damage to or destruction of any portion of the Central Sewage System due to any acts or omissions by Harbor Shores Condominium Association Inc., any Customer or their respective agents, representatives, employees, invitees or licensees, Service Company shall repair or replace such damaged or destroyed facilities at the sole cost and expense of responsible party. The individual condominium owners shall operate, maintain and repair all other portions of the System not conveyed to Service Company at their sole cost and expense.

11. **Term**

This Agreement shall become effective as of the date first written above, and shall continue for so long as Service Company provides sewer service to the public.

12. **Default**

In the event of a default by either party of its duties and obligations hereunder, the non-defaulting party shall provide written notice to the defaulting party specifying the nature of the default and the defaulting party shall have five (5) days to cure any default of a monetary nature and thirty (30) days for any other default. If the default has not been cured within the applicable period (time being of the essence), the non-defaulting party shall be entitled to exercise all remedies available at law or in equity, including but not limited to, the right to damages, injunctive relief and specific performance. Service Company may, at its sole option, discontinue and suspend the delivery of service to the System in accordance with all requirements of applicable law and the Tariff if Harbor Shores Condominium Association Inc. fails to timely pay all fees, rates and charges pursuant to the terms of this Agreement.

13. Excuse from Performance

- (a) Force Majeure. If Service Company is prevented from or delayed in performing any act required to be performed by Service Company hereunder, and such prevention or delay is caused by strikes, labor disputes, inability to obtain labor, materials or equipment, storms, earthquakes, electric power failures, land subsidence, acts of God, acts of public enemy, wars, blockades, riots, acts of armed forces, delays by carriers, inability to obtain rights-of-way, acts of public authority, regulatory agencies, or courts, or any other cause, whether the same kind is enumerated herein, not within the control of Service Company (Force Majeure), the performance of such act shall be excused for a period equal to the period of prevention or delay.
- (b) Governmental Acts If for any reason during the term of this Agreement, other than the fault of Harbor Shores Condominium Association Inc., any federal, state or local authorities or agencies fail to issue necessary permits, grant necessary approvals or require any change in the operation of the Central Sewage System or the System (Governmental Acts), then, to the extent that such Governmental Acts shall affect the ability of any party to perform any of the terms of this Agreement in whole or in part, the affected party shall be excused from the performance thereof and a new agreement shall be negotiated, if possible, by the parties hereto in conformity with such permits, approvals or requirements. Notwithstanding the foregoing, neither Harbor Shores Condominium Association Inc. nor Service Company shall be obligated to accept any new agreement if it substantially adds to its burdens and obligations hereunder.
- (c) Emergency Situations Service Company shall not be held liable for damages to Harbor Shores Condominium Association Inc. and Harbor Shores Condominium Association Inc. hereby agrees not to hold Service Company liable for damages for failure to deliver service to the Property upon the occurrence of any of the following events:
1. A lack of service due to loss of flow or process or distribution failure;
 2. Equipment or material failure in the Central Sewage System or the System, including storage, pumping and piping provided the Service Company has utilized its best efforts to maintain the Central Sewage System in good operating condition; and
 3. Force Majeure, unforeseeable failure or breakdown of pumping, transmission or other facilities, any and all governmental requirements, acts or action of any government, public or governmental authority, commission or board, agency, agent, official or officer, the enactment of any statute, ordinance, resolution, regulation, rule or ruling, order, decree or judgment, restraining order or injunction of any court, including, without limitation, Governmental Acts.
- (d) Notwithstanding any excuse of performance due to the occurrence of any of the foregoing events, Harbor Shores Condominium Association Inc. shall not be excused from payment of any fees, charges and rates due to Service Company under the terms of this Agreement (including without limitation, the Capacity Reservation Fee and Connection Charges).

14. Successors and Assigns

This Agreement and the easements granted hereby, shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

15. **Indemnification**

Harbor Shores Condominium Association Inc. shall indemnify, defend and hold Service Company and Service Company's Affiliates harmless from and against any and all claims, demands, causes of action, losses, damages, liabilities, costs and reasonable expenses, including, without limitation, attorneys fees and disbursements, suffered or incurred by Service Company or any of Service Company's Affiliates and arising out of or in connection with use, occupancy, or operation of the System, the Property, or the activities, errors, or omissions of Harbor Shores Condominium Association Inc., its agents, employees, servants, licensees, invitees, or contractors on or about the Property, pursuant to terms and conditions of this Agreement. Harbor Shores Condominium Association Inc.'s duty to indemnify shall also include, but not be limited to, indemnification from and against any fine, penalty, liability, or cost to Service Company arising out of Harbor Shores Condominium Association Inc.'s violation or breach of any law, ordinance, governmental regulation, this Agreement requirement or permit applicable to the System or Harbor Shores Condominium Association Inc.'s activities on or about the Property. The provisions of this Section 15 shall survive the termination of this Agreement.

16. **Section Intentionally Deleted.**

17. **Notices**

All notices, demands, requests or other communications by either party under this Agreement shall be in writing and sent by (a) first class U.S. certified or registered mail, return receipt requested, with postage prepaid, or (b) overnight delivery service or courier, or (c) telefacsimile or similar facsimile transmission with receipt confirmed as follows:

If to Service Company:

Mr. Doug Carter, General Manager
6450 Junior College Road
Key West, Florida 33040
Fax (305) 294-1212

With a copy to:

Mr. Jeff Weiler, P.E.
Weiler Engineering
20020 Veterans Blvd.
Port Charlotte, Florida 33954
Fax (941) 764-8915

If to Harbor Shores Condominium Association Inc.: Harbor Shores Condominium Association Inc..
6800 Maloney Ave
Key West, FL 33040

18. **Tariff**

This Agreement is subject to all of the terms and provision of the Tariff. In the event of any conflict between the Tariff and the terms of this Agreement, the Tariff shall govern and control.

19. Miscellaneous Provisions

- (a) This Agreement shall not be altered, amended, changed, waived, terminated or otherwise modified in any respect or particular, and no consent or approval required pursuant to this Agreement shall be effective, unless the same shall be in writing and signed by or on behalf of the party to be charged.
- (b) All prior statements, understandings, representations and agreements between the parties, oral or written, are superseded by and merged in this Agreement, which alone fully and completely expresses the agreement between them in connection with this transaction and which is entered into after full investigation, neither party relying upon any statement, understanding, representation or agreement made by the other not embodied in this Agreement. This Agreement shall be given a fair and reasonable construction in accordance with the intentions of the parties hereto, and without regard to or aid of canons requiring construction against Service Company or the party drafting this Agreement.
- (c) No failure or delay of either party in the exercise of any right or remedy given to such party hereunder or the waiver by any party of any condition hereunder for its benefit (unless the time specified herein for exercise of such right or remedy has expired) shall constitute a waiver of any other or further right or remedy nor shall any single or partial exercise of any right or remedy preclude other or further exercise thereof or any other right or remedy. No waiver by either party of any breach hereunder or failure or refusal by the other party to comply with its obligations shall be deemed a waiver of any other or subsequent breach, failure or refusal to so comply.
- (d) This Agreement may be executed in one or more counterparts, each of which so executed and delivered shall be deemed an original, but all of which taken together shall constitute but one and the same instrument. It shall not be necessary for the same counterpart of this Agreement to be executed by all of the parties hereto.
- (e) Each of the exhibits and schedules referred to herein and attached hereto is incorporated herein by this reference.
- (f) The caption headings in this Agreement are for convenience only and are not intended to be a part of this Agreement and shall not be construed to modify, explain or alter any of the terms, covenants or conditions herein contained.
- (g) This Agreement shall be interpreted and enforced in accordance with the laws of the state in which the Property is located without reference to principles of conflicts of laws. In the event that the Florida Public Service commission loses or relinquishes its authority to regulate Service Company, then all references to such regulatory authority will relate to the agency of government or political subdivision imposing said regulations. If no such regulation exists, then this Agreement shall be governed by applicable principles of law.
- (h) Each of the parties to this Agreement agrees that at any time after the execution hereof, it will, on request of the other party, execute and deliver such other documents and further assurances as may reasonably be required by such other party in order to carry out the intent of this Agreement.
- (i) If any provision of this Agreement shall be unenforceable or invalid, the same shall not affect the remaining provisions of this Agreement and to this end the provisions of this Agreement are

intended to be and shall be severed. Notwithstanding the foregoing sentence, if (I) any provision of this Agreement is finally determined by a court of competent jurisdiction to be unenforceable or invalid in whole or in part, (ii) the opportunity for all appeals of such determination have expired, and (iii) such unenforceability or invalidity alters the substance of this Agreement (taken as a whole) so as to deny either party, in a material way, the realization of the intended benefit of its bargain, such party may terminate this Agreement within thirty (30) days after the final determination by notice to the other. If such party so elects to terminate this Agreement, then this Agreement shall be terminated and neither party shall have any further rights, obligations or liabilities hereunder, except for any rights, obligations or liabilities which by this specific terms of this Agreement survive the termination of this Agreement.

- (j) In the event of any litigation arising out of or connected in any manner with this Agreement, the non-prevailing party shall pay the costs of the prevailing party, including its reasonable counsel and paralegal fees incurred in connection therewith through and including all other legal expenses and the costs of any appeals and appellate costs relating thereto. Wherever in this Agreement it is stated that one party shall be responsible for the attorneys fees and expenses of another party, the same shall automatically be deemed to include the fees and expenses in connection with all appeals and appellate proceedings relating or incidental thereto. This subsection (j) shall survive the termination of this Agreement.
- (k) This Agreement shall not be deemed to confer in favor of any third parties any rights whatsoever as third-party beneficiaries, the parties hereto intending by the provisions hereof to confer no such benefits or status.
- (l) Harbor Shores Condominium Association Inc. agrees that Service Company may, at its sole discretion, require certain allocations to the proposed collection and transmission systems for future connections. Harbor Shores Condominium Association Inc. further agrees that Service Company may, at its sole discretion, extend the sewer line for any reason. It is understood that there will be no reimbursement or additional credit.

(SIGNATURE PAGE IMMEDIATELY FOLLOWING)

IN WITNESS WHEREOF, Service Company and Harbor Shores Condominium Association Inc. have executed this Agreement as of the day and year first above written.

SERVICE COMPANY:

Harbor Shores Condominium Association Inc.

Key West Resort Utilities Corporation

By: _____

Print Name: _____

Title: _____

Address: Key West Resort Utilities Corporation
6450 Junior College Road
Key West, Florida 33040

By: _____

Print Name: _____

Title: _____

Address: _____

STATE OF FLORIDA)
) ss:
COUNTY OF MONROE)

The foregoing instrument was acknowledged before me this _____ day of _____, 2004, by _____, as _____, a Florida corporation, on behalf of said corporation. He/she is personally known to me or who has produced _____ as identification.

My Commission Expires: _____

STATE OF FLORIDA)
) ss:
COUNTY OF MONROE)

The foregoing instrument was acknowledged before me this _____ day of _____, 200__, by _____, as _____, a Florida corporation, on behalf of said corporation. He/she is personally known to me or who has produced _____ as identification.

My Commission Expires: _____

Sent

KW RESORT UTILITIES
P.O. Box 2125
Key West, FL 33045

Harbor Shores Condominium Assoc (President)
6800 Maloney Ave.
Key West, FL 33040

May 27th, 2004

Mitchell J. Cook, P.A.
3706 North Roosevelt Boulevard
Suite I
Key West, FL 33045

Re: Harbor Shores Connection Proposal

Dear Mr. Cook:

On April 14th, 2004 you requested an agreement for the connection of The Harbor Shores Condominium Association sewer system to KW Resort Utilities central sewer system. At your request I forwarded you an agreement on May 7th and I have not heard from you since. Do you have any questions or comments about the agreement?

Due to the escalating cost of construction materials, the original connection proposal dated Jan 21st, 2004 will only be valid until July 1st, 2004.

I believe that we can negotiate a final agreement well before the July 1st deadline if your client is willing.

I look forward to hearing from you.

Sincerely,

Doug Carter
KWRU

ACTIVITY REPORT

TIME : 12/30/2004 14:13
 NAME :
 FAX : 3052941212
 TEL : 3052945232
 SER.# : BR0G3J524162

NO.	DATE	TIME	FAX NO. /NAME	DURATION	PAGE(S)	RESULT	COMMENT
	12/30	12:37	2923466	02	00	NG	RX
#256	12/30	12:41	2923466	06:00	21	OK	TX ECM
#257	12/30	12:48	2923466	18	01	OK	TX ECM
	12/30	13:57	3052934415	43	02	OK	RX ECM
#260	12/30	13:58	18504102526	59	03	OK	TX ECM
#258	12/30	14:00	18504102526	57	03	OK	TX ECM
#259	12/30	14:01	18504102526	57	03	OK	TX ECM
#261	12/30	14:07	2923466	05:29	19	OK	TX ECM

BUSY: BUSY/NO RESPONSE
 NG : POOR LINE CONDITION / OUT OF MEMORY
 CV : COVERPAGE
 POL : POLLING
 RET : RETRIEVAL

Attachment 22



BOARD OF COUNTY COMMISSIONERS

Mayor Dixie M. Spehar, District 1
Mayor Pro Tem Charles "Sonny" McCoy, District 3
George Neugent, District 2
David P. Rice, District 4
Murray E. Nelson, District 5

Engineering Division
1100 Simonton Street
Key West, FL 33040



May 4, 2005

Mr. Chris Johnson, President
Keys Environmental Inc.
6630 Front Street
Key West, FL 33040

RE: Stock Island Sewer Extension

Dear Mr. Johnson:

On 11/29/04 the BOCC approved Alternate 1A of the URS report but also allowed other work to proceed subject to the property owner paying for work above and beyond that identified in Alternate 1A.

After reviewing the proposed work specified in your letter to Mr. Willi dated May 4, 2005 I find only one location approved by the BOCC for funding, i.e. El Mar Trailer Park vacuum pit and short vacuum line.

However, lateral extensions on Second St. were part of the original scope. I understand that due to a survey discrepancy the lines ended within the pavement and need to be extended. Therefore, this work can be funded. A new proposal for these two locations is required specifying unit costs and quantities. Also, Monroe County is not allowed to pay in advance. Finally, since Monroe County's contract is with KW Resort Utility and not Keys Environmental Inc. work would have to go thru them. As an alternative, Monroe County may be willing to contract directly with the plumbing contractors to have the work done.

Please feel free to contact me directly with your comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Koppel', written over a horizontal line.

David S. Koppel, P.E.
County Engineer

DSK/jl
SISewerExtensionChrisJohnson.DOC

Cc: Tom Willi



KEYS ENVIRONMENTAL INC.
 6630 FRONT STREET • KEY WEST, FL 33040
 PHONE (305) 522-0052 • FAX (305) 522-0052
 www.KeysEnvironmental.com

*File
copy*

March 11, 2005

Mr. Thomas J. Willi
 Monroe County Administrator
 1100 Simonton St., Room 2-205
 Key West, FL 33040

Mr. Administrator,

As you are aware, there are some contingency items that remain outstanding from the South Stock Island Sewer Expansion Project. These items include several properties on Second Street. A portion of the R.O.W. that was previously undeclared has recently been claimed by Monroe County (See attachment). As a result of the County's recent action, it may be necessary to extend the laterals across the recently declared County R.O.W. to the property line, as it is currently defined. Other items include properties that are not currently served and are contingency items from the project. K.W. Resort Utilities is actively bidding the work as directed by the County Administrator during the CTF meeting. The Utility and its engineers have met with B&L Beneway, Higgins, BAT Construction, Haskins Plumbing, Gary's Plumbing, Frank's Plumbing, and Tony Herse Plumbing. Field meetings will conclude next week and it is expected that all bids will be submitted by the first week of April. Currently the following properties are not served according to Monroe County Ordinance (No. 04-2000):

Maloney Ave.	Second Street	Fifth Street
126070	133060	125360
126080	133070	
126120	133080	
	133090	
	133100	
	133120	

K.W. Resort Utility shall inform the County in writing when the above properties are served per Monroe County Ordinance. In the interim these property owners should be informed that they are not in violation at the present, but that it is the County's intention to serve them in the near future. Regarding these properties, Utility staff would be happy to meet with plumbers or residents to discuss their planned points of connection so that they may begin planning and procuring price quotes.

Respectfully,

Christopher Johnson
 President, Keys Environmental Inc.

CAJ/CAJ

Match line

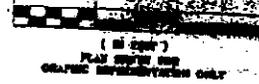
10/12/05

FAXED 10:00 AM

8

WORK LOCATIONS

GRAPHIC SCALE



(IN FEET)

PLAN SHEET FOR GRAPHIC REPRESENTATION ONLY

① Oropesa Warehouse Bldg. 6475 2nd St 1 EDU

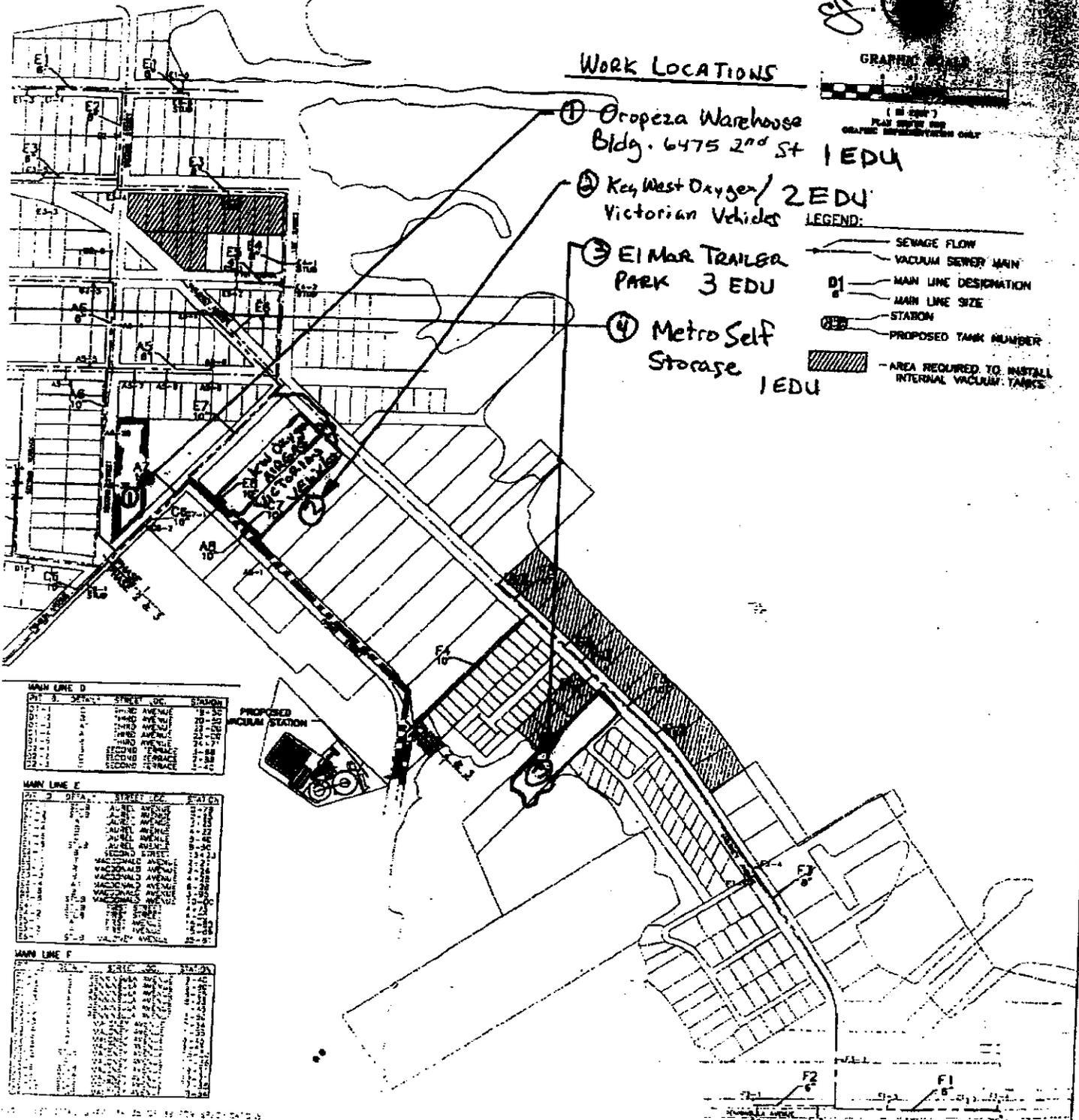
② Key West Oxygen/ Victorian Vehicles 2 EDU

③ El Mar TRAILER PARK 3 EDU

④ Metro Self Storage 1 EDU

LEGEND:

- SEWAGE FLOW
- VACUUM SEWER MAIN
- MAIN LINE DESIGNATION
- MAIN LINE SIZE
- STATION
- PROPOSED TANK NUMBER
- AREA REQUIRED TO INSTALL INTERNAL VACUUM TANKS



MAIN LINE D

LINE NO.	STREET OR AVENUE	STATION
D1-1	1st AVENUE	1+00.00
D1-2	2nd AVENUE	1+100.00
D1-3	3rd AVENUE	1+200.00
D1-4	4th AVENUE	1+300.00
D1-5	5th AVENUE	1+400.00
D1-6	6th AVENUE	1+500.00
D1-7	7th AVENUE	1+600.00
D1-8	8th AVENUE	1+700.00
D1-9	9th AVENUE	1+800.00
D1-10	10th AVENUE	1+900.00
D1-11	11th AVENUE	2+000.00
D1-12	12th AVENUE	2+100.00
D1-13	13th AVENUE	2+200.00
D1-14	14th AVENUE	2+300.00
D1-15	15th AVENUE	2+400.00
D1-16	16th AVENUE	2+500.00
D1-17	17th AVENUE	2+600.00
D1-18	18th AVENUE	2+700.00
D1-19	19th AVENUE	2+800.00
D1-20	20th AVENUE	2+900.00
D1-21	21st AVENUE	3+000.00
D1-22	22nd AVENUE	3+100.00
D1-23	23rd AVENUE	3+200.00
D1-24	24th AVENUE	3+300.00
D1-25	25th AVENUE	3+400.00
D1-26	26th AVENUE	3+500.00
D1-27	27th AVENUE	3+600.00
D1-28	28th AVENUE	3+700.00
D1-29	29th AVENUE	3+800.00
D1-30	30th AVENUE	3+900.00
D1-31	31st AVENUE	4+000.00
D1-32	32nd AVENUE	4+100.00
D1-33	33rd AVENUE	4+200.00
D1-34	34th AVENUE	4+300.00
D1-35	35th AVENUE	4+400.00
D1-36	36th AVENUE	4+500.00
D1-37	37th AVENUE	4+600.00
D1-38	38th AVENUE	4+700.00
D1-39	39th AVENUE	4+800.00
D1-40	40th AVENUE	4+900.00
D1-41	41st AVENUE	5+000.00
D1-42	42nd AVENUE	5+100.00
D1-43	43rd AVENUE	5+200.00
D1-44	44th AVENUE	5+300.00
D1-45	45th AVENUE	5+400.00
D1-46	46th AVENUE	5+500.00
D1-47	47th AVENUE	5+600.00
D1-48	48th AVENUE	5+700.00
D1-49	49th AVENUE	5+800.00
D1-50	50th AVENUE	5+900.00
D1-51	51st AVENUE	6+000.00
D1-52	52nd AVENUE	6+100.00
D1-53	53rd AVENUE	6+200.00
D1-54	54th AVENUE	6+300.00
D1-55	55th AVENUE	6+400.00
D1-56	56th AVENUE	6+500.00
D1-57	57th AVENUE	6+600.00
D1-58	58th AVENUE	6+700.00
D1-59	59th AVENUE	6+800.00
D1-60	60th AVENUE	6+900.00
D1-61	61st AVENUE	7+000.00
D1-62	62nd AVENUE	7+100.00
D1-63	63rd AVENUE	7+200.00
D1-64	64th AVENUE	7+300.00
D1-65	65th AVENUE	7+400.00
D1-66	66th AVENUE	7+500.00
D1-67	67th AVENUE	7+600.00
D1-68	68th AVENUE	7+700.00
D1-69	69th AVENUE	7+800.00
D1-70	70th AVENUE	7+900.00
D1-71	71st AVENUE	8+000.00
D1-72	72nd AVENUE	8+100.00
D1-73	73rd AVENUE	8+200.00
D1-74	74th AVENUE	8+300.00
D1-75	75th AVENUE	8+400.00
D1-76	76th AVENUE	8+500.00
D1-77	77th AVENUE	8+600.00
D1-78	78th AVENUE	8+700.00
D1-79	79th AVENUE	8+800.00
D1-80	80th AVENUE	8+900.00
D1-81	81st AVENUE	9+000.00
D1-82	82nd AVENUE	9+100.00
D1-83	83rd AVENUE	9+200.00
D1-84	84th AVENUE	9+300.00
D1-85	85th AVENUE	9+400.00
D1-86	86th AVENUE	9+500.00
D1-87	87th AVENUE	9+600.00
D1-88	88th AVENUE	9+700.00
D1-89	89th AVENUE	9+800.00
D1-90	90th AVENUE	9+900.00
D1-91	91st AVENUE	10+000.00
D1-92	92nd AVENUE	10+100.00
D1-93	93rd AVENUE	10+200.00
D1-94	94th AVENUE	10+300.00
D1-95	95th AVENUE	10+400.00
D1-96	96th AVENUE	10+500.00
D1-97	97th AVENUE	10+600.00
D1-98	98th AVENUE	10+700.00
D1-99	99th AVENUE	10+800.00
D1-100	100th AVENUE	10+900.00

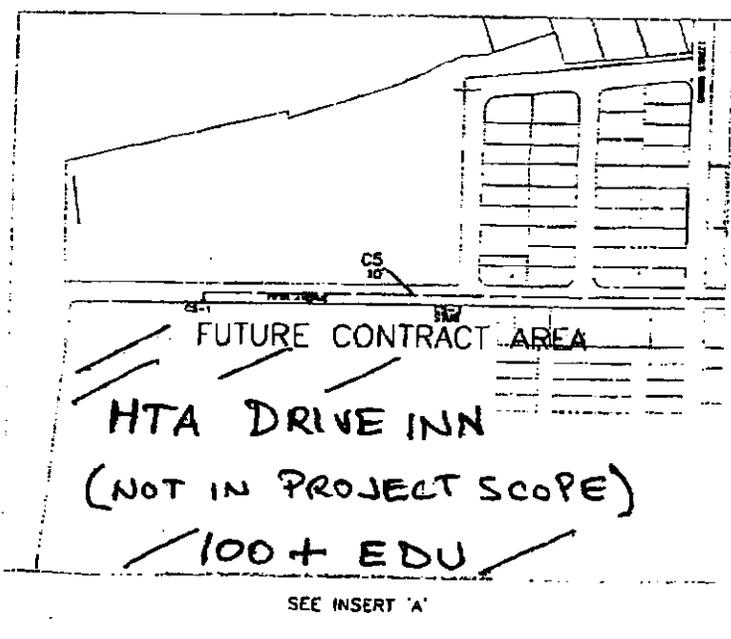
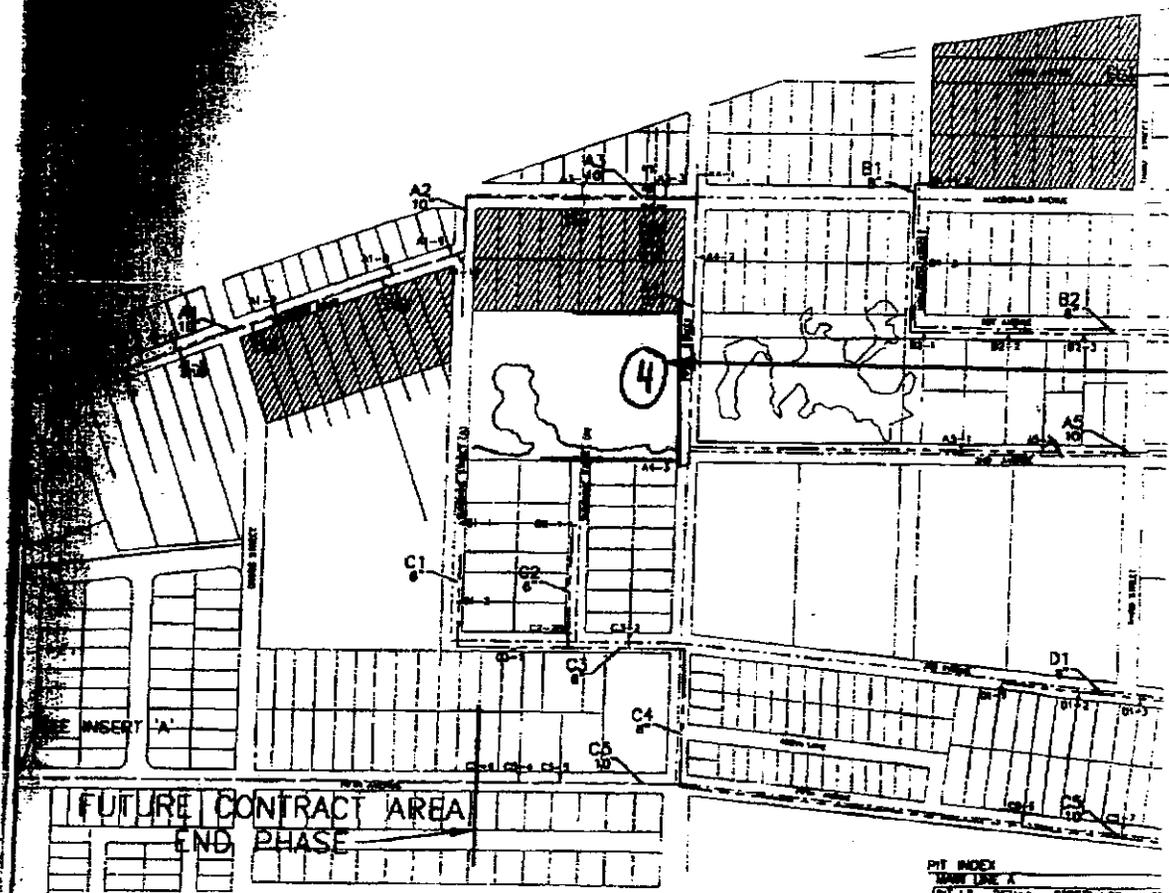
MAIN LINE E

LINE NO.	STREET OR AVENUE	STATION
E1-1	1st AVENUE	1+00.00
E1-2	2nd AVENUE	1+100.00
E1-3	3rd AVENUE	1+200.00
E1-4	4th AVENUE	1+300.00
E1-5	5th AVENUE	1+400.00
E1-6	6th AVENUE	1+500.00
E1-7	7th AVENUE	1+600.00
E1-8	8th AVENUE	1+700.00
E1-9	9th AVENUE	1+800.00
E1-10	10th AVENUE	1+900.00
E1-11	11th AVENUE	2+000.00
E1-12	12th AVENUE	2+100.00
E1-13	13th AVENUE	2+200.00
E1-14	14th AVENUE	2+300.00
E1-15	15th AVENUE	2+400.00
E1-16	16th AVENUE	2+500.00
E1-17	17th AVENUE	2+600.00
E1-18	18th AVENUE	2+700.00
E1-19	19th AVENUE	2+800.00
E1-20	20th AVENUE	2+900.00
E1-21	21st AVENUE	3+000.00
E1-22	22nd AVENUE	3+100.00
E1-23	23rd AVENUE	3+200.00
E1-24	24th AVENUE	3+300.00
E1-25	25th AVENUE	3+400.00
E1-26	26th AVENUE	3+500.00
E1-27	27th AVENUE	3+600.00
E1-28	28th AVENUE	3+700.00
E1-29	29th AVENUE	3+800.00
E1-30	30th AVENUE	3+900.00
E1-31	31st AVENUE	4+000.00
E1-32	32nd AVENUE	4+100.00
E1-33	33rd AVENUE	4+200.00
E1-34	34th AVENUE	4+300.00
E1-35	35th AVENUE	4+400.00
E1-36	36th AVENUE	4+500.00
E1-37	37th AVENUE	4+600.00
E1-38	38th AVENUE	4+700.00
E1-39	39th AVENUE	4+800.00
E1-40	40th AVENUE	4+900.00
E1-41	41st AVENUE	5+000.00
E1-42	42nd AVENUE	5+100.00
E1-43	43rd AVENUE	5+200.00
E1-44	44th AVENUE	5+300.00
E1-45	45th AVENUE	5+400.00
E1-46	46th AVENUE	5+500.00
E1-47	47th AVENUE	5+600.00
E1-48	48th AVENUE	5+700.00
E1-49	49th AVENUE	5+800.00
E1-50	50th AVENUE	5+900.00
E1-51	51st AVENUE	6+000.00
E1-52	52nd AVENUE	6+100.00
E1-53	53rd AVENUE	6+200.00
E1-54	54th AVENUE	6+300.00
E1-55	55th AVENUE	6+400.00
E1-56	56th AVENUE	6+500.00
E1-57	57th AVENUE	6+600.00
E1-58	58th AVENUE	6+700.00
E1-59	59th AVENUE	6+800.00
E1-60	60th AVENUE	6+900.00
E1-61	61st AVENUE	7+000.00
E1-62	62nd AVENUE	7+100.00
E1-63	63rd AVENUE	7+200.00
E1-64	64th AVENUE	7+300.00
E1-65	65th AVENUE	7+400.00
E1-66	66th AVENUE	7+500.00
E1-67	67th AVENUE	7+600.00
E1-68	68th AVENUE	7+700.00
E1-69	69th AVENUE	7+800.00
E1-70	70th AVENUE	7+900.00
E1-71	71st AVENUE	8+000.00
E1-72	72nd AVENUE	8+100.00
E1-73	73rd AVENUE	8+200.00
E1-74	74th AVENUE	8+300.00
E1-75	75th AVENUE	8+400.00
E1-76	76th AVENUE	8+500.00
E1-77	77th AVENUE	8+600.00
E1-78	78th AVENUE	8+700.00
E1-79	79th AVENUE	8+800.00
E1-80	80th AVENUE	8+900.00
E1-81	81st AVENUE	9+000.00
E1-82	82nd AVENUE	9+100.00
E1-83	83rd AVENUE	9+200.00
E1-84	84th AVENUE	9+300.00
E1-85	85th AVENUE	9+400.00
E1-86	86th AVENUE	9+500.00
E1-87	87th AVENUE	9+600.00
E1-88	88th AVENUE	9+700.00
E1-89	89th AVENUE	9+800.00
E1-90	90th AVENUE	9+900.00
E1-91	91st AVENUE	10+000.00
E1-92	92nd AVENUE	10+100.00
E1-93	93rd AVENUE	10+200.00
E1-94	94th AVENUE	10+300.00
E1-95	95th AVENUE	10+400.00
E1-96	96th AVENUE	10+500.00
E1-97	97th AVENUE	10+600.00
E1-98	98th AVENUE	10+700.00
E1-99	99th AVENUE	10+800.00
E1-100	100th AVENUE	10+900.00

MAIN LINE F

LINE NO.	STREET OR AVENUE	STATION
F1-1	1st AVENUE	1+00.00
F1-2	2nd AVENUE	1+100.00
F1-3	3rd AVENUE	1+200.00
F1-4	4th AVENUE	1+300.00
F1-5	5th AVENUE	1+400.00
F1-6	6th AVENUE	1+500.00
F1-7	7th AVENUE	1+600.00
F1-8	8th AVENUE	1+700.00
F1-9	9th AVENUE	1+800.00
F1-10	10th AVENUE	1+900.00
F1-11	11th AVENUE	2+000.00
F1-12	12th AVENUE	2+100.00
F1-13	13th AVENUE	2+200.00
F1-14	14th AVENUE	2+300.00
F1-15	15th AVENUE	2+400.00
F1-16	16th AVENUE	2+500.00
F1-17	17th AVENUE	2+600.00
F1-18	18th AVENUE	2+700.00
F1-19	19th AVENUE	2+800.00
F1-20	20th AVENUE	2+900.00
F1-21	21st AVENUE	3+000.00
F1-22	22nd AVENUE	3+100.00
F1-23	23rd AVENUE	3+200.00
F1-24	24th AVENUE	3+300.00
F1-25	25th AVENUE	3+400.00
F1-26	26th AVENUE	3+500.00
F1-27	27th AVENUE	3+600.00
F1-28	28th AVENUE	3+700.00
F1-29	29th AVENUE	3+800.00
F1-30	30th AVENUE	3+900.00
F1-31	31st AVENUE	4+000.00
F1-32	32nd AVENUE	4+100.00
F1-33	33rd AVENUE	4+200.00
F1-34	34th AVENUE	4+300.00
F1-35	35th AVENUE	4+400.00
F1-36	36th AVENUE	4+500.00
F1-37	37th AVENUE	4+600.00
F1-38	38th AVENUE	4+700.00
F1-39	39th AVENUE	4+800.00
F1-40	40th AVENUE	4+900.00
F1-41	41st AVENUE	5+000.00
F1-42	42nd AVENUE	5+100.00
F1-43	43rd AVENUE	5+200.00
F1-44	44th AVENUE	5+300.00
F1-45	45th AVENUE	5+400.00
F1-46	46th AVENUE	5+500.00
F1-47	47th AVENUE	5+600.00
F1-48	48th AVENUE	5+700.00
F1-49	49th AVENUE	5+800.00
F1-50	50th AVENUE	5+900.00
F1-51	51st AVENUE	6+000.00
F1-52	52nd AVENUE	6+100.00
F1-53	53rd AVENUE	6+200.00
F1-54	54th AVENUE	6+300.00
F1-55	55th AVENUE	6+400.00
F1-56	56th AVENUE	6+500.00
F1-57	57th AVENUE	6+600.00
F1-58	58th AVENUE	6+700.00
F1-59	59th AVENUE	6+800.00
F1-60	60th AVENUE	6+900.00
F1-61	61st AVENUE	7+000.00
F1-62	62nd AVENUE	7+100.00
F1-63	63rd AVENUE	7+200.00
F1-64	64th AVENUE	7+300.00
F1-65	65th AVENUE	7+400.00
F1-66	66th AVENUE	7+500.00
F1-67	67th AVENUE	7+600.00
F1-68	68th AVENUE	7+700.00
F1-69	69th AVENUE	7+800.00
F1-70	70th AVENUE	7+900.00
F1-71	71st AVENUE	8+000.00
F1-72	72nd AVENUE	8+100.00
F1-73	73rd AVENUE	8+200.00
F1-74	74th AVENUE	8+300.00
F1-75	75th AVENUE	8+400.00
F1-76	76th AVENUE	8+500.00
F1-77	77th AVENUE	8+600.00
F1-78	78th AVENUE	8+700.00
F1-79	79th AVENUE	8+800.00
F1-80	80th AVENUE	8+900.00
F1-81	81st AVENUE	9+000.00
F1-82	82nd AVENUE	9+100.00
F1-83	83rd AVENUE	9+200.00
F1-84	84th AVENUE	9+300.00
F1-85	85th AVENUE	9+400.00
F1-86	86th AVENUE	9+500.00
F1-87	87th AVENUE	9+600.00
F1-88	88th AVENUE	9+700.00
F1-89	89th AVENUE	9+800.00
F1-90	90th AVENUE	9+900.00
F1-91	91st AVENUE	10+000.00
F1-92	92nd AVENUE	10+100.00
F1-93	93rd AVENUE	10+200.00
F1-94	94th AVENUE	10+300.00
F1-95	95th AVENUE	10+400.00
F1-96	96th AVENUE	10+500.00
F1-97	97th AVENUE	10+600.00
F1-98	98th AVENUE	10+700.0

OWN FOR GRAPHIC REPRESENTATION ONLY.
 UCTION PLAN SET AND SPECIFICATIONS FOR
 LOCATION AND INSTALLATION OF VACUUM SEWER.



PIT INDEX
 MAIN LINE A

PIT ID	DEPTH	STREET LOC.
A1	4.0	100+ EDU
A2	4.0	100+ EDU
A3	4.0	100+ EDU
A4	4.0	100+ EDU
A5	4.0	100+ EDU
A6	4.0	100+ EDU
A7	4.0	100+ EDU
A8	4.0	100+ EDU
A9	4.0	100+ EDU
A10	4.0	100+ EDU
A11	4.0	100+ EDU
A12	4.0	100+ EDU
A13	4.0	100+ EDU
A14	4.0	100+ EDU
A15	4.0	100+ EDU
A16	4.0	100+ EDU
A17	4.0	100+ EDU
A18	4.0	100+ EDU
A19	4.0	100+ EDU
A20	4.0	100+ EDU
A21	4.0	100+ EDU
A22	4.0	100+ EDU
A23	4.0	100+ EDU
A24	4.0	100+ EDU
A25	4.0	100+ EDU
A26	4.0	100+ EDU
A27	4.0	100+ EDU
A28	4.0	100+ EDU
A29	4.0	100+ EDU
A30	4.0	100+ EDU
A31	4.0	100+ EDU
A32	4.0	100+ EDU
A33	4.0	100+ EDU
A34	4.0	100+ EDU
A35	4.0	100+ EDU
A36	4.0	100+ EDU
A37	4.0	100+ EDU
A38	4.0	100+ EDU
A39	4.0	100+ EDU
A40	4.0	100+ EDU
A41	4.0	100+ EDU
A42	4.0	100+ EDU
A43	4.0	100+ EDU
A44	4.0	100+ EDU
A45	4.0	100+ EDU
A46	4.0	100+ EDU
A47	4.0	100+ EDU
A48	4.0	100+ EDU
A49	4.0	100+ EDU
A50	4.0	100+ EDU

MAIN LINE B

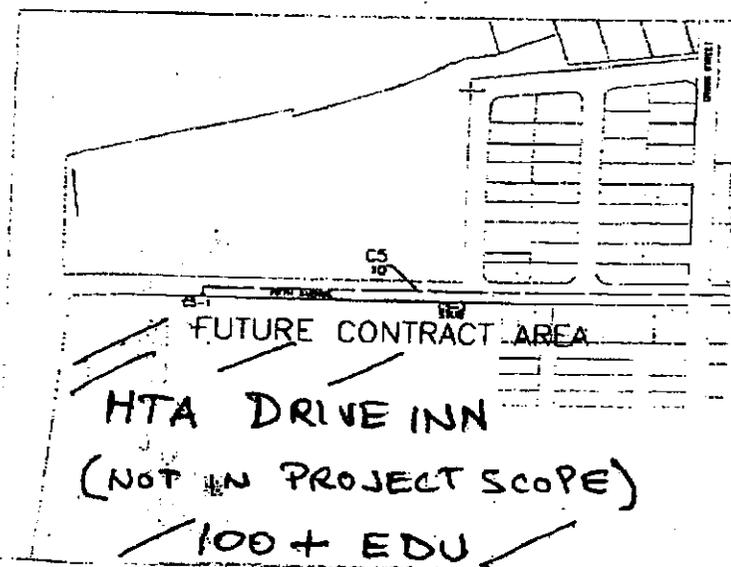
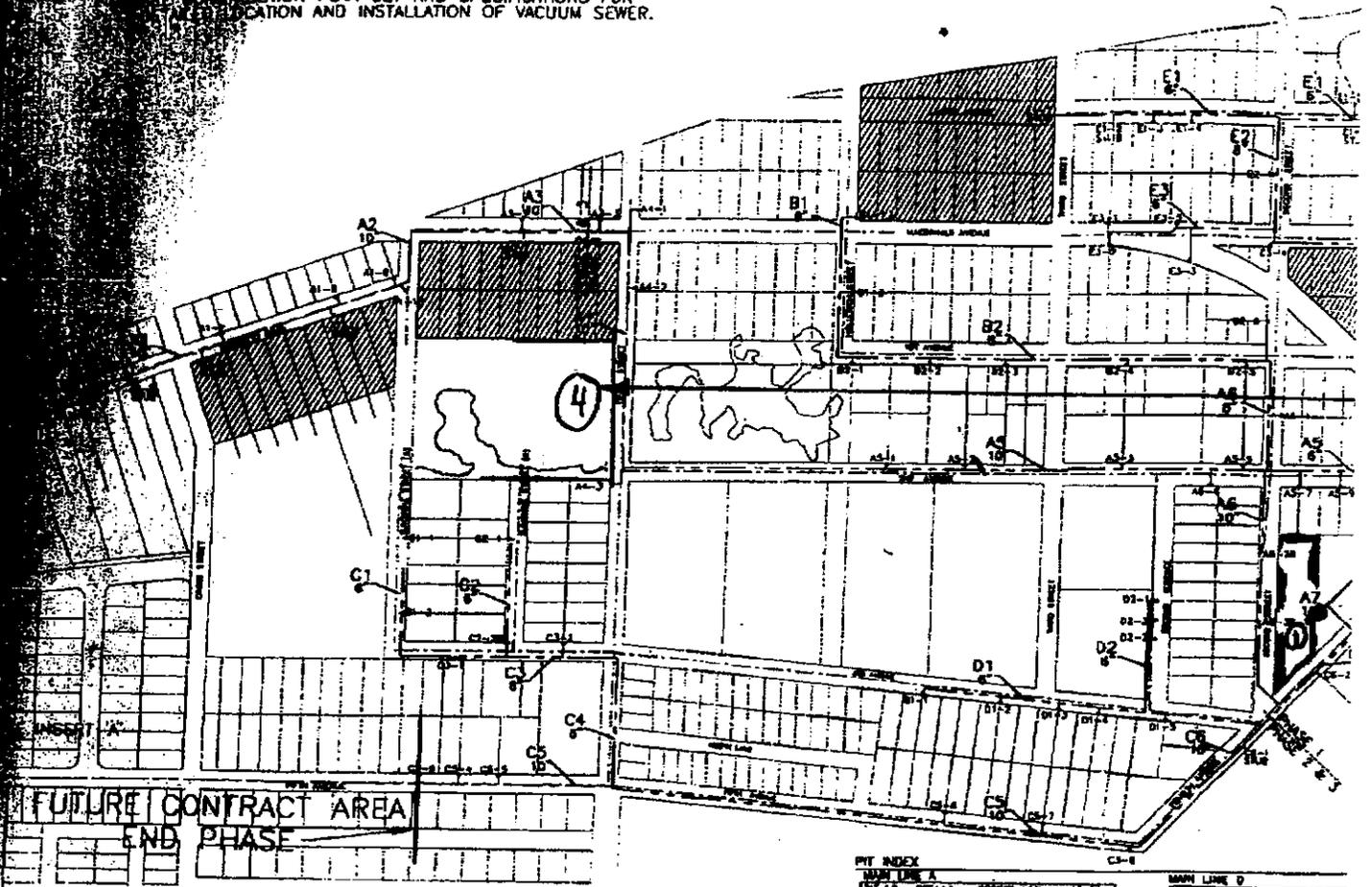
PIT ID	DEPTH	STREET LOC.
B1	4.0	100+ EDU
B2	4.0	100+ EDU
B3	4.0	100+ EDU
B4	4.0	100+ EDU
B5	4.0	100+ EDU
B6	4.0	100+ EDU
B7	4.0	100+ EDU
B8	4.0	100+ EDU
B9	4.0	100+ EDU
B10	4.0	100+ EDU
B11	4.0	100+ EDU
B12	4.0	100+ EDU
B13	4.0	100+ EDU
B14	4.0	100+ EDU
B15	4.0	100+ EDU
B16	4.0	100+ EDU
B17	4.0	100+ EDU
B18	4.0	100+ EDU
B19	4.0	100+ EDU
B20	4.0	100+ EDU
B21	4.0	100+ EDU
B22	4.0	100+ EDU
B23	4.0	100+ EDU
B24	4.0	100+ EDU
B25	4.0	100+ EDU
B26	4.0	100+ EDU
B27	4.0	100+ EDU
B28	4.0	100+ EDU
B29	4.0	100+ EDU
B30	4.0	100+ EDU
B31	4.0	100+ EDU
B32	4.0	100+ EDU
B33	4.0	100+ EDU
B34	4.0	100+ EDU
B35	4.0	100+ EDU
B36	4.0	100+ EDU
B37	4.0	100+ EDU
B38	4.0	100+ EDU
B39	4.0	100+ EDU
B40	4.0	100+ EDU
B41	4.0	100+ EDU
B42	4.0	100+ EDU
B43	4.0	100+ EDU
B44	4.0	100+ EDU
B45	4.0	100+ EDU
B46	4.0	100+ EDU
B47	4.0	100+ EDU
B48	4.0	100+ EDU
B49	4.0	100+ EDU
B50	4.0	100+ EDU

MAIN LINE C

PIT ID	DEPTH	STREET LOC.
C1	4.0	100+ EDU
C2	4.0	100+ EDU
C3	4.0	100+ EDU
C4	4.0	100+ EDU
C5	4.0	100+ EDU
C6	4.0	100+ EDU
C7	4.0	100+ EDU
C8	4.0	100+ EDU
C9	4.0	100+ EDU
C10	4.0	100+ EDU
C11	4.0	100+ EDU
C12	4.0	100+ EDU
C13	4.0	100+ EDU
C14	4.0	100+ EDU
C15	4.0	100+ EDU
C16	4.0	100+ EDU
C17	4.0	100+ EDU
C18	4.0	100+ EDU
C19	4.0	100+ EDU
C20	4.0	100+ EDU
C21	4.0	100+ EDU
C22	4.0	100+ EDU
C23	4.0	100+ EDU
C24	4.0	100+ EDU
C25	4.0	100+ EDU
C26	4.0	100+ EDU
C27	4.0	100+ EDU
C28	4.0	100+ EDU
C29	4.0	100+ EDU
C30	4.0	100+ EDU
C31	4.0	100+ EDU
C32	4.0	100+ EDU
C33	4.0	100+ EDU
C34	4.0	100+ EDU
C35	4.0	100+ EDU
C36	4.0	100+ EDU
C37	4.0	100+ EDU
C38	4.0	100+ EDU
C39	4.0	100+ EDU
C40	4.0	100+ EDU
C41	4.0	100+ EDU
C42	4.0	100+ EDU
C43	4.0	100+ EDU
C44	4.0	100+ EDU
C45	4.0	100+ EDU
C46	4.0	100+ EDU
C47	4.0	100+ EDU
C48	4.0	100+ EDU
C49	4.0	100+ EDU
C50	4.0	100+ EDU

PLAN FOR GRAPHIC REPRESENTATION ONLY.
 COLLECTION PLAN SET AND SPECIFICATIONS FOR
 COLLECTION AND INSTALLATION OF VACUUM SEWER.

+ match 1



SEE INSERT 'A'

PIT INDEX

MAIN LINE A	MAIN LINE D																																																																																																																																																																								
<table border="1"> <tr><th>PIT NO.</th><th>DETAIL</th><th>STREET</th><th>LOC.</th></tr> <tr><td>101</td><td>101</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>102</td><td>102</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>103</td><td>103</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>104</td><td>104</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>105</td><td>105</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>106</td><td>106</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>107</td><td>107</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>108</td><td>108</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>109</td><td>109</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>110</td><td>110</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>111</td><td>111</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>112</td><td>112</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>113</td><td>113</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>114</td><td>114</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>115</td><td>115</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>116</td><td>116</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>117</td><td>117</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>118</td><td>118</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>119</td><td>119</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>120</td><td>120</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> </table>	PIT NO.	DETAIL	STREET	LOC.	101	101	HTA DRIVE	100 + EDU	102	102	HTA DRIVE	100 + EDU	103	103	HTA DRIVE	100 + EDU	104	104	HTA DRIVE	100 + EDU	105	105	HTA DRIVE	100 + EDU	106	106	HTA DRIVE	100 + EDU	107	107	HTA DRIVE	100 + EDU	108	108	HTA DRIVE	100 + EDU	109	109	HTA DRIVE	100 + EDU	110	110	HTA DRIVE	100 + EDU	111	111	HTA DRIVE	100 + EDU	112	112	HTA DRIVE	100 + EDU	113	113	HTA DRIVE	100 + EDU	114	114	HTA DRIVE	100 + EDU	115	115	HTA DRIVE	100 + EDU	116	116	HTA DRIVE	100 + EDU	117	117	HTA DRIVE	100 + EDU	118	118	HTA DRIVE	100 + EDU	119	119	HTA DRIVE	100 + EDU	120	120	HTA DRIVE	100 + EDU	<table border="1"> <tr><th>PIT NO.</th><th>DETAIL</th><th>STREET</th><th>LOC.</th></tr> <tr><td>201</td><td>201</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>202</td><td>202</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>203</td><td>203</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>204</td><td>204</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>205</td><td>205</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>206</td><td>206</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>207</td><td>207</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>208</td><td>208</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>209</td><td>209</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>210</td><td>210</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>211</td><td>211</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>212</td><td>212</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>213</td><td>213</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>214</td><td>214</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>215</td><td>215</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>216</td><td>216</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>217</td><td>217</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>218</td><td>218</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>219</td><td>219</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>220</td><td>220</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> </table>	PIT NO.	DETAIL	STREET	LOC.	201	201	HTA DRIVE	100 + EDU	202	202	HTA DRIVE	100 + EDU	203	203	HTA DRIVE	100 + EDU	204	204	HTA DRIVE	100 + EDU	205	205	HTA DRIVE	100 + EDU	206	206	HTA DRIVE	100 + EDU	207	207	HTA DRIVE	100 + EDU	208	208	HTA DRIVE	100 + EDU	209	209	HTA DRIVE	100 + EDU	210	210	HTA DRIVE	100 + EDU	211	211	HTA DRIVE	100 + EDU	212	212	HTA DRIVE	100 + EDU	213	213	HTA DRIVE	100 + EDU	214	214	HTA DRIVE	100 + EDU	215	215	HTA DRIVE	100 + EDU	216	216	HTA DRIVE	100 + EDU	217	217	HTA DRIVE	100 + EDU	218	218	HTA DRIVE	100 + EDU	219	219	HTA DRIVE	100 + EDU	220	220	HTA DRIVE	100 + EDU
PIT NO.	DETAIL	STREET	LOC.																																																																																																																																																																						
101	101	HTA DRIVE	100 + EDU																																																																																																																																																																						
102	102	HTA DRIVE	100 + EDU																																																																																																																																																																						
103	103	HTA DRIVE	100 + EDU																																																																																																																																																																						
104	104	HTA DRIVE	100 + EDU																																																																																																																																																																						
105	105	HTA DRIVE	100 + EDU																																																																																																																																																																						
106	106	HTA DRIVE	100 + EDU																																																																																																																																																																						
107	107	HTA DRIVE	100 + EDU																																																																																																																																																																						
108	108	HTA DRIVE	100 + EDU																																																																																																																																																																						
109	109	HTA DRIVE	100 + EDU																																																																																																																																																																						
110	110	HTA DRIVE	100 + EDU																																																																																																																																																																						
111	111	HTA DRIVE	100 + EDU																																																																																																																																																																						
112	112	HTA DRIVE	100 + EDU																																																																																																																																																																						
113	113	HTA DRIVE	100 + EDU																																																																																																																																																																						
114	114	HTA DRIVE	100 + EDU																																																																																																																																																																						
115	115	HTA DRIVE	100 + EDU																																																																																																																																																																						
116	116	HTA DRIVE	100 + EDU																																																																																																																																																																						
117	117	HTA DRIVE	100 + EDU																																																																																																																																																																						
118	118	HTA DRIVE	100 + EDU																																																																																																																																																																						
119	119	HTA DRIVE	100 + EDU																																																																																																																																																																						
120	120	HTA DRIVE	100 + EDU																																																																																																																																																																						
PIT NO.	DETAIL	STREET	LOC.																																																																																																																																																																						
201	201	HTA DRIVE	100 + EDU																																																																																																																																																																						
202	202	HTA DRIVE	100 + EDU																																																																																																																																																																						
203	203	HTA DRIVE	100 + EDU																																																																																																																																																																						
204	204	HTA DRIVE	100 + EDU																																																																																																																																																																						
205	205	HTA DRIVE	100 + EDU																																																																																																																																																																						
206	206	HTA DRIVE	100 + EDU																																																																																																																																																																						
207	207	HTA DRIVE	100 + EDU																																																																																																																																																																						
208	208	HTA DRIVE	100 + EDU																																																																																																																																																																						
209	209	HTA DRIVE	100 + EDU																																																																																																																																																																						
210	210	HTA DRIVE	100 + EDU																																																																																																																																																																						
211	211	HTA DRIVE	100 + EDU																																																																																																																																																																						
212	212	HTA DRIVE	100 + EDU																																																																																																																																																																						
213	213	HTA DRIVE	100 + EDU																																																																																																																																																																						
214	214	HTA DRIVE	100 + EDU																																																																																																																																																																						
215	215	HTA DRIVE	100 + EDU																																																																																																																																																																						
216	216	HTA DRIVE	100 + EDU																																																																																																																																																																						
217	217	HTA DRIVE	100 + EDU																																																																																																																																																																						
218	218	HTA DRIVE	100 + EDU																																																																																																																																																																						
219	219	HTA DRIVE	100 + EDU																																																																																																																																																																						
220	220	HTA DRIVE	100 + EDU																																																																																																																																																																						
<table border="1"> <tr><th>PIT NO.</th><th>DETAIL</th><th>STREET</th><th>LOC.</th></tr> <tr><td>301</td><td>301</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>302</td><td>302</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>303</td><td>303</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>304</td><td>304</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>305</td><td>305</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>306</td><td>306</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>307</td><td>307</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>308</td><td>308</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>309</td><td>309</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>310</td><td>310</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>311</td><td>311</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>312</td><td>312</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>313</td><td>313</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>314</td><td>314</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>315</td><td>315</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>316</td><td>316</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>317</td><td>317</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>318</td><td>318</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>319</td><td>319</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>320</td><td>320</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> </table>	PIT NO.	DETAIL	STREET	LOC.	301	301	HTA DRIVE	100 + EDU	302	302	HTA DRIVE	100 + EDU	303	303	HTA DRIVE	100 + EDU	304	304	HTA DRIVE	100 + EDU	305	305	HTA DRIVE	100 + EDU	306	306	HTA DRIVE	100 + EDU	307	307	HTA DRIVE	100 + EDU	308	308	HTA DRIVE	100 + EDU	309	309	HTA DRIVE	100 + EDU	310	310	HTA DRIVE	100 + EDU	311	311	HTA DRIVE	100 + EDU	312	312	HTA DRIVE	100 + EDU	313	313	HTA DRIVE	100 + EDU	314	314	HTA DRIVE	100 + EDU	315	315	HTA DRIVE	100 + EDU	316	316	HTA DRIVE	100 + EDU	317	317	HTA DRIVE	100 + EDU	318	318	HTA DRIVE	100 + EDU	319	319	HTA DRIVE	100 + EDU	320	320	HTA DRIVE	100 + EDU	<table border="1"> <tr><th>PIT NO.</th><th>DETAIL</th><th>STREET</th><th>LOC.</th></tr> <tr><td>401</td><td>401</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>402</td><td>402</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>403</td><td>403</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>404</td><td>404</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>405</td><td>405</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>406</td><td>406</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>407</td><td>407</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>408</td><td>408</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>409</td><td>409</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>410</td><td>410</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>411</td><td>411</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>412</td><td>412</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>413</td><td>413</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>414</td><td>414</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>415</td><td>415</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>416</td><td>416</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>417</td><td>417</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>418</td><td>418</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>419</td><td>419</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> <tr><td>420</td><td>420</td><td>HTA DRIVE</td><td>100 + EDU</td></tr> </table>	PIT NO.	DETAIL	STREET	LOC.	401	401	HTA DRIVE	100 + EDU	402	402	HTA DRIVE	100 + EDU	403	403	HTA DRIVE	100 + EDU	404	404	HTA DRIVE	100 + EDU	405	405	HTA DRIVE	100 + EDU	406	406	HTA DRIVE	100 + EDU	407	407	HTA DRIVE	100 + EDU	408	408	HTA DRIVE	100 + EDU	409	409	HTA DRIVE	100 + EDU	410	410	HTA DRIVE	100 + EDU	411	411	HTA DRIVE	100 + EDU	412	412	HTA DRIVE	100 + EDU	413	413	HTA DRIVE	100 + EDU	414	414	HTA DRIVE	100 + EDU	415	415	HTA DRIVE	100 + EDU	416	416	HTA DRIVE	100 + EDU	417	417	HTA DRIVE	100 + EDU	418	418	HTA DRIVE	100 + EDU	419	419	HTA DRIVE	100 + EDU	420	420	HTA DRIVE	100 + EDU
PIT NO.	DETAIL	STREET	LOC.																																																																																																																																																																						
301	301	HTA DRIVE	100 + EDU																																																																																																																																																																						
302	302	HTA DRIVE	100 + EDU																																																																																																																																																																						
303	303	HTA DRIVE	100 + EDU																																																																																																																																																																						
304	304	HTA DRIVE	100 + EDU																																																																																																																																																																						
305	305	HTA DRIVE	100 + EDU																																																																																																																																																																						
306	306	HTA DRIVE	100 + EDU																																																																																																																																																																						
307	307	HTA DRIVE	100 + EDU																																																																																																																																																																						
308	308	HTA DRIVE	100 + EDU																																																																																																																																																																						
309	309	HTA DRIVE	100 + EDU																																																																																																																																																																						
310	310	HTA DRIVE	100 + EDU																																																																																																																																																																						
311	311	HTA DRIVE	100 + EDU																																																																																																																																																																						
312	312	HTA DRIVE	100 + EDU																																																																																																																																																																						
313	313	HTA DRIVE	100 + EDU																																																																																																																																																																						
314	314	HTA DRIVE	100 + EDU																																																																																																																																																																						
315	315	HTA DRIVE	100 + EDU																																																																																																																																																																						
316	316	HTA DRIVE	100 + EDU																																																																																																																																																																						
317	317	HTA DRIVE	100 + EDU																																																																																																																																																																						
318	318	HTA DRIVE	100 + EDU																																																																																																																																																																						
319	319	HTA DRIVE	100 + EDU																																																																																																																																																																						
320	320	HTA DRIVE	100 + EDU																																																																																																																																																																						
PIT NO.	DETAIL	STREET	LOC.																																																																																																																																																																						
401	401	HTA DRIVE	100 + EDU																																																																																																																																																																						
402	402	HTA DRIVE	100 + EDU																																																																																																																																																																						
403	403	HTA DRIVE	100 + EDU																																																																																																																																																																						
404	404	HTA DRIVE	100 + EDU																																																																																																																																																																						
405	405	HTA DRIVE	100 + EDU																																																																																																																																																																						
406	406	HTA DRIVE	100 + EDU																																																																																																																																																																						
407	407	HTA DRIVE	100 + EDU																																																																																																																																																																						
408	408	HTA DRIVE	100 + EDU																																																																																																																																																																						
409	409	HTA DRIVE	100 + EDU																																																																																																																																																																						
410	410	HTA DRIVE	100 + EDU																																																																																																																																																																						
411	411	HTA DRIVE	100 + EDU																																																																																																																																																																						
412	412	HTA DRIVE	100 + EDU																																																																																																																																																																						
413	413	HTA DRIVE	100 + EDU																																																																																																																																																																						
414	414	HTA DRIVE	100 + EDU																																																																																																																																																																						
415	415	HTA DRIVE	100 + EDU																																																																																																																																																																						
416	416	HTA DRIVE	100 + EDU																																																																																																																																																																						
417	417	HTA DRIVE	100 + EDU																																																																																																																																																																						
418	418	HTA DRIVE	100 + EDU																																																																																																																																																																						
419	419	HTA DRIVE	100 + EDU																																																																																																																																																																						
420	420	HTA DRIVE	100 + EDU																																																																																																																																																																						

+ Match



KEYS ENVIRONMENTAL INC.
 6630 FRONT STREET • KEY WEST, FL 33040
 PHONE (305) 295-3301 • FAX (305) 295-0143

LETTER OF TRANSMITTAL

Transmittal Date: May 4, 2005

From:

Christopher Johnson
 President, Keys Environmental Inc.
 6630 Front Street
 Key West, FL 33040
 (305) 295-3301

To: Mr. Thomas J. Willi
 Company: Monroe County
 Administrator

Attention:
 Job No.
 Spec Ref. Stock Island Sewer Extension
 Proposal Dated May 4, 2005

Submittal No.
 Equipment No.

Enclosed you will find the following:

- Prints Specifications Shop Drawings Plans Test Report
- Submittal Change Order Approval Letter Copy of Letter
- Samples Signatory Letter Other

Items are submitted as indicated below:

- For Approval For Your Use
- As Requested For Review and Comment
- Returned for Corrections Other _____

Item No.	Type	# Copies	Description

Remarks:

Janie Jr 5/4/05



KEYS ENVIRONMENTAL INC.
 6630 FRONT STREET • KEY WEST, FL 33040
 PHONE (305) 295-3301 • FAX (305) 295-0143
 www.KeysEnvironmental.com

RECEIVED
 MAY - 4 2005
COUNTY ADMINISTRATOR

May 4, 2005

Mr. Thomas J. Willi
 Monroe County Administrator
 1100 Simonton Street, Room 2-205
 Key West, FL 33040

Mr. Administrator:

Attached, please find a spreadsheet outlining Keys Environmental's proposal to complete the South Stock Island Sewer Extension dated May 2, 2005. This includes the following locations:

- Maloney Line Extension
- El Mar Vacuum Pit
- Keys Mini Storage
- Second Street - Six Laterals
- Steve's Marine Repair
- Leo's Campground

Individual bids from contractors are also attached for your reference. In all cases the low bidder was chosen for each portion of the project. Please note that the total bid price of \$101,942.00 is a lump sum. The payment schedule of this sum is negotiable; however, you will note that Haskins Plumbing requires 50% upon acceptance, 30% upon rough in, and 20% upon final inspection and completion of punch list. While Atlantic Plumbing's terms are not noted, they are normally the same. In addition, materials will need to be purchased to start work. Therefore, Keys Environmental will require at a minimum the following amounts to commence work and upon completion of rough in:

50% of Contractors' Fees	\$28,275
<u>Materials</u>	<u>\$16,456</u>
Total Needed to Start Work	\$44,731

Total Needed Upon Completion of Rough In 30% of Contractors' Fees	\$16,965
---	----------



KEYS ENVIRONMENTAL INC.
6630 FRONT STREET • KEY WEST, FL 33040
PHONE (305) 295-3301 • FAX (305) 295-0143
www.KeysEnvironmental.com

There has been no provision included for bonding due to the fact that each of the contractor's bids are relatively small, and should therefore not expose the county to undo risk of job forfeiture. Should bonding be required, Keys Environmental assumes the total bid price will need to be increased by 3% to cover the cost of the bond.

Please call me at 305-522-0052 at your convenience to discuss the details of this proposal. We look forward to the opportunity to work with the County on this project.

Respectfully,

Christopher Johnson, President
Keys Environmental, Inc.

CAJ/rhh

South Stock Island Sewer Extension Proposal

2-May-05

Work Item	Contractor	Bid Amount
Maloney Line Extension	Haskins Plumbing	\$28,250
El Mar Vacuum Pit	Haskins Plumbing	\$5,500
Keys Mini Storage	Atlantic Plumbing	\$5,500
Second Street all 6 laterals	Atlantic Plumbing	\$7,000
Steve's Marine Repair	Atlantic Plumbing	\$5,500
Leo's Campground	Atlantic Plumbing	\$4,800
	Contractor Subtotal	\$56,550

Material		Amount
4 pits with valves, rims, breathers, etc.		\$9,652
Shipping		\$2,123
Tax		\$883
Markup		\$3,797
	Materials Subtotal	\$16,456

Engineering	Permits/hours	Amount
Permit Fees	5 permits @ \$500 ea.	\$2,500
AutoCad Technician	45	\$3,825
DEP Permitting Engineer	25	\$2,125
Review P.E.	13	\$1,625
Sign and Seal P.E.	5	\$625
	Engineering Subtotal	\$11,415

Inspection	Hours	Amount
	65	\$4,225

Profit and Overhead	Amount
	\$13,297

Total \$101,942

Keys Environmental Inc.
6630 Front Street
Key West FL 33040
Telephone (305) 295-3301
FAX (305) 295-0143

FAX COVER SHEET

DATE: May 3, 2005 TIME: _____
TO: BILL SMITH PHONE: _____
FAX: 312 939-7765
FROM: CHRIS JOHNSON PHONE: _____
FAX: _____

RE: SSI CONTINGENCY PROPOSAL

Number of pages (include cover sheet): 2

Original will: Not follow Follow
By: U.S. Mail Courier

MESSAGE:

Please Review. - Chris.

Keys Environmental Inc.
6630 Front Street
Key West FL 33040
Telephone (305) 295-3301
FAX (305) 295-0143

FAX COVER SHEET

DATE: Friday the 13th TIME: _____

TO: BILL SMITH PHONE: _____

FAX: (305) 939 7765

FROM: CHRIS JOHNSON PHONE: _____

FAX: _____

RE: Proposal + Reply

Number of pages (include cover sheet): _____

Original will: _____ Not follow _____ Follow
By: _____ U.S. Mail _____ Courier

MESSAGE:

Bill,

I told Barry Richard (Dave's Assist)
that 2nd St work is underway. I
also told him we intended to
run the job thru KWRU not KEI.

South Stock Island Sewer Extension Proposal

2-May-05

Work Item	Contractor	Bid Amount
Maloney Line Extension	Haskins Plumbing	\$28,250
El Mar Vacuum Pit	Haskins Plumbing	\$5,500
Keys Mini Storage	Atlantic Plumbing	\$5,500
Second Street all 6 laterals	Atlantic Plumbing	\$7,000
Steve's Marine Repair	Atlantic Plumbing	\$5,500
Leo's Campground	Atlantic Plumbing	\$4,800
	Contractor Subtotal	\$56,550

Material		Amount
4 pits with valves, rims, breathers, etc.		\$9,652
Shipping		\$2,123
Tax		\$883
Markup		\$3,797
	Materials Subtotal	\$16,456

Engineering	Permits/hours	Amount
Permit Fees	5 permits @ \$500 ca.	\$2,500
AutoCad Technician	45	\$3,825
DEP Permitting Engineer	25	\$2,125
Review P.E.	13	\$1,625
Sign and Seal P.E.	5	\$625
	Engineering Subtotal	\$11,415

Inspection	Hours	Amount
	65	\$4,225

Profit and Overhead	Amount
	\$13,297

Total \$101,942

Barnard

5492 pit installed.
241.55 c/o
1200 per 6" lateral

6933.55 (plus)
561.70 (10' 6" sanitary lat)

7495.25 to install (pit, c/o, and gravity)

Gilbert SOUTHERN.

1427.90 } install &
3379.70 } pit
3030.54 (grau lats)
(c/o)

300.40 (grau lat material)

8138.54

To address the eventual need to collect additional wastewater volumes from certain properties through time, URS assessed additional modifications to the vacuum collection system that may be necessary for this option. These modifications would address wastewater collection from many of the properties that may be redeveloped within the planning horizon. Additional modifications may be required to continue to support proper wastewater collection from other properties within the study area that may generate larger wastewater quantities than what occurs currently. The large-size plan, presented in Appendix H depicts the various modifications that may be necessary to support additional properties for the future condition. Based on the conceptual configuration and the current condition, 5 percent of additional vacuum pipe volume is required for the upgraded configuration for the future condition. Thus, the total vacuum pipe volume that would be added to the existing vacuum collection system is 28 percent (28 percent) and future (5 percent) volume.

A complete list of potential future modifications to the vacuum system within the right-of-way for this conceptual sewer system configuration is provided below in Table 3-4.

Table 3-4 Potential Future Modifications to the Vacuum Collection System within County ROWs

1	Future development extend vacuum system to property line	Suncrest Rd west of Cross St property ID 719
2	Add new Valve Pit to existing stub A1-V18	Suncrest Rd east of Cross St property ID Skylink
3	Future development extend vacuum system header to property line	North side of MacDonald Ave West of 3 rd St., 245
4	Future development extend vacuum system header to property line	South side of 2 nd Ave, North of 5 th St., 457 and 458
5	Add new valve pit to vacuum header A6-V2	4 th Ave east of 2 nd St, 443
6	Add new valve pit to vacuum header C2-V2	Sunshine St
7	Add new valve pit to vacuum header C4-V2	5 th St North of 3 rd Ave
8	Future development extend vacuum system header to property line	Possible Coral Hammock expansion 3 rd St and Laurel Ave.
9	Future development extend vacuum system header B1 to property line	Keys Federal Office Building, Laurel Ave and 3 rd St.
10	Future development extend vacuum system header E5 to property line	Standard Marine vacant lot, 15 Ave, E and Maloney
11	Future development extend vacuum system header E5 to property line	S&V vacant lot, Maloney Ave and property ID 453.
12	Future development extend vacuum system header F2 to property line	Historic Tours vacant parcel, property ID's 483 and 483
13	Add new valve pit to vacuum header, F1-V8	Peninsula Ave., property ID's 143, 144 and 740.
14	Future development extend vacuum system header F1 to property line	Peninsula Ave. Stock Island Lobster, property ID 765

Note: Refer to map in Appendix H for exact property location per property ID number.

		1035 and 442.
5	Extend vacuum main E7 to property line from Front St.	Liz's Trailer Park, 4 th Ave and Front St., property ID 756
6	Extend vacuum main F3 northwest on Maloney and to property line	Maloney Ave., property adjacent to Boyd's, property ID 437
7	Install new vacuum header south on Shrimp Rd	Shrimp Rd., property ID's 886 to 119
8	Add new valve pit on Shrimp Rd, C9-V31	Shrimp Rd., property ID's 119 and 935
9	Install new vacuum header south from WWTP on Front St. and to property line	Front St., property ID 61

Note: Refer to map in Appendix H for exact property location per property ID number.

Details regarding the on-site configuration of the vacuum system are included on a series of smaller graphics located in the Appendix I. In general, one 11-inch-by-17-inch concept plan is provided for each of the properties. Each concept plan illustrates potential routes that could be further expanded. The graphics show the vacuum mains and valve pits needed to gravity drain the properties. The vacuum valve pits established on each property was divided into sections. The number of pits needed for each property was determined based upon the flow analysis results. The number of pits was based upon the flow analysis results established for the site for a valve pit, which established how many pits would be needed for each property.

The following conditions and qualifications are noted regarding this particular concept plan:

- The vacuum system was not extended onto all of the properties that were to originally be connected to the Utility System's central vacuum collection system. One of these properties was Boyd's Campground. During the last year, Boyd's upgraded their on-site gravity collection system to meet requisite industry standards and has installed a dedicated force main and a section of new gravity main. A pump station will be constructed to convey all wastewater generated at Boyd's through the force main that will ultimately lead to the Utility System's WWTP. The Utility System has accepted this specific change to their original sewer system plan for the study area.
- Due to the proximity of Roy's Trailer Park to the Utility's WWTP and given that relatively large quantities of wastewater are already routed to one pump station located near the southern property line, this particular property will be served by a dedicated pump station. The existing lift station on the property that currently routes wastewater into the on-site package plant would likely need to be upgraded to ensure that wastewater can be routed into an existing force main within the adjacent ROW that leads to the WWTP. A land easement would be established to provide the Utility with adequate access to the pump station.

Keys Environmental Inc.
6630 Front Street
Key West FL 33040
Telephone (305) 295-3301
FAX (305) 295-0143

FAX COVER SHEET

DATE: 5-16-2005 TIME: 5:25 PM
TO: Dave Koppel PHONE: _____
FAX: 295-4321
FROM: Chris Johnson PHONE: 305 522 0052
FAX: 305 295-0143

RE: Proposal

Number of pages (include cover sheet): 3

Original will: Not follow Follow
By: U.S. Mail Courier

MESSAGE: Dave,

Please Review New Proposal. Please
call me if you have any questions.

Thank you,

**K.W. Resort Utilities Corp.
6450 East College Road
Key West, FL 33040
(305) 294-5232
FAX (305) 294-1212**

County of Monroe
Engineering Division
Mr. County Engineer
1100 Simonton Street
Key West, FL 33040

May 16, 2005

Dear Mr. Koppel,

This proposal is intended to address two locations that are most in need of sewer service at present. El Mar Trailer Park and Second Street lateral extensions. The El Mar Park has completed the necessary internal infrastructure work and is awaiting sewer service. On Second Street, Villa Patricia (a three unit complex) has begun site work and will be ready for sewer service within days. Other residents on Second St. have told utility officials they are ready and are waiting for service to be extended before they start their lateral work. In your letter dated May 4, 2005 you state that El Mar has been approved by the BOCC for funding and that Second Street can be funded because of the County ROW issues. This proposal represents a good faith effort by K.W. Resort Utility Corp. (KWRU) to complete this work so these residents can move forward. Utility engineers contacted several contractors, held field meetings, solicited bids, and developed cost estimates in the preparation of this proposal. In all cases a minimum of 3 bids were received and in all cases the low bid is recommended. There is no provision for contingency in this proposal as K.W. Resort Utilities assumes all risk. The work will be completed and payment will be made once said work is certified complete. Please review the attached spreadsheet detailing the project costs. In your May 4th letter you state that Monroe County does not have a provision to make payments in advance. A Purchase Order, issued to KWRU for the total project cost of \$24,442.10 would be acceptable for us to commence construction. KWRU is committed to providing affordable wastewater service to Monroe County residents.

Sincerely Yours,



William L. Smith
President, K.W. Resort Utilities Corp.

WLS/cj
Cc:Tom Willi

South Stock Island Sewer Extension Proposal

Job Name: El Mar and 2nd Street Lateral Extensions

K.W. Resort Utilities Corp.

May 18, 2005

Work Item	Contractor	Bid Amount
El Mar Vacuum Pit	Haskins Plumbing	\$5,500.00
Second St. 6 laterals	Atlantic Plumbing	\$7,000.00
	Contractor Subtotal	\$12,500.00

Materials	Amount
1 Valve Pit Assembly w breather, valve, rim, lift etc.	\$2,413.00
Shipping	\$1,400.00
Tax	\$181.00
Markup	\$1,224.00
	Materials Subtotal
	\$5,304.00

Engineering	Permits/hours	Amount
Permit Fees	1	\$500.00
AutoCad Tech	10	\$850.00
DEP Permitting Eng	5	\$425.00
Design Review P.E.	2	\$250.00
Sign and Seal P.E.	1	\$125.00
	Engineering Subtotal	\$2,150.00

Inspection	Hours	Amount
	20	\$1,300.00
	Inspection Subtotal	\$1,300.00

Cost Summary	Amount
Contractor Subtotal	\$12,500.00
Materials Subtotal	\$5,304.00
Engineering Subtotal	\$2,150.00
Inspection Subtotal	\$1,300.00
Profit and Overhead	\$3,188.10
TOTAL PROJECT COST	\$24,442.10

Keys Environmental Inc.
6630 Front Street
Key West FL 33040
Telephone (305) 295-3301
FAX (305) 295-0143

FAX COVER SHEET

DATE: 5/17/2005 TIME: 0815
TO: Tom WILLI PHONE: _____
FAX: 292-4544
FROM: CHRIS JOHNSON PHONE: 522-0052
FAX: 295-0143

RE: South Stuck Island Proposal

Number of pages (include cover sheet): 3

Original will: Not follow Follow
By: U.S. Mail Courier

MESSAGE:

Tom,

Per Bill Smith I am sending a proposal to fast track some work that has already been deemed fundable by the County Engineer. This work would provide connections to people who have plumbers

Keys Environmental Inc.
6630 Front Street
Key West FL 33040
Telephone (305) 295-3301
FAX (305) 295-0143

FAX COVER SHEET

DATE: 6-30-05 TIME: _____

TO: Gay Curry PHONE: _____

FAX: 295-4321

FROM: Chris Idensow PHONE: _____

FAX: _____

RE: The three quotes you requested

Number of pages (include cover sheet): _____

Original will: _____ Not follow _____ Follow
By: _____ U.S. Mail _____ Courier

MESSAGE:

394-4641 ?



KEYS ENVIRONMENTAL INC.
6630 Front Street • Key West, FL 33040
Phone (305) 295-3301 • FAX (305) 295-0143
www.KeysEnvironmental.com

FAXED

10/11/2005
4:30 PM.

CJ.

FAX COVER SHEET

DATE: 10/11/2005

TIME: 4:30 PM

TO: Dave Koppel

PHONE: 292-4426

FAX: 295-4321

Fax TO: ~~292-4358~~

FROM: Chris Johnson

PHONE:

FAX:

RE: SSI Contingency

Number of pages (include cover sheet): 6

Original will: Not follow Follow
By: U.S. Mail Courier

MESSAGE:

Attachment 23



KEYS ENVIRONMENTAL INC.
6630 FRONT ST
KEY WEST, FL 33040
(305)-295-3301

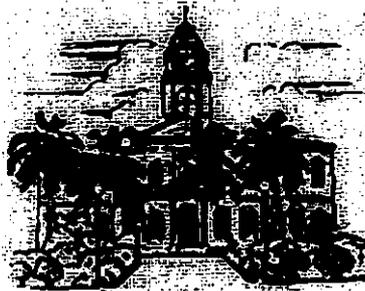
To:
From:
Re:
Date:

South Stock Island Sewer Extension Proposal / E.R.C. Count

Work Item	E.R.C. Count
Maloney Line Extension	1 1
El Mar Vacuum Pit	3
Keys Mini Storage	1 1
Second Street all 6 Laterals	10
Steves Marine Repair / Orpeza	4
X Leo's Campground	
Total	

45 EDU'S

\$121,500



BOARD OF COUNTY COMMISSIONERS
Mayor Dixie M. Spebar, District 1
Mayor Pro Tem Charles "Sonny" McCoy, District 3
George Neugent, District 2
David P. Rice, District 4
Murray E. Nelson, District 5

Engineering Department
1100 Simonton Street
Key West, FL 33040



January 28, 2005

Mr. Chris Johnson
KW Resort Utilities
6630 Front Street
Key West, FL 33040

RE: Right-of-Way
2nd St., Stock Island

Dear Mr. Johnson:

Thank you for inquiring into the right-of-way width of 2nd Street on Stock Island. Based on field conditions and extensive review by Monroe County, it is our position that we maintain a section of right-of-way approximately 75' wide between Second Avenue and Third Avenue on Second Street. The west side of the right-of-way coincides with the general placement of fences on the west side of Second Street between Second Avenue and Third Avenue.

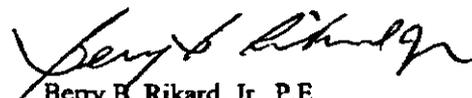
We understand that it is necessary for you to cut into the recently paved Second Avenue in order to make the proper connections to your customers on the West Side of Second Avenue.

Any work performed between the platted eastern edge of right-of-way and the westerly fence line would be considered work in the public right-of-way and not work on private property. As such, all work performed would fall under the guidelines of the Monroe County Public Works Manual Volumes I & II. Furthermore, due to the extensive nature of the work you would be performing we ask that you apply to our office for a permit to perform such work in the right-of-way. Your contact person regarding any permit information is Mr. Clark Briggs, 295-4306. We will provide any sections of the Public Works Manual that you may require to perform the work to County standards.

We will also require that a Monroe County representative be present when the work is performed. Details of these requirements will be outlined on the permit. There will be no permit fee for KW Resort Utilities for the work performed on Second Avenue.

Please do not hesitate to contact us if we can be of any further assistance.

Sincerely,


Berry B. Rikard, Jr., P.E.
Assistant County Engineer

BBR/jl
SecondStRWChrisJohnson.DOC

6630 Front Street
Key West, FL 33040
Phone: 305-295-3301
Fax: 305-295-0143

**Weiler Engineering
Corporation**

Fax

To: Doug Carter, Manager	From: Ed Castle
Fax: 294-1212	Date: May 26, 2004
Phone: 294-5636	Pages: 3
Re: El Mar & Maloney extension	CC:

Urgent For Review Please Comment Please Reply Please Recycle

•Comments

Doug,

Explanations and amounts are given below.

- El Mar Vacuum Pit – Due to misunderstandings as to future development plans, the El Mar RV Resort was supplied with a vacuum stub. Since the anticipated development will not occur per Weiler Engineering's understanding, the flow for the Resort will remain under the 1000 GPD limit. The property therefore must be supplied with a gravity point of connection per County ordinance. The \$8,200.00 is a quote from a local contractor to install the necessary vacuum pit.
- Maloney Avenue Extension – The Victorian Vehicles property on Maloney Avenue is not served by the sewer system. To serve this property, a 4" vacuum main must be run from the 4th Street intersection east on Maloney Avenue and a vacuum pit set with cleanouts to the Victorian Vehicles and AirGas properties. A vacuum stub to serve the northern portion of the Liz Trailer Park property, including the proposed Conch Cruiser Café will also be provided. The \$30,794.00 is a quote from a local contractor to provide these services.

BILL SMITH

934 7765

South Stock Island Sewer Extension Proposal

Job Name: Approved Contingency Items per Dave Koppel
 K.W. Resort Utilities Corp.
 June 16, 2005

Approval	Work Item	Contractor	Bid Amount
DK 5/4/05	El Mar Vacuum Pit	Haskins Plumbing	\$5,500.00
DK 5/4/05	Second St. 6 laterals	Atlantic Plumbing	\$7,000.00
Table 3-4 #2	Leo's Stub	Atlantic Plumbing	\$4,800.00
Table 3-3 #1	Steve's Marine Repair	Atlantic Plumbing	\$5,500.00
Table 3-3 #4&5	Maloney Line Extension	Haskins Plumbing	\$28,250.00
Contractor Subtotal			\$51,050.00

Materials	Amount
3 Valve Pit Assembly w breather, valve, rim, kit etc.	\$7,239.00
Shipping	\$2,123.00
Tax	\$542.93
Materials Subtotal	\$9,904.93

Engineering	Permits/hours	Amount
AutoCad Tech	35	\$2,975.00
DEP Permitting Eng	20	\$1,700.00
Design Review P.E.	11	\$1,375.00
Sign and Seal P.E.	4	\$500.00
Engineering Subtotal		\$6,550.00

Inspection	Hours	Amount
Site/Field Inspection	55	\$3,575.00
Inspection Subtotal		\$3,575.00

Cost Summary	Amount
Contractor Subtotal	\$51,050.00
Materials Subtotal	\$9,904.93
DEP Permits 4 @ \$500 per	\$2,000.00
Engineering Subtotal	\$6,550.00
Inspection Subtotal	\$3,575.00
Admin and Overhead	XXXX
TOTAL PROJECT COST	\$73,079.93

Keys Environmental Inc.
6630 Front Street
Key West FL 33040
Telephone (305) 295-3301
FAX (305) 295-0143

FAX COVER SHEET

9397765

DATE: 6/20/2005 TIME: _____
TO: Dave Koppel PHONE: _____
FAX: 295-4321
FROM: Chris Johnson PHONE: 305 522 0052
FAX: 305 295-3301

RE: 2nd St. Lateral Ext.

Number of pages (include cover sheet): 3

Original will: Not follow Follow
By: U.S. Mail Courier

MESSAGE:

Dave,

I spoke w/ Bill Smith and have revised the proposal at his direction. His cover letter is attached. I appreciate the time you have spent working on this with us.

Thank you,
Chris

**Keys Environmental Inc.
6630 Front Street
Key West FL 33040
Telephone (305) 295-3301
FAX (305) 295-0143**

FAX COVER SHEET

DATE: 6-20-2005 TIME: _____
TO: Mr. Administrator PHONE: _____
FAX: _____
FROM: Bill Smith PHONE: _____
FAX: 292-4544

RE: Proposal 2nd Street

Number of pages (include cover sheet): 3

Original will: Not follow Follow
By: U.S. Mail Courier

MESSAGE:

Keys Environmental Inc.
6630 Front Street
Key West FL 33040
Telephone (305) 295-3301
FAX (305) 295-0143

FAX COVER SHEET

DATE: April 27th TIME: _____
TO: BILL SMITH PHONE: _____
FAX: _____
FROM: CHRIS JOHNSON PHONE: _____
FAX: _____

RE: SSI Contingency items/ Bids.

Number of pages (include cover sheet): ~~2~~ 4

Original will: Not follow _____ Follow
By: U.S. Mail _____ Courier

MESSAGE:

Bice,

With your approval I will forward
this summary & Bids to T. Willi.
Chris.

Work Item	Contractor	Bid Amount
Maloney Line Extension	Haskins Plumbing	\$25,250
El Mar Vacuum Pit	Haskins Plumbing	\$5,500
Keys Mini Storage	Atlantic Plumbing	\$5,500
Second Street all 6 laterals	Atlantic Plumbing	\$7,000
Steve's Marine Repair	Atlantic Plumbing	\$5,500
Leo's Campground	Atlantic	\$4,800
	Contractor Subtotal	\$53,550
Material		
Valve Pits Provided by KWRU (includes valves, breathers, etc.) 4 Pits	KWRU	\$15,600
	Materials Subtotal	\$15,600
Inspection and Engineering		
Inspection	KWRU	\$6915
Engineering and Permitting	KWRU	\$4500
	Inspection & Engineering Subtotal	\$11,415
Legal, Admin, and Profit		
Legal and Administration	KWRU	\$6445
Profit	KWRU	\$6445
	Legal, Admin, and Profit Subtotal	\$12,890
Contingency@15%		\$14,018
	Total	\$107,473

**South Stock Island Sewer Extension Project
Contingency Bid Summary**

April 27, 2005

Prepared by: Chris Johnson

JOB Name: Maloney Line Extension	
Contrator	Bid Amount
B&L Beneway*	\$43,470.00
Bee Brothers	\$43,275.00
Haskins Plumbing*	\$25,250.00

JOB Name: El Mar	
*KWRU to supply vac pit, valve, and kit	
Contrator	Bid Amount
B&L Beneway*	\$12,250.00
Bee Brothers	\$25,725.00
Haskins Plumbing*	\$5,500.00

JOB Name: Keys Mini Storage	
*KWRU to supply vac pit, valve, and kit	
Contrator	Bid Amount
Haskins Plumbing*	\$12,000.00
Atlantic*	\$5,500.00

JOB Name: 6402 2nd Street	
Contrator	Bid Amount
Haskins Plumbing	\$4,500.00
Atlantic (See Note 1)	\$2,333.00

JOB Name: 6418 2nd Street	
Contrator	Bid Amount
Haskins Plumbing	\$4,500.00
Atlantic (see Note 1)	\$2,333.00

JOB Name: 6414 2nd Street	
Contrator	Bid Amount
Haskins Plumbing	\$4,500.00
Tony Herce Plumbing	\$8,410.00
Atlantic (see Note 1)	\$2,333.00

Notes (1) Atlantic bid all 2nd Street line extensions as one job. Because all three pieces are essentially the same, for the purposes of this summary I divided the estimate total by 3 and entered the result into the three separate job summary sections.

JOB Name: Steve's Marine Repair	
*KWRU to supply vac pit, valve, and kit	
Contrator	Bid Amount
Haskins Plumbing*	\$7,000.00
Atlantic*	\$5,500.00

JOB Name: Leo's Campground provide vacuum stub.	
Contrator	Bid Amount
Haskins Plumbing	\$5,000.00
Atlantic	\$4,800.00

**Engineering Report
Wastewater Collection System Evaluation
South Stock Island, Monroe County, Florida**

3.2.3 Strategy #1A: Extension of Vacuum Systems on Private Properties

As previously proposed by the Utility System, a potential option to complete the sewerage effort is to extend vacuum lines from the existing vacuum headers that are located within County right-of-ways onto private properties. A series of vacuum stub-outs were provided during initial construction of the existing vacuum collection system to facilitate these extensions onto private properties.

The extension of vacuum lines onto private properties would consist of installing a relatively small diameter pipe (typically three to four inches ID) within the limits of the property. A series of vacuum valve pits would be sited at appropriate locations within each property to serve all existing units that could generate wastewater. Each vacuum valve pit would be connected to the four-inch diameter vacuum line. In order to establish the final hydraulic connection to make the on-site system complete, new or rehabilitated service laterals would be used to route wastewater from individual units to the vacuum valve pits. Depending on the total number of units and their location relative to one another, the individual laterals may be routed directly into a valve pit or through an intermediate manhole structure. Shallow manholes may be necessary prior to a vacuum valve pit to reduce the total number of piping connections needed for an individual valve pit. An atmospheric vent line would also be provided for each gravity lateral that feeds a valve pit. As stated above, proper easements would need to be established to allow access by the Utility System to all on-site vacuum mains as well as any vacuum valve pits. Figure 3-4 illustrates a general piping schematic for this general piping system configuration.

Appendix H contains a large-size plan that illustrates a conceptual piping system configuration at condition, whereby vacuum lines would be extended onto private properties. All modifications that are recommended to the existing vacuum system within County right-of-ways include the relocation of vacuum stub-outs and lateral layouts developed for the on-site systems as well as additional piping to address wastewater collection from other properties. Based on the conceptual piping system configuration developed for this strategy, 28 percent of additional vacuum pipe volume would be added to the existing system to support the current condition.

A complete list of proposed modifications to the vacuum system within the right-of-way for this conceptual sewer system configuration is provided below in Table 3-3.

Modification ID	Description of Modification	Location
1	Add new valve pit to vacuum header, A6-V1	4 th Ave and 2 nd St., property ID 751
2	Extend vacuum system main to property line from MacDonald Ave.	Water's Edge Colony, Laurel Ave. and 2 nd St.
3	Extend vacuum system main to property line from 2 nd St.	Water's Edge Colony, Laurel Ave. and 2 nd St.
4	Extend vacuum main and add valve pit, E8-V1	Southeast on Maloney from 4 th Ave. to property ID

South Stock Island Sewer Extension Proposal
 2-May-05

Work Item	Contractor	Bid Amount
Maloney Line Extension	Haskins Plumbing	\$28,250
El Mar Vacuum Pit	Haskins Plumbing	\$5,500
Keys Mini Storage	Atlantic Plumbing	\$5,500
Second Street all 6 laterals	Atlantic Plumbing	\$7,000
Steve's Marine Repair	Atlantic Plumbing	\$5,500
Leo's Campground	Atlantic Plumbing	\$4,800
	Contractor	\$56,550
	Subtotal	

Material		Amount
4 pits with valves, rims, breathers, etc.		\$9,652
Shipping		\$2,123
Tax		\$883
Markup		\$3,797
	Materials	\$16,456
	Subtotal	

Engineering	Permits/hours	Amount
Permit Fees	5 permits @ \$500 ea.	\$2,500
AutoCad Technician	45	\$3,825
DEP Permitting Engineer	25	\$2,125
Review P.E.	13	\$1,625
Sign and Seal P.E.	5	\$625

	Engineering Subtotal	\$11,415
--	---------------------------------	-----------------

Inspection	Hours	Amount
	65	\$4,225

Profit and Overhead	Amount
	\$13,297

Total \$101,942

Attachment 24

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 		A. Signature 	
1. Article Addressed to: <i>Harbor Shores Condominiums Association (President)</i> <i>6800 Maloney Avenue</i> <i>Key West, FL 33040</i>		B. Received by (Printed Name) <i>WILLIAM ROBERTSON</i>	C. Date of Delivery <i>1-24-04</i>
2. Article Number (Transfer from service label)		D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.		4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	
PS Form 3811, August 2001		Domestic Return Receipt	
		102595-02-M-1540	

U.S. Postal Service...
CERTIFIED MAIL... RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage	\$	
Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$	5.25

Postmark: KEY WEST FL 33040, JAN 23 2004, USPS

To: *6800 SHORES Condo Assoc (President)*
 Apt No: *6800 Maloney Avenue*
 Key West FL 33040

Jan 23 2004

See Reverse for Instructions

7003 1010 0001 3743 5942

1/22/04

Harbor Shores Connection Proposal

At the December 10th 2003 meeting of the Monroe County BOCC, Bill Smith of KW Resort Utilities Corp. (KWRU) offered to connect Harbor Shores to the vacuum sewer system for a total cost to the condominium association of \$305,710.00. This amount includes all work associated with: 1.) Design, permitting and construction of a vacuum sewer line and a dual buffer tank to collect wastewater from the existing gravity sewer system; 2.) Testing and repair of the existing gravity sewer system; 3.) FDEP-required abandonment of the existing wastewater treatment plant; 4.) Administration and oversight of the project; and 5.) Capacity reservation fees for 70 EDUs. Once connected to the KWRU sewer system, each homeowner will be required to pay a monthly sewer bill, currently \$36.21.

The Capacity Reservation Fee for 70 EDUs comprises \$189,000.00 of the \$305,710.00 total cost of connection. Monroe County has funding in place that will allow the Capacity Reservation Fee to be paid as part of the Property Tax bills over a 20-year period. To participate in this program, the property owners must enter into the County's Consent and Acknowledgement Agreement and provide 5% of the Capacity Reservation Fee at that time. The remaining 95% will be financed by the County at low interest rates, and will be paid in annual installments over the following 20 years. The residents of Harbor Shores are free to elect to participate in this Agreement with the County. Payment of the remaining \$116,710.00 will be made to KW Resort Utilities Corp., according to terms that will be negotiated between KW Resort Utilities Corp. and Harbor Shores.

As part of this proposal, KW Resort Utilities Corp. agrees to own and maintain all components of the vacuum sewer system and those portions of the gravity sewer system located within the condominium association's common areas, provided that an easement allowing access by KW Resort Utilities Corp. maintenance personnel is granted. The laterals located on individually owned properties would remain the property of the individual homeowners. Only those portions of the laterals that are located in the

easement will be owned and maintained by KW Resort Utilities Corp. However, in the initial testing and repair project, subcontractors hired by KW Resort Utilities Corp. will test the individually owned laterals and repair any leaks found at no expense to the property owner. Any future maintenance or repairs needed on individually owned laterals, after this initial testing and repair, would be the responsibility of the homeowner.

Vacuum Sewer System

The vacuum sewer system will be designed and permitted by KW Resort Utilities Corp.'s Engineer. It is anticipated that the design will include extension of a 6-inch vacuum main onto Harbor Shores property, through an easement in the common area. A dual buffer tank (*Note: A dual buffer tank is a single structure with dual sumps and dual vacuum valves as shown on sheet 34 of 36 in the WEC Phase 1 construction drawings*) will be located adjacent to the existing wastewater pumping station. When construction and testing is completed, the existing 8-inch gravity main will be re-routed from the pump station into the dual buffer tank. Property restoration will be performed in accordance with Monroe County and industry standards.

The permitting fee and the cost of a special purpose survey, if needed, are included in the total cost of the project. Harbor Shores will incur no additional cost.

Testing and Repair of Existing Gravity Collection System

The existing gravity collection system will be tested for water-tightness in accordance with the Monroe County connection ordinance. Testing may consist of hydrostatic testing, air testing, or a combination of the two. If leakage is detected in any test section, the source of the leak will be located by television inspection or other appropriate methods. Once located, the leak will be repaired in a manner consistent with industry standards and the section of infrastructure will then be retested to demonstrated water-tightness. Any leaks located on individual properties will, with the homeowner's permission, be repaired by KW Resort Utilities Corp.'s contractors. Restoration according to Monroe County and industry standards will follow any repairs.

Wastewater Treatment Plant Abandonment

Abandonment of the existing wastewater treatment plant will be performed in accordance with FDEP requirements. These requirements include emptying and cleaning of all tanks to be abandoned, followed by disinfections. The tanks will then be covered to prevent accumulation of rainwater. The abandonment does not include removal of equipment or tanks except to the extent necessary to perform the abandonment and to install covering. Once covered, the maintenance of the abandoned plant will be the responsibility of Harbor Shores Condominium association.

The FDEP-required abandonment of the two effluent disposal wells is also included in the total price quoted.

Requirement for Easement

It is anticipated that all wastewater infrastructure, with the exception of the homeowner's laterals, will be located in the condominium association's common areas. KW Resort Utilities Corp. will require an easement allowing access to the wastewater infrastructure for maintenance and repair purposes. The costs associated with processing the granting of this easement are included in the Administration and Oversight fees included in the total price quoted.

This proposal is good only until April 30th, 2004.

Doug Carter

KW Resort Utilities Corp

Attachment 25

KW RESORT UTILITIES
P.O. Box 2125
Key West, FL 33045

HISTORY DETAIL FOR ACCOUNTS

PAGE: 1
DATE: 10/21/2008

CUSTOMER	NAME	TYPE	DEPOSIT	BALANCE		
DATE	CODE	CHARGE	PAYMENT	CHECK #	ADJUST	
H018	1390 ALAN HILLMAN			100	0.00	0.00
	12/31/2002	0	71.16	0.00	0	0.00
	01/10/2003	0	0.00	35.89	1520	0.00
	01/31/2003	100	35.89	0.00	0	0.00
	02/11/2003	0	0.00	35.89	2789	0.00
	02/24/2003	0	0.00	0.00	0	-35.27
	02/28/2003	100	35.89	0.00	0	0.00
	03/13/2003	0	0.00	35.89	0	0.00
	03/31/2003	100	35.89	0.00	0	0.00
	04/08/2003	0	0.00	35.89	2823	0.00
	04/30/2003	100	35.89	0.00	0	0.00
	05/14/2003	0	0.00	35.89	2853	0.00
	05/31/2003	100	35.89	0.00	0	0.00
	06/06/2003	0	0.00	35.89	2877	0.00
	06/30/2003	100	35.89	0.00	0	0.00
	07/16/2003	0	0.00	35.89	2901	0.00
	07/31/2003	100	35.89	0.00	0	0.00
	08/13/2003	0	0.00	35.89	2925	0.00
	08/31/2003	100	35.89	0.00	0	0.00
	09/10/2003	0	0.00	35.89	2950	0.00
	09/30/2003	100	35.89	0.00	0	0.00
	10/10/2003	0	0.00	35.89	2982	0.00
	10/31/2003	100	35.89	0.00	0	0.00
	11/12/2003	0	0.00	35.89	3001	0.00
	11/30/2003	100	36.21	0.00	0	0.00
	12/16/2003	0	0.00	36.21	3024	0.00
	12/31/2003	100	36.21	0.00	0	0.00
	01/08/2004	0	0.00	36.21	3043	0.00
	01/31/2004	100	36.21	0.00	0	0.00
	02/12/2004	0	0.00	36.21	3067	0.00
	02/29/2004	100	36.21	0.00	0	0.00
	03/09/2004	0	0.00	36.21	3092	0.00
	03/31/2004	100	36.21	0.00	0	0.00
	04/13/2004	0	0.00	36.21	3122	0.00
	04/30/2004	100	36.21	0.00	0	0.00
	05/10/2004	0	0.00	36.21	3147	0.00
	05/31/2004	100	36.21	0.00	0	0.00
	06/10/2004	0	0.00	36.21	3171	0.00
	06/30/2004	100	36.72	0.00	0	0.00
	07/14/2004	0	0.00	36.72	3199	0.00
	07/31/2004	100	36.72	0.00	0	0.00
	08/10/2004	0	0.00	36.72	3221	0.00

09/09/2004	0	0.00	36.72	3246	0.00	0
09/30/2004	100	36.72	0.00	0	0.00	0
10/13/2004	0	0.00	36.72	3282	0.00	0

KW RESORT UTILITIES
P.O. Box 2125
Key West, FL 33045

HISTORY DETAIL FOR ACCOUNTS

PAGE: 2
DATE: 10/21/2008

CUSTOMER	NAME	TYPE	DEPOSIT	BALANCE		
DATE	CODE	CHARGE	PAYMENT	CHECK #	ADJUST	
H018	1390 ALAN HILLMAN			100	0.00	0.00
	10/31/2004	100	36.72	0.00	0	0.00
	11/15/2004	0	0.00	36.72	3314	0.00
	11/30/2004	100	36.72	0.00	0	0.00
	12/09/2004	0	0.00	36.72	3330	0.00
	12/31/2004	100	36.72	0.00	0	0.00
	01/07/2005	0	0.00	36.72	3359	0.00
	01/31/2005	100	36.72	0.00	0	0.00
	02/14/2005	0	0.00	36.72	3392	0.00
	02/28/2005	100	36.72	0.00	0	0.00
	03/14/2005	0	0.00	36.72	3408	0.00
	03/31/2005	100	36.72	0.00	0	0.00
	04/07/2005	0	0.00	36.72	3431	0.00
	04/30/2005	100	36.72	0.00	0	0.00
	05/11/2005	0	0.00	36.72	3455	0.00
	05/31/2005	100	36.72	0.00	0	0.00
	06/07/2005	0	0.00	36.72	3478	0.00
	06/30/2005	100	37.93	0.00	0	0.00
	07/14/2005	0	0.00	37.93	3504	0.00
	07/31/2005	100	37.93	0.00	0	0.00
	08/16/2005	0	0.00	37.93	3526	0.00
	08/31/2005	100	37.93	0.00	0	0.00
	09/07/2005	0	0.00	37.93	3545	0.00
	09/30/2005	100	37.93	0.00	0	0.00
	10/12/2005	0	0.00	37.93	3569	0.00
	10/31/2005	100	37.93	0.00	0	0.00
	11/10/2005	0	0.00	37.93	3587	0.00
	11/30/2005	100	37.93	0.00	0	0.00
	12/13/2005	0	0.00	37.93	3619	0.00
	12/31/2005	100	37.93	0.00	0	0.00
	01/06/2006	0	0.00	37.93	3644	0.00
	01/29/2006	100	37.93	0.00	0	0.00
	02/08/2006	0	0.00	37.93	3674	0.00
	02/28/2006	100	37.93	0.00	0	0.00
	03/09/2006	0	0.00	37.93	3748	0.00
	03/31/2006	100	37.93	0.00	0	0.00
	04/10/2006	0	0.00	37.93	3694	0.00
	04/30/2006	100	37.93	0.00	0	0.00
	05/08/2006	0	0.00	37.93	3719	0.00
	05/31/2006	100	37.93	0.00	0	0.00
	06/08/2006	0	0.00	37.93	3767	0.00
	06/28/2006	100	39.20	0.00	0	0.00

07/28/2006	100	39.20	0.00	0	0.00	0
08/17/2006	0	0.00	39.20	3833	0.00	0
08/29/2006	100	39.20	0.00	0	0.00	0

KW RESORT UTILITIES
P.O. Box 2125
Key West, FL 33045

HISTORY DETAIL FOR ACCOUNTS

PAGE: 3
DATE: 10/21/2008

CUSTOMER	NAME	TYPE	DEPOSIT	BALANCE		
DATE	CODE	CHARGE	PAYMENT	CHECK #	ADJUST	
H018	1390 ALAN HILLMAN	100	0.00	0.00		
	09/13/2006	0	0.00	39.20	3844	0.00 0
	09/27/2006	100	39.20	0.00	0	0.00 0
	10/17/2006	0	0.00	39.20	3865	0.00 0
	10/31/2006	100	39.20	0.00	0	0.00 0
	11/14/2006	0	0.00	39.20	3896	0.00 0
	11/30/2006	100	39.20	0.00	0	0.00 0
	12/06/2006	0	0.00	39.20	3918	0.00 0
	12/29/2006	100	39.20	0.00	0	0.00 0
	01/19/2007	0	0.00	39.20	395	0.00 0
	01/31/2007	100	39.20	0.00	0	0.00 0
	02/21/2007	0	0.00	39.20	3983	0.00 0
	02/28/2007	100	39.20	0.00	0	0.00 0
	03/15/2007	0	0.00	39.20	4009	0.00 0
	03/29/2007	100	39.20	0.00	0	0.00 0
	04/09/2007	0	0.00	39.20	4042	0.00 0
	04/30/2007	100	39.20	0.00	0	0.00 0
	05/17/2007	0	0.00	39.20	4064	0.00 0
	05/28/2007	100	39.20	0.00	0	0.00 0
	06/13/2007	0	0.00	39.20	4090	0.00 0
	06/30/2007	100	40.39	0.00	0	0.00 0
	07/12/2007	0	0.00	40.39	4121	0.00 0
	07/31/2007	100	40.39	0.00	0	0.00 0
	08/15/2007	0	0.00	40.39	4140	0.00 0
	08/31/2007	100	40.39	0.00	0	0.00 0
	09/07/2007	0	0.00	40.39	4150	0.00 0
	09/30/2007	100	47.61	0.00	0	0.00 0
	10/15/2007	0	0.00	47.61	4170	0.00 0
	10/31/2007	100	47.61	0.00	0	0.00 0
	11/08/2007	0	0.00	47.61	4196	0.00 0
	11/30/2007	100	47.61	0.00	0	0.00 0
	12/20/2007	0	0.00	47.61	4237	0.00 0
	12/31/2007	100	47.61	0.00	0	0.00 0
	01/15/2008	0	0.00	47.61	4250	0.00 0
	01/31/2008	100	47.61	0.00	0	0.00 0
	02/13/2008	0	0.00	47.61	4277	0.00 0
	02/29/2008	100	47.61	0.00	0	0.00 0
	03/13/2008	0	0.00	47.61	4298	0.00 0
	03/31/2008	100	47.61	0.00	0	0.00 0
	04/17/2008	0	0.00	47.61	4326	0.00 0
	04/29/2008	100	47.61	0.00	0	0.00 0
	05/13/2008	0	0.00	47.61	4349	0.00 0

06/16/2008	0	0.00	47.61	4376	0.00	0
06/30/2008	100	47.61	0.00	0	0.00	0
07/08/2008	0	0.00	47.61	4398	0.00	0

KW. RESORT UTILITIES
P.O. Box 2125
Key West, FL 33045

HISTORY DETAIL FOR ACCOUNTS

PAGE: 4
DATE: 10/21/2008

CUSTOMER	NAME	TYPE	DEPOSIT	BALANCE		
DATE	CODE	CHARGE	PAYMENT	CHECK #	ADJUST	
H018	1390 ALAN HILLMAN			100	0.00	0.00
	07/31/2008	100	47.61	0.00	0	0.00
	08/06/2008	0	0.00	47.61	4421	0.00
	08/31/2008	100	47.61	0.00	0	0.00
	09/17/2008	0	0.00	47.61	4447	0.00
	09/30/2008	100	47.61	0.00	0	0.00
	10/07/2008	0	0.00	47.61	4467	0.00
			2789.83	2754.56		-35.27
					CURRENT BALANCE	0.00

Attachment 26

9/22/08

Florida Keys Wastewater Rates

KW Resort Utilities: (July 2007 PSC approved rate \$40.39 flat rate)

Residential Base Charge - \$35.08

Wastewater flow charge - \$5.27 per thousand gallons

Total Monthly bill assuming 167 gpd (**\$61.49**)

One time Connection Fee - \$2,700 for 250 gpd = **\$10.80/gal.**

FCAA Little Venice: (05/01/08)

Residential Base Charge - \$34.99

Wastewater flow charge - \$7.21 per thousand gallons

Total Monthly bill assuming 167 gpd (**\$71.22**)

One time Connection Fee - \$4,500 for 167 gpd = **\$26.95/gal.**

FCAA Conch Key, Hawks Cay, Duck Key: (05/01/08)

Residential Base Charge - \$47.65

Wastewater flow charge - \$7.43 per thousand gallons

Total Monthly bill assuming 167 gpd (**\$84.88**)

One time Connection Fee - \$4,500 for 167 gpd = **\$26.95/gal.**

FCAA Bay Point: (05/01/08)

Residential Base Charge - \$47.65

Wastewater flow charge - \$7.43 per thousand gallons

Total Monthly bill assuming 167 gpd (**\$84.88**)

One time Connection Fee - \$4,500 for 167 gpd = **\$26.95/gal.**

FCAA Layton: (05/01/08)

Residential Base Charge - \$45.09

Wastewater flow charge - \$8.95 per thousand gallons

Total Monthly bill assuming 167 gpd (**\$89.93**)

One time Connection Fee - \$4,500 for 167 gpd = **\$26.95/gal.**

City of Key West:

Residential Base Charge - \$22.91

Wastewater flow charge - \$4.54 per thousand gallons

Total Monthly bill assuming 167 gpd (**\$45.66**)

One time Connection Fee - \$4,500 for 167 gpd = **\$26.95/gal.**

Key Haven:

Residential Base Charge - \$33.27

Wastewater flow charge - \$8.76 per thousand gallons

Total Monthly bill assuming 167 gpd (**\$77.16**)

Proposed connection assessment if FKAA purchases **\$12,000** / resident

Key Largo Wastewater Districts:

Residential Base Charge - \$33.60

Wastewater flow charge - \$5.27 per thousand gallons

Total Monthly bill assuming 167 gpd (**\$60.01**)

One time Connection Fee - \$4,500 for 167 gpd = **\$26.95/gal.**

Marathon (Proposed):

Residential Base Charge - \$34.99

Wastewater flow charge - \$7.21 per thousand gallons

Total Monthly bill assuming 167 gpd (**\$71.22**)

One time Connection Fee - \$4,500 for 167 gpd = **\$26.95/gal.**

Islamorada:

Residential Base Charge - \$

Wastewater flow charge - \$ per thousand gallons

Total Monthly bill assuming 167 gpd (\$)

One time Connection Fee - \$4,500 for 167 gpd = **\$26.95/gal.**

Attachment 27

UTILITY AGREEMENT

THIS UTILITY AGREEMENT (Agreement), dated as of the 20th day of March, 2007, by and between KW Resort Utilities Corp., a Florida corporation, having its office(s) at 6450 College Road, Key West, Florida 33040, (hereinafter "Service Company"), and Harbor Shores Condominium Unit Owners Association, Inc., having its office(s) at 6800 Maloney Avenue, Key West, Florida 33040 (hereinafter "Association")

RECITALS

- A. Association is a condominium association of single family homeowners of units of real property located at 6800 Maloney Avenue, Key West, Florida (hereinafter "Property").
- B. Service Company owns, operates, manages and controls a Central Sewage System and is willing to provide sanitary sewer services pursuant to this Agreement.
- C. Association requests that Service Company provide central wastewater service to the Property as indicated on the plans prepared by Weiler Engineering for The South Stock Island sewer expansion. (Copy of plan sheet included as an Exhibit "A" and is incorporated herein by reference).

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00), and the mutual covenants and agreements hereinafter set forth, and intending to be legally bound thereby, it is agreed as follows:

1. **Definitions**

Business Day shall mean any day of the year in which commercial banks are not required or authorized to close in New York, New York.

Capacity Reservation Fee as such term is defined in Section 5 hereof.

Central Sewage System shall mean the central collection, transmission, treatment and disposal system and appurtenant facilities owned and operated by the Service Company.

Connection as such term is defined in Section 5 hereof.

Equivalent Residential Connections (ERC), shall be defined as one individual residential connection or, for commercial and other uses, the estimated flow based on the use and Chapter 64E-6, F.A.C., divided by the most recently approved Capacity Analysis rate per residential connection (currently 250 gallons per day per residential connection) also known as E.D.U.

Plans and Specifications as such term is defined in Section hereof.

Point of Delivery shall mean the point where the pipes connect at the property line between the public right of way and private property. The Service Company shall own the gravity main from the property line out to and including the buffer tank and the remaining vacuum lines down stream. The customer shall own the pipes connecting thereto. Monroe County has retained ownership of the six-inch dedicated air intake and associated piping in the County's right of way.

Property as such term is defined in the Recitals hereof.

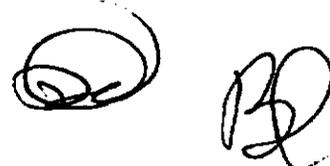
Property Installations or System shall include any connections necessary to connect facilities on the Property to the Central Sewage System, all to be installed by Association at its expense.

Service Company's Affiliates shall mean any disclosed or undisclosed officer, director, employee, trustee shareholder, partner, principal, parent, subsidiary or other affiliate of Service Company.

Tariff shall mean Service Company's existing and future schedules of rates and charges for sewer service.

2. **System Construction**

- (c) Service Company has approved the Plans and Specifications submitted by Association. Association may proceed with the construction and installation of the System at its expense. Association shall notify Service Company seventy-two (72) hours prior to beginning construction. Construction and Installation shall be completed within six (6) months of Service Company's written notice of approval of the Plans and Specifications. All work shall be inspected by licensed and insured contractors and engineers reasonably acceptable to Service Company and Service Company has accepted those contractors and engineers as shown on Exhibit "B". In accordance with Chapter 62-604 F.A.C., Association shall provide, at its sole cost, a Professional Engineer registered in Florida to provide on-site observation during construction and testing and to certify that the System is constructed in compliance with the approved Plans and Specifications. All materials employed by Association for the System shall be reasonably acceptable to Service Company. No portion or element of the System shall be covered or concealed until inspected by Service Company. Association shall notify Service Company of Association's readiness for inspection of the System, and Service Company shall inspect the System within two (2) business days after each such notice. Any portion of the System not inspected by Service Company within said time period shall be deemed to have been accepted by Service Company. In the event that Service Company determines through any such inspection that any portion of the System does not fully comply with the Plans and specific conditions or applicable laws and regulations, Service Company shall notify Association in writing of such non-compliance not more than two (2) business



days after any such inspection and Association shall within a reasonable time modify the System to insure that the System fully complies with the Plans and Specifications and applicable laws and regulations. Such inspection shall be in accordance with the provisions set forth in the attached Exhibit "C".

- (d) In the event Service Company discovers that any portion of element of the System has been installed, covered, or concealed without the prior approval of Service Company, Association shall, upon written demand by Service Company, immediately dismantle or excavate such portion of the System at its sole cost and expense.

3. **System Records**

Prior to Service Company's acceptance of all or any portion of the System for service, operation and maintenance or for service only, Association shall deliver the following records and documents to Service Company:

- (a) Copies of all invoices and/or contracts for the construction and installation.
- (b) An affidavit signed by the Association stating that there are no parts or portions of the System which are not included in the invoices and contracts noted in subsection (a) above, that said invoices and contracts accurately and fully reflect the total cost of the System and that the System is free and clear of all liens and encumbrances.
- (c) Lien waivers from all contracts, subcontractors, material people, and any other parties that provided labor, services or materials in connection with the construction of the System.
- (d) A reproducible Mylar and two (2) sets of blue line copies, accurately depicting all of the System as constructed and installed, and signed and sealed by the engineer and surveyor or record for the System.
- (e) Copies of the results of all tests conducted on the System.
- (f) Any other records or documents required by applicable law or required under the Tariff.
- (g) A certificate of completion of the System signed and sealed by the engineer of record.
- (h) A copy of the Department of Environmental Protection permit to construct the System and all inspection reports and approvals issued by the Engineer and the Department of Environmental Protection and any other applicable governmental authority or agency.



4. **Property Rights**

This section is intentionally omitted. N.A.

5. **Rates, Fees, Charges**

- (a) The Association will pay the applicable fees, rates and charges as set forth in the Tariff for the monthly sewer service after the sewer system is operational. The Service Company shall bill the Association for all regular charges for all condominium unit owners.
- (b) The Association shall not be responsible to the Service Company for the reservation fee. Only the individual unit owners shall pay to the Service Company such reservation fee in the amount of Two Thousand Seven Hundred (\$2,700.00) dollars per E.R.C. connection or accept consent and acknowledgment of Tax Collector's amended bill. (Capacity Reservation Fee), in the amount of Two Thousand Seven Hundred (\$2,700.00) dollars per E.R.C. Service Company agrees that all payments or other acceptable arrangements have been made for reservation fees. Before execution of this agreement, Association has previously supplied Service Company access and information necessary to determine number of ERC's proposed. From this information it has been determined: A Total of 69 ERC's X \$2,700. = \$186,300.
- (c) Intentionally omitted.
- (d) Association shall pay (5% of on-site construction work as set forth in Exhibit "D") to Service Company, for engineering review and administrative costs related to processing construction plans and documents submitted by Association pursuant to this Agreement. Association shall also pay Service Company within thirty (30) days of submission by Service Company to Association of invoices confirming time spent conducting such inspections related to the on-site construction at the rate of \$100.00 per hour.
- (f) Association agrees that in the event of a material change of use that affects flows (i.e. addition of a clubhouse) Service Company will be notified and the applicable Capacity Reservation Fees will be paid prior to discharge to the Central Sewage System.

6. **Payment Options**

Intentionally omitted.

7. **Absolute Conveyance**

Two handwritten signatures in black ink are located in the bottom right corner of the page. The first signature is a cursive 'D' with a loop, and the second is a cursive 'B' with a loop.

Intentionally omitted.

8. **Delivery of Service; Operation and Maintenance**

- (a) Upon Association's full performance of its obligations under this Agreement, Service Company shall provide service to the Point of Delivery in accordance with the terms of this Agreement, all applicable laws and regulations and shall operate and maintain the Central Sewage System to the Point of Delivery in accordance with the terms and provisions of this Agreement. Said service shall be provided simultaneously with the disconnection of existing system after completion of Association's proper installation and payment of all fees.
- (b) Association shall, at its sole cost and expense, own, operate and maintain any part of the System that has not been conveyed to Service Company pursuant to the terms and conditions of this Agreement.
- (c) Association acknowledges that certain water quality standards must be met prior to influent entering the wastewater treatment plant (primarily chloride levels and excessive flows) and agrees to allow Service Company to monitor flows and water quality at Service Company's discretion at a point on the Association's side of the Point of Delivery. If it is determined that substandard influent or excessive flows are entering the Central Sewage System via Association's System, Association agrees to isolate the source and to repair or replace the portion or portions of the faulty System in a manner acceptable to Service Company in accordance with this Agreement.
- (d) Association shall be required to execute a service agreement with respect to any portion of the System not conveyed to Service Company. Such service agreement shall provide that if the Association fails to adequately repair the System, Service Company shall have the right to repair such System at the sole cost and expense of the Association after reasonable notice is given to Association by Service Company pursuant to this agreement and Association fails to make such repairs.

9. Intentionally omitted.

10. **Repair of System**

In the event of any damage to or destruction of any portion of the Central Sewage System due to any acts or omissions by Association, any Customer or their respective agents, representatives, employees, invitees or licensees, Service Company shall repair or replace such damaged or destroyed facilities at the sole cost and expense of responsible party. Association shall operate, maintain and repair all other portions of the System not conveyed to Service Company at its sole cost and expense.



11. **Term**

This Agreement shall become effective as of the date first written above, and shall continue for so long as Service Company provides sewer service to the public.

12. **Default**

In the event of a default by either party of its duties and obligations hereunder, the non-defaulting party shall provide written notice to the defaulting party specifying the nature of the default and the defaulting party shall have five (5) days to cure any default of a monetary nature and thirty (30) days for any other default. If the default has not been cured within the applicable period (time being of the essence), the non-defaulting party shall be entitled to exercise all remedies available at law or in equity, including but not limited to, the right to damages, injunctive relief and specific performance. Service Company may, at its sole option, discontinue and suspend the delivery of service to the System in accordance with all requirements of applicable law and the Tariff if Association fails to timely pay all fees, rates and charges pursuant to the terms of this Agreement.

13. **Excuse from Performance**

(a) **Force Majeure.**

If Service Company is prevented from or delayed in performing any act required to be performed by Service Company hereunder, and such prevention or delay is caused by strikes, labor disputes, inability to obtain labor, materials or equipment, storms, earthquakes, electric power failures, land subsidence, acts of God, acts of public enemy, wars, blockades, riots, acts of armed forces, delays by carriers, inability to obtain rights-of-way, acts of public authority, regulatory agencies, or courts, or any other cause, whether the same kind is enumerated herein, not within the control of Service Company (Force Majeure), the performance of such act shall be excused for a period equal to the period of prevention or delay.

(b) **Governmental Acts.**

If for any reason during the term of this Agreement, other than the fault of Association, any federal, state or local authorities or agencies fail to issue necessary permits, grant necessary approval or require any change in the operation of the Central Sewage System or the System (Governmental Acts), then, to the extent that such Governmental Acts shall affect the ability of any party to perform any of the terms of this Agreement in whole or in part, the affected party shall be excused from the performance thereof and a new agreement shall be negotiated, if possible, by the parties hereto in conformity with such permits, approval or requirements. Notwithstanding the foregoing,

Handwritten signature or initials in black ink, consisting of a large, stylized 'B' and some scribbles.

neither Association nor Service Company shall be obligated to accept any new agreement if it substantially adds to its burdens and obligations hereunder.

(c) Emergency Situations.

Service Company shall not be held liable for damages to Association and Association hereby agrees not to hold Service Company liable for damages for failure to deliver service to the Property upon the occurrence of any of the following events:

1. A lack of service due to loss of flow or process or distribution failure; provided that Service Company has utilized its best efforts to maintain the Central Sewage System in good operating condition.
2. Equipment or material failure in the Central Sewage System or the System, including storage , pumping and piping provided the Service Company has utilized its best efforts to maintain the Central Sewage System in good operating condition; and
3. Force Majeure, unforeseeable failure or breakdown of pumping, transmission or other facilities, any and all governmental requirements, acts or action of any government, public or governmental authority, commission or board, agency, agent, official or officer, the enactment of any statute, ordinance, resolution, regulation, rule or ruling, order, decree or judgment, restraining order or injunction of any court, including, without limitation, Governmental Acts.

(d) Notwithstanding any excuse of performance due to the occurrence of any of the foregoing events, Association shall not be excused from payment of any fees, charges and rates due to Service Company under the terms of this Agreement.

14. Successors and Assigns

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

15. Indemnification

Service Company and Association agree:

- (1) to indemnify and hold the other harmless from negligent acts or omissions of itself, its officers, agents, invitees and users of the system, and
- (2) to indemnify and hold the others harmless from third-party suits against a party which result from the breach of the Agreement by the other party.



16. **Assignment of Warranties and Bonds**

Intentionally omitted.

17. **Notices**

All notices, demands, requests or other communications by either party under this Agreement shall be in writing and sent by (a) first class U.S. certified or registered mail, return receipt requested, with postage prepaid, or (b) overnight delivery service or courier, or (c) tele-facsimile or similar facsimile transmission with receipt confirmed as follows:

If to Service Company: Mr. Doug Carter, General Manager
6450 Junior College Road
Key West, FL 33040
Facsimile (305) 294-1212

With a Copy To: Mr. Jeff Weiler, P.E.
Weiler Engineering
20020 Veterans Boulevard
Port Charlotte, FL 33954
Facsimile (941) 764-8915

If to Association: President
Harbor Shores Condominium Unit Owners Association,
Inc.
6800 Maloney Avenue,
Key West, Florida 33040

With a Copy To: Mitchell J. Cook
24171 Overseas Highway, Suite 2
Summerland Key, FL 33042

18. **Tariff**

This agreement shall be filed by Service Company with the Florida Public Service Commission within twenty (20) days after this Agreement is signed by both parties. This Agreement is subject to all of the terms and provisions of the Tariff. In the event of any conflict between the Tariff and the terms of this Agreement, the Agreement shall govern and control.

19. **Miscellaneous Provisions**

- (a) This Agreement shall not be altered, amended, changed, waived, terminated or otherwise modified in any respect or particular, and no consent or approval



required pursuant to this Agreement shall be effective, unless the same shall be in writing and signed by or on behalf of the party to be charged.

- (b) All prior statements, understandings, representations and agreements between the parties, oral or written, are superseded by and merged in this Agreement, which alone fully and completely expresses the agreement between them in connection with this transaction and which is entered into after full investigation, neither party relying upon any statement, understanding, representation or agreement made by the other not embodied in this Agreement. This Agreement shall be given a fair and reasonable construction in accordance with the intentions of the parties hereto, and without regard to or aid of canons requiring construction against Service Company or the party drafting this Agreement.
- (c) No failure or delay of either party in the exercise of any right or remedy given to such party hereunder or the waiver by any party of any condition hereunder for its benefit (unless the time specified herein for exercise of such right or remedy has expired) shall constitute a waiver of any other or further right or remedy nor shall any single or partial exercise of any right or remedy preclude other or further exercise thereof or any other right or remedy. No waiver by either party of any breach hereunder or failure or refusal by the other party to comply with its obligations shall be deemed a waiver of any other or subsequent breach, failure or refusal to so comply.
- (d) This Agreement may be executed in one or more counterparts, each of which so executed and delivered shall be deemed an original, but all of which taken together shall constitute but one and the same instrument. It shall not be necessary for the same counterpart of this Agreement to be executed by all of the parties hereto.
- (e) Each of the exhibits and schedules referred to herein and attached hereto is incorporated herein by this reference.
- (f) The caption headings in this Agreement are for convenience only and are not intended to be a part of this Agreement and shall not be construed to modify, explain or alter any of the terms, covenants or conditions herein contained.
- (g) This Agreement shall be interpreted and enforced in accordance with the laws of the state in which the Property is located without reference to principles of conflicts of laws. In the event that the Florida Public Service Commission loses or relinquishes its authority to regulate Service Company, then all references to such regulatory authority will relate to the agency of government or political subdivision imposing said regulations. If no such regulation exists, then this Agreement shall be governed by applicable principles of law.
- (h) Each of the parties to this Agreement agrees that at any time after the execution hereof, it will, on request of the other party, execute and deliver such other

Two handwritten signatures in black ink. The signature on the left is a cursive 'JD' inside a circle. The signature on the right is a cursive 'RB'.

documents and further assurances as may reasonably be required by such other party in order to carry out the intent of this Agreement.

- (i) If any provision of this Agreement shall be unenforceable or invalid, the same shall not affect the remaining provisions of this Agreement and to this end the provisions of this Agreement are intended to be and shall be severed. Notwithstanding the foregoing sentence, if (i) any provision of this Agreement is finally determined by a court of competent jurisdiction to be unenforceable or invalid in whole or in part, (ii) the opportunity for all appeals of such determination have expired, and (iii) such enforceability or invalidity alters the substance of this Agreement (taken as a whole) so as to deny either party, in a material way, the realization of the intended benefit of its bargain, such party may terminate this Agreement within thirty (30) days after the final determination by notice to the other. If such party so elects to terminate this Agreement, then this Agreement shall be terminated and neither party shall have any further rights, obligations or liabilities hereunder, except for any rights, obligations or liabilities which by this specific terms of this Agreement survive the termination of this Agreement.
- (j) In the event of any litigation arising out of or connected in any manner with this Agreement, the non-prevailing party shall pay the costs of the prevailing party, including its reasonable counsel and paralegal fees incurred in connection therewith through and including all other legal expenses and the costs of any appeals and appellate costs relating thereto. Wherever in this Agreement it is stated that one party shall be responsible for the attorneys fees and expenses of another party, the same shall automatically be deemed to include the fees and expenses in connection with all appeals and appellate proceedings relating or incidental thereto. This subsection (j) shall survive the termination of this Agreement.
- (k) This Agreement shall not be deemed to confer in favor of any third parties any rights whatsoever as third-party beneficiaries, the parties hereto intending by the provisions hereof to confer no such benefits or status.
- (l) All approved testing requirements are identified on Exhibit C.
- (m) Service Company agrees that is will not take any actions against Association that are not reasonable based on the facts and circumstances and association agrees that it will not take any actions against Service Company that are not reasonable.

IN WITNESS WHEREOF, Service Company and Association have executed this Agreement as of the day and year first above written.

SERVICE COMPANY:

ASSOCIATION:



Exhibit B



BOARD OF COUNTY COMMISSIONERS

Mayor Mario Di Gennaro, District 4
Mayor Pro Tem Dede M. Spelhar, District 1
George Neugent, District 2
Charles "Sonny" McCoy, District 3
Sylvia J. Murphy, District 5



March 20, 2007

Mr. Doug Carter
KW Resort Utilities Corp.
6450 E. Junior College Road
Key West, FL 33040

Dear Doug:

The Monroe County Engineering Department would like to inform you that all 69 properties in the Harborshores development (property real estate identification numbers starting with the prefix "133760") have either paid in full, are grant recipients, or have signed the Consent and Acknowledgment agreements, to the satisfaction of the County.

If you have any questions, please feel free to let me know.

Thank you.

A handwritten signature in black ink, appearing to read 'April M. Pearson'.

April M. Pearson
Executive Assistant
pearson-april@monroecounty-fl.gov

Monroe County Engineering Division

The Historic Gato Cigar Factory
1100 Simonton Street, Suite 2-216
Key West, Florida 33040
305-292-4426 department
305-295-4321 fax

Handwritten initials or a signature in black ink, possibly 'D' and 'B'.

Exhibit C



BOARD OF COUNTY COMMISSIONERS
Mayor Mario Di Gennaro, District 4
Mayor Pro Tem Dixie M. Spehar, District 1
George Neugent, District 2
Charles "Sonny" McCoy, District 3
Sylvia J. Murphy, District 5



Chris Johnson
Keys Environmental, Inc.
6630 Front Street
Key West, FL 33040

February 22, 2007

Dear Mr. Johnson:

As you are aware, the Monroe County Board of County Commissioners (BOCC) has requested that the Engineering Division assist in facilitating the connection of the remaining properties within the Phase 1, Phase 2, and Phase 3 Stock Island Sanitary Sewer Expansion. In consideration of the Community Block Development Grant (CBDG) timeframe, we propose the existing collection system at Harbor Shores be tested as soon as possible so that areas for repair may be identified and funded, if necessary, with grant awards. Please provide confirmation that the testing approach, procedures and specifications outlined in this letter are acceptable for connection to the KW Resort Utilities Corporation (KWRU) wastewater treatment system.

Testing (and repair, if necessary) of all existing and new infrastructure must be completed prior to connection to the KWRU system. Within 30 days of submittal of the DEP Permit or upon permit issuance, installation of the new gravity main, manhole(s), and new manhole-pipe connections can commence. Monroe County code shall be followed for testing of the new infrastructure following installation.

It is proposed that hydrostatic testing of the manholes, mains, and laterals be performed on the existing system as soon as possible to allow adequate time for repair if necessary. The testing is to be performed as specified by the KWRU/Keys Environmental, Inc. engineer and under the direction of Keys Environmental, Inc. It is anticipated that if site conditions allow the testing contractor to set up tests and the Keys Environmental, Inc. Inspector to be on-site only to observe the change in water elevation, that up to 4 hours per day of inspection will be required for up to 5 days resulting in up to 20 hours of inspection time. Per the contract under review, inspection shall be billed at \$100.00 per hour. In the event that difficulty setting up the test or water loss is encountered, Bill Robertson shall be contacted at 305-304-6009 to communicate these findings with the Harbor Shores Homeowner's Board prior to additional time being spent on site by Keys Environmental, Inc. An invoice shall be submitted to Harbor Shores with an attached time log.

- a) Exfiltration testing shall first be performed on the manholes to verify that they are water tight. Manholes will be tested by plugging the inlets and outlets and filling to the top of the manhole frame to verify a proper seal between the manhole frame and structure. In the event of water loss, the volume of loss may be determined using the geometry of the manhole, by refilling to the original test elevation using a calibrated drum, or by other methods approved by the KWRU/Keys Environmental, Inc. engineer. Allowable leakage for manholes shall not exceed 0.1 gallon per hour per foot of head above estimated ground water elevation. In the event that the manhole ring elevation is below +3.9 feet NGVD, verify that

A handwritten signature in black ink, appearing to be 'D. B.' or similar initials.

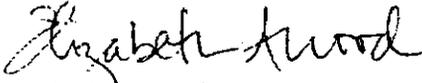
Exhibit C

the groundwater elevation is at least 2.0 feet below the lowest manhole ring in the section being tested. Again, manholes should be filled to the top.

- b) The exfiltration tests for the mains and laterals will commence with the high end of each branch main. Tests will be conducted on portions of the system not exceeding three manhole runs or maximum of 1200 feet whichever is greater. Testing is to be conducted by filling the portion of the system being tested with water to a level equal to the top of the manhole frame. The allowable limits of exfiltration for the entire existing sewer piping system, or any portion thereof, shall not exceed a rate of 100 gallons per inch of inside pipe diameter per mile of pipe per 24 hours. This equates to 0.08 gallons per hour per inch diameter per 100 feet. No additional allowance will be made for house service lines. *The water used for the test will be taken from the secondary clarifier located on site.*
- c) If there is no leakage detected (as indicated by no change in water elevation) in the first 20 minutes, the test may be ended by the Keys Environmental Inc. Inspector. If there is a change in water elevation, the test must continue for a minimum of two hours to accurately calculate the leakage rate. The geometry of the manhole must be verified to calculate the volume lost.
- d) Where exfiltration exceeds the allowable limits specified herein, the "failing" portion of the system shall be located on a site map which includes the lot numbers of those lots on the portion of the system that failed. Proposals and invoices for lateral repairs must designate lot numbers for CDBG eligibility.
- e) Once repairs are made, the section requiring repairs will be re-tested as specified above.

Please provide written confirmation to our office at your earliest convenience confirming that testing of the existing system and new system can be performed separately and to verify that the test specifications and methods described herein are acceptable to KWRU/Keys Environmental Inc.

Sincerely,



Elizabeth Wood
Sr. Administrator, Sewer Projects

cc: Doug Carter, KW Resort Utilities Corporation (email)
Ed Castle, Weiler Engineering (email)
Bill Robertson, Harbor Shores (email)
Rick Rummell, Rummell, Costabel, Warrington, and Brock LLP (email)



Exhibit C

LIST OF PROJECT ENGINEERS AND CONTRACTORS

for

HARBOR SHORES CONDOMINIUM
6800 MALONEY AVENUE
STOCK ISLAND, FLORIDA

**PROJECT: GRAVITY SEWER REPLACEMENT AND CONNECTION
TO CENTRAL SEWER VACUUM COLLECTION SYSTEM**

DATE: MARCH 2007

ENGINEER: PEREZ ENGINEERING & DEVELOPMENT, INC.

GENERAL CONTRACTOR: BEE BROTHERS DEV., INC.

TESTING SERVICES: B.R.I.A.N., INC.

Handwritten initials or signature, possibly "DR" or similar, located in the bottom right corner of the page.

Exhibit D

Gary's Plumbing Inc.

6409 2nd Terrace Suite 1
Key West, FL 33040

Date	Estimate #
2/26/2007	10084

Name / Address
Harbor Shores Condominiums Unit Owners Association, Inc. 6800 Maloney Ave Key West, FL 33040

			Project
Description	Qty	Cost	Total
Roof Testing of Sewers			
Testing of 2000 ft. of 8" Sewer Line & 13 Manholes		9,800.00	9,800.00
Hourly rate for installing, TV or Repairs		250.00	250.00
We appreciate your continued business.		Subtotal	
		Sales Tax (7.5%)	
		Total	

Signature Jeffery Wright
 Brenda K Conroy PRES
 BRENOAK CONROY PRES
 HARBOR SHORES CONDO ASSOC.

Security enhanced document. See back for details.

1071

**HARBOR SHORES
CONDOMINIUM UNIT**

OWNERS ASSOC, INC
6800 MALONEY AVE
KEY WEST, FL 33040

DATE March, 2007

63-43/670
1

PAY TO THE ORDER OF KW Resort Utilities Corp. \$ 5,409.60

Five thousand four hundred nine dollars + ⁶⁰/₁₀₀ DOLLARS



Will [Signature]
Dina Hood-Moore

FOR KWRU Agreement 5. (2 months)

GUARDIAN & SAFETY

REDACTED

Security enhanced document. See back for details.

1070

**HARBOR SHORES
CONDOMINIUM UNIT**

OWNERS ASSOC, INC
6800 MALONEY AVE
KEY WEST, FL 33040

DATE March, 2007

63-43/670
1

PAY TO THE ORDER OF KW Resort Utilities Corp. \$ 5,433.75

Five thousand four hundred thirty three dollars + ⁷⁵/₁₀₀ DOLLARS



Will [Signature]
Dina Hood-Moore

FOR KWRU Agreement 5.6) 5%

GUARDIAN & SAFETY

REDACTED

UTILITY AGREEMENT

THIS UTILITY AGREEMENT (Agreement), dated as of the day of April 2004, by and between Key West Resort Utilities, a Florida corporation, having its office(s) at 6450 College Road, Key West Florida 33040, (Service Company) and, Harbor Shores Condominium Association Inc., having its office(s) at 6800 Maloney Ave. Key West, FL 33040. (Developer).

R E C I T A L S

- A. Harbor Shores Condominium Association Inc. is the owner of certain real property more particularly described on Exhibit A, attached hereto and made a part hereof (the Property).
- B. Service Company owns, operates, manages and controls a Central Sewage System and buffer tanks on private property and is willing to provide sanitary sewer services pursuant to the Harbor Shores Connection Proposal dated January 21, 2004. (Exhibit B).
- C. Harbor Shores Condominium Association Inc. requests that Service Company provide central wastewater service to the Property as indicated on the plans prepared by Weiler Engineering for The South Stock Island sewer expansion. (Copy of plan sheet included as an exhibit).

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00), and the mutual covenants and agreements hereinafter set forth, and intending to be legally bound thereby, it is agreed as follows:

1. Definitions

Business Day shall mean any day of the year in which commercial banks are not required or authorized to close in New York, New York.

Capacity Reservation Fee as such term is defined in Section 6 hereof.

Central Sewage System shall mean the central collection, transmission, treatment and disposal system and appurtenant facilities owned and operated by the Service Company.

Connection as such term is defined in Section 6 hereof.

Customer shall mean any residential or commercial customer of Service Company.

Equivalent Residential Connections (ERC), shall be defined as one individual residential connection or, for commercial and other uses, the estimated flow based on the use and Chapter 64E-6 F.A.C., divided by 250 gallons per day per residential connection also known as E.D.U..

Plans and Specifications as such term is defined in Section hereof.

Point of Delivery shall mean the point where the pipes connect to the individual condominium owner's property. The Service Company shall own the buffer tank and all pipes located in the condominium common areas and the customer shall own the pipes connecting thereto. Utility must own the clean out to the buffer tank, and all of the remaining vacuum lines down stream

Property as such term is defined in the Recitals hereof.

Property Installations or System shall mean any service lines located on individual lots or parcels of the Property or to buildings located on the Property that connect to the Central-Sewage System, and may

include facilities located outside the Property, required to be installed by Harbor Shores Condominium Association Inc., to connect facilities on the Property to the Central Sewage System.

Service Company's Affiliates shall mean any disclosed or undisclosed officer, director, employee, trustee shareholder, partner, principal, parent, subsidiary or other affiliate of Service Company.

Tariff shall mean Service Company's existing and future schedules of rates and charges for sewer service.

2. New System Construction

- (a) Service Company shall install on behalf of Harbor Shores Condominium Association Inc. all pipes necessary to connect the existing Harbor Shores Condominium Association Inc. sewage system to Services Company's vacuum collection system located in the public right of way on Maloney Avenue. Service Company shall inspect and repair all existing pipes connecting individual homes to the existing central sewer system. The testing and repair of the individual homeowners laterals located on homeowners property shall be a one time event and 60 days after connection all maintenance and repair of homeowners laterals shall be at the individual homeowners expense. See Exhibit "B" attached hereto for all additional services to be provided by Service Company.
- (b) Service Company shall charge \$116,710 for the work performed. Payment shall be 1/3 (\$38,903.33) upon execution hereof and the balance of \$77,806.67 upon delivery of service to the association.
- ~~(c) Upon Developer's receipt of Service Company's written notice of disapproval of the Plans and Specifications, Harbor Shores Condominium Association Inc. shall promptly revise the Plans and Specifications in accordance with any requirements set forth by Service Company in its written notice of disapproval, and re-submit such revised Plan and specifications to Service Company for approval or disapproval. Service Company shall approve or disapprove of any revised Plans and Specifications with five (5) business days of receipt thereof by written notice to Harbor Shores Condominium Association Inc..~~
- ~~(d) Upon Developer's receipt of Service Company's written notice of approval of the Plans and Specifications, Harbor Shores Condominium Association Inc. may proceed with the construction and installation of the System. Harbor Shores Condominium Association Inc. shall notify Service Company seventy two (72) hours prior to beginning construction. Construction and Installation shall be completed within six (6) months of Service Company's written notice of approval of the Plans and Specifications. All work shall be inspected by licensed and insured contractors and engineers reasonably acceptable to Service Company. In accordance with Chapter 62-604 F.A.C., Harbor Shores Condominium Association Inc. shall provide, at its sole cost, a Professional Engineer Registered in Florida to provide on-site observation during construction and testing and to certify that the System is constructed in compliance with the approved Plans and Specifications. All materials employed by Harbor Shores Condominium Association Inc. for the System shall be reasonably acceptable to Service Company. No portion or element of the System shall be covered or concealed until inspected by Service Company. Harbor Shores Condominium Association Inc. shall notify Service Company of Developer's readiness for inspection of the System, and Service Company shall inspect the System within two (2) business days after each such notice. Any portion of the System not inspected by Service Company within said time period, shall be deemed to have been accepted by Service Company. In the event that Service Company determines through any such inspection that any portion of the System does not fully comply with the Plans and specific conditions or applicable laws and regulations, Service Company shall notify Harbor Shores Condominium Association Inc. in~~

~~writing of such noncompliance not more than two (2) business days after any such inspection and Harbor Shores Condominium Association Inc. shall immediately modify the System to insure that the System fully complies with the Plans and Specifications and applicable laws and regulations.~~

- ~~(e) In the event Service Company discovers that any portion or element of the System has been installed, covered or concealed without the prior approval of Service Company, Harbor Shores Condominium Association Inc. shall, upon written demand by Service Company, immediately dismantle or excavate such portion of the System at its sole cost and expense.~~

3. System Records

Prior to Service Company's acceptance of all or any portion of the System for service, operation and maintenance or for service only, Harbor Shores Condominium Association Inc. shall deliver the following records and documents to Service Company:

- ~~(a) — Copies of all invoices and/or contracts for the construction and installation.~~
- (b) An affidavit signed by the Harbor Shores Condominium Association Inc. stating that there are no parts or portions of the System which are not included in the invoices and contracts noted in subsection (a) above, that said invoices and contracts accurately and fully reflect the total cost of the System and that the System is free and clear of all liens and encumbrances.
- ~~(c) — Lien waivers from all contractors, subcontractors, material people, and any other parties that provided labor, services or materials in connection with the construction of the System.~~
- ~~(d) — A reproducible Mylar and two (2) sets of blue line copies, accurately depicting all of the System as constructed and installed, and signed and sealed by the engineer and surveyor of record for the System.~~
- ~~(e) — Copies of the results of all tests conducted on the System.~~
- ~~(f) — Any other records or documents required by applicable law or required under the Tariff.~~
- ~~(g) — A certificate of completion of the System signed and sealed by the engineer of record.~~
- (h) A copy of the Department of Environmental Protection permit to operate the System and all inspection reports and approvals issued by the Engineer and the Department of Environmental Protection and any other applicable governmental authority or agency.
- (j) A bill of sale, in recording form, conveying all right, title and interest in and to the System, to Service Company free of any and all liens and encumbrances for that portion of the System located on the Service Company side of the Point of Delivery.

4. Property Rights

In those cases in which Service Company accepts all or any portion of the System for service, operation and maintenance, Harbor Shores Condominium Association Inc. shall convey the following property rights and interests for that portion of the System to Service Company:

- (a) A non-exclusive easement, in the form attached as Exhibit "C", for that portion of the Property of sufficient size to enable Service Company ingress and egress and to operate, maintain and

replace such portions of the System not located within public rights-of-way. The foregoing easement shall be in effect for a period of time not less than the period during which the Service Company shall use the System to provide service to Customers.

- (b) A non-exclusive easement, in the form attached as Exhibit "C", of sufficient size to enable ingress, egress and access by Service company personnel or vehicles to any lift or pump station located on the Property. The foregoing easement shall be in effect for a period of time not less than the period during which the Service Company shall use the System to provide service to Customers.
- (c) Notwithstanding the foregoing easements, Harbor Shores Condominium Association Inc. retains all rights and privileges to utilize the Property in any manner it deems appropriate provided such use is not inconsistent with the purposes intended for such easements.

5. Section Intentionally Deleted.

6. Rates, Fees, Charges

- (a) All Customers will pay the applicable fees, rates and charges as set forth in the Tariff. Nothing contained in this Agreement shall serve to prohibit Service Company's right to bill or collect its rates and charges from Customers, nor to require compliance with any provision of its Tariff.
- (b) Harbor Shores Condominium Association Inc. shall pay to Service Company a reservation fee (Capacity Reservation Fee), in the amount of Two Thousand Seven Hundred (\$2,700.00) dollars per E.R.C. connection to be reserved by Harbor Shores Condominium Association Inc. to serve the residential or commercial structures to be constructed in or upon the Property (individually, a Connection, collectively, the Connections). Prior to execution of this agreement, Harbor Shores Condominium Association Inc. has previously supplied Service Company access and information necessary to determine number of ERC's proposed. From this information it has been determined:

70 Single family homes	70 ERC's
Total	70 ERC's (\$189,000)

- (c) Each individual homeowner may choose an option in Section 7 of this Agreement and to the extent they do so, Harbor Shores' obligation to pay the Capacity Reservation shall be reduced accordingly.

~~Harbor Shores Condominium Association shall pay \$3,942 for the Capacity Reservation Fee upon execution of the Agreement, or may choose an option in Section 7 of this Agreement.~~

Service Company shall have the right to cancel such reservation in the event of Developer's failure to comply with the terms of this Agreement. In the event there is additional water usage over and above the amount reserved in paragraph 6b above, (based on an annual review) the Harbor Shores Condominium Association Inc. shall remit additional capacity reservation fees to Service Company 30 days after notice by Service Company of additional fees due.

- (c) ~~Harbor Shores Condominium Association Inc. shall pay to Service Company, for engineering services and applicable administrative fees necessary to review and approve construction plans and documents and for periodic inspection during construction and testing in the amount of N/A. Said payment is to be made upon submission of plans and documents.~~

- (f) In the event of default by Harbor Shores Condominium Association Inc. and the payment of fees hereunder, Service Company may cancel this agreement by giving 30 (thirty) days written notice of default and retain all payments hereunder as liquidated damages.
- (g) Harbor Shores Condominium Association Inc. agrees that in the event of a change of use or any change that might affect the flows (i.e. Addition of a restaurant) Service Company will be notified and the applicable Capacity Reservation fees will be paid prior to discharge to the Central Sewage System.

7. **Payment Options:**

- (a) The Property Owner must pay the Utility the entire cost of the Capacity Reservation Fee; \$2700 as provided for in Paragraph 6(c) above; or
- (b) The Property Owner must pay five (5) percent of the Capacity Reservation Fee, said check being payable to Monroe County, Florida and execute a Consent and Acknowledgment Agreement delivering both to Utility upon execution of the Utility Agreement.

Property Owners who elect to finance the balance of the Capacity Reservation Fee will be required to execute a Consent and Acknowledgment Agreement along with this Utility Agreement. The Consent and Acknowledgment Agreement is undertaken in anticipation of the bonding of the Capacity Reservation Fee. The Consent and Acknowledgment Agreement sets forth the Property Owner's agreement to comply with the Wastewater Ordinance and acknowledges Property Owner's promise to pay the balance of the Capacity Reservation Fee to Monroe County pursuant to annual Wastewater Ordinance Assessments that will be levied by Monroe County for a period not to exceed twenty (20) years. The Wastewater Ordinance Assessments impose a lien against the subject property and provide a vehicle for Property Owners to finance the cost. Property Owner's electing to participate can expect to pay the remaining balance constituting ninety-five (95) percent of the Capacity Reservation Fee over a period of up to twenty (20) years plus interest each year in the form of the Wastewater Assessment. To take advantage of the bond financing program, the Property Owner must execute the Consent and Acknowledgment Agreement, which is attached to this Agreement, in addition to paying the five (5) percent Capacity Reservation Fee.

- (d) The payment options referenced in this paragraph are only options to pay the balance of the Capacity Reservation Fee and are separate and distinct from monthly costs for sewer service, which remain the sole responsibility of the Property Owner.

8. **Absolute Conveyance**

Harbor Shores Condominium Association Inc. understands, agrees and acknowledges that Harbor Shores Condominium Association Inc. conveyance of any and all easements, real property or personal property (including, without limitation, the System), or payment of any funds hereunder (including, without limitation, the Capacity Reservation Fee and Connection Charges), shall, upon acceptance by Service Company, be absolute, complete and unqualified, and that neither Harbor Shores Condominium Association Inc. nor any party claiming by or through Harbor Shores Condominium Association Inc. shall have any right to such easements, real or personal property, or funds, or any benefit which Service Company may derive from such conveyance or payments in any form or manner.

9. **Delivery of Service; Operation and Maintenance**

- (a) Upon Harbor Shores Condominium Association Inc.'s full performance of its obligations under this Agreement, Service Company shall provide service to the Point of Delivery in accordance with the terms of this Agreement, all applicable laws and regulations and shall operate and maintain the Central Sewage System to the Point of Delivery in accordance with the terms and provisions of this Agreement. Service Company shall use its best efforts to provide service on or about September 2004. Service Company shall not be responsible for any costs or damages, in the event service is not available at that time.
- (b) Harbor Shores Condominium Association Inc. or the individual condominium owners shall, at its sole cost and expense, own, operate and maintain any part of the System that has not been conveyed to Service Company pursuant to the terms and conditions of this Agreement.
- (c) Harbor Shores Condominium Association Inc. acknowledges that certain water quality standards must be met prior to influent entering the wastewater treatment plant (primarily chloride levels and excessive flows) and agrees to allow Service Company to monitor flows and water quality at Service Company's discretion at a point on the Harbor Shores Condominium Association Inc. or the individual condominium owners side of the Point of Delivery. If it is determined that substandard influent or excessive flows are entering the Central Sewage System via the System, Harbor Shores Condominium Association Inc. or the individual condominium owners agrees to isolate the source and to repair or replace the portion or portions of the faulty System in a manner acceptable to Service Company in accordance with this agreement.
- (d) ~~In the event any portion of the Property is developed as a condominium, the condominium association shall be required to execute a maintenance agreement with respect to any portion of the System not conveyed to Service Company. Such maintenance agreement shall provide that if the condominium association fails to adequately maintain and repair the System, Service Company shall have the right to maintain and repair such System at the sole cost and expense of the condominium association.~~

10. Repair of System

In the event of any damage to or destruction of any portion of the Central Sewage System due to any acts or omissions by Harbor Shores Condominium Association Inc., any Customer or their respective agents, representatives, employees, invitees or licensees, Service Company shall repair or replace such damaged or destroyed facilities at the sole cost and expense of responsible party. The individual condominium owners shall operate, maintain and repair all other portions of the System not conveyed to Service Company at their sole cost and expense.

11. Term

This Agreement shall become effective as of the date first written above, and shall continue for so long as Service Company provides sewer service to the public.

12. Default

In the event of a default by either party of its duties and obligations hereunder, the non-defaulting party shall provide written notice to the defaulting party specifying the nature of the default and the defaulting party shall have five (5) days to cure any default of a monetary nature and thirty (30) days for any other default. If the default has not been cured within the applicable period (time being of the essence), the non-defaulting party shall be entitled to exercise all remedies available at law or in equity, including but not limited to, the right to damages, injunctive relief and specific performance. Service Company may, at its sole option, discontinue and suspend the delivery of service to the System in accordance with all

requirements of applicable law and the Tariff if Harbor Shores Condominium Association Inc. fails to timely pay all fees, rates and charges pursuant to the terms of this Agreement.

13. Excuse from Performance

- (a) Force Majeure. If Service Company is prevented from or delayed in performing any act required to be performed by Service Company hereunder, and such prevention or delay is caused by strikes, labor disputes, inability to obtain labor, materials or equipment, storms, earthquakes, electric power failures, land subsidence, acts of God, acts of public enemy, wars, blockades, riots, acts of armed forces, delays by carriers, inability to obtain rights-of-way, acts of public authority, regulatory agencies, or courts, or any other cause, whether the same kind is enumerated herein, not within the control of Service Company (Force Majeure), the performance of such act shall be excused for a period equal to the period of prevention or delay.
- (b) Governmental Acts If for any reason during the term of this Agreement, other than the fault of Harbor Shores Condominium Association Inc., any federal, state or local authorities or agencies fail to issue necessary permits, grant necessary approvals or require any change in the operation of the Central Sewage System or the System (Governmental Acts), then, to the extent that such Governmental Acts shall affect the ability of any party to perform any of the terms of this Agreement in whole or in part, the affected party shall be excused from the performance thereof and a new agreement shall be negotiated, if possible, by the parties hereto in conformity with such permits, approvals or requirements. Notwithstanding the foregoing, neither Harbor Shores Condominium Association Inc. nor Service Company shall be obligated to accept any new agreement if it substantially adds to its burdens and obligations hereunder.
- (c) Emergency Situations Service Company shall not be held liable for damages to Harbor Shores Condominium Association Inc. and Harbor Shores Condominium Association Inc. hereby agrees not to hold Service Company liable for damages for failure to deliver service to the Property upon the occurrence of any of the following events:
1. A lack of service due to loss of flow or process or distribution failure;
 2. Equipment or material failure in the Central Sewage System or the System, including storage, pumping and piping provided the Service Company has utilized its best efforts to maintain the Central Sewage System in good operating condition; and
 3. Force Majeure, unforeseeable failure or breakdown of pumping, transmission or other facilities, any and all governmental requirements, acts or action of any government, public or governmental authority, commission or board, agency, agent, official or officer, the enactment of any statute, ordinance, resolution, regulation, rule or ruling, order, decree or judgment, restraining order or injunction of any court, including, without limitation, Governmental Acts.
- (d) Notwithstanding any excuse of performance due to the occurrence of any of the foregoing events, Harbor Shores Condominium Association Inc. shall not be excused from payment of any fees, charges and rates due to Service Company under the terms of this Agreement (including without limitation, the Capacity Reservation Fee and Connection Charges).

14. **Successors and Assigns**

This Agreement and the easements granted hereby, shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

15. **Indemnification**

Harbor Shores Condominium Association Inc. shall indemnify, defend and hold Service Company and Service Company's Affiliates harmless from and against any and all claims, demands, causes of action, losses, damages, liabilities, costs and reasonable expenses, including, without limitation, attorneys fees and disbursements, suffered or incurred by Service Company or any of Service Company's Affiliates and arising out of or in connection with use, occupancy, or operation of the System, the Property, or the activities, errors, or omissions of Harbor Shores Condominium Association Inc., its agents, employees, servants, licensees, invitees, or contractors on or about the Property, pursuant to terms and conditions of this Agreement. Harbor Shores Condominium Association Inc.'s duty to indemnify shall also include, but not be limited to, indemnification from and against any fine, penalty, liability, or cost to Service Company arising out of Harbor Shores Condominium Association Inc.'s violation or breach of any law, ordinance, governmental regulation, this Agreement requirement or permit applicable to the System or Harbor Shores Condominium Association Inc.'s activities on or about the Property. The provisions of this Section 15 shall survive the termination of this Agreement.

~~16. **Assignment of Warranties and Bonds**~~

~~Harbor Shores Condominium Association Inc. shall assign any and all warranties, maintenance, completion and performance bonds and the right to enforce same to the Service Company which Harbor Shores Condominium Association Inc. obtains from any contractor constructing the System. Harbor Shores Condominium Association Inc. shall obtain a written warranty, completion, performance and maintenance bonds from its contractor for a minimum period of twenty four (24) months. If Harbor Shores Condominium Association Inc. does not obtain such written warranty and performance and maintenance bonds from its contractor and deliver same to Service Company, then in such event, Harbor Shores Condominium Association Inc. agrees to warrant the construction of the System for a period of twenty four (24) months from the date of acceptance by the Service Company.~~

17. **Notices**

All notices, demands, requests or other communications by either party under this Agreement shall be in writing and sent by (a) first class U.S. certified or registered mail, return receipt requested, with postage prepaid, or (b) overnight delivery service or courier, or (c) telefacsimile or similar facsimile transmission with receipt confirmed as follows:

If to Service Company:

Mr. Doug Carter, General Manager
6450 Junior College Road
Key West, Florida 33040
Fax (305) 294-1212

With a copy to:

Mr. Jeff Weiler, P.E.

Weiler Engineering
20020 Veterans Blvd.
Port Charlotte, Florida 33954
Fax (941) 764-8915

If to Harbor Shores Condominium Association Inc.: Harbor Shores Condominium Association Inc..
6800 Maloney Ave
Key West, FL 33040

18. Tariff

This Agreement is subject to all of the terms and provision of the Tariff. In the event of any conflict between the Tariff and the terms of this Agreement, the Tariff shall govern and control.

19. Miscellaneous Provisions

- (a) This Agreement shall not be altered, amended, changed, waived, terminated or otherwise modified in any respect or particular, and no consent or approval required pursuant to this Agreement shall be effective, unless the same shall be in writing and signed by or on behalf of the party to be charged.
- (b) All prior statements, understandings, representations and agreements between the parties, oral or written, are superseded by and merged in this Agreement, which alone fully and completely expresses the agreement between them in connection with this transaction and which is entered into after full investigation, neither party relying upon any statement, understanding, representation or agreement made by the other not embodied in this Agreement. This Agreement shall be given a fair and reasonable construction in accordance with the intentions of the parties hereto, and without regard to or aid of canons requiring construction against Service Company or the party drafting this Agreement.
- (c) No failure or delay of either party in the exercise of any right or remedy given to such party hereunder or the waiver by any party of any condition hereunder for its benefit (unless the time specified herein for exercise of such right or remedy has expired) shall constitute a waiver of any other or further right or remedy nor shall any single or partial exercise of any right or remedy preclude other or further exercise thereof or any other right or remedy. No waiver by either party of any breach hereunder or failure or refusal by the other party to comply with its obligations shall be deemed a waiver of any other or subsequent breach, failure or refusal to so comply.
- (d) This Agreement may be executed in one or more counterparts, each of which so executed and delivered shall be deemed an original, but all of which taken together shall constitute but one and the same instrument. It shall not be necessary for the same counterpart of this Agreement to be executed by all of the parties hereto.
- (e) Each of the exhibits and schedules referred to herein and attached hereto is incorporated herein by this reference.
- (f) The caption headings in this Agreement are for convenience only and are not intended to be a part of this Agreement and shall not be construed to modify, explain or alter any of the terms, covenants or conditions herein contained.

- (g) This Agreement shall be interpreted and enforced in accordance with the laws of the state in which the Property is located without reference to principles of conflicts of laws. In the event that the Florida Public Service commission loses or relinquishes its authority to regulate Service Company, then all references to such regulatory authority will relate to the agency of government or political subdivision imposing said regulations. If no such regulation exists, then this Agreement shall be governed by applicable principles of law.
- (h) Each of the parties to this Agreement agrees that at any time after the execution hereof, it will, on request of the other party, execute and deliver such other documents and further assurances as may reasonably be required by such other party in order to carry out the intent of this Agreement.
- (i) If any provision of this Agreement shall be unenforceable or invalid, the same shall not affect the remaining provisions of this Agreement and to this end the provisions of this Agreement are intended to be and shall be severed. Notwithstanding the foregoing sentence, if (I) any provision of this Agreement is finally determined by a court of competent jurisdiction to be unenforceable or invalid in whole or in part, (ii) the opportunity for all appeals of such determination have expired, and (iii) such unenforceability or invalidity alters the substance of this Agreement (taken as a whole) so as to deny either party, in a material way, the realization of the intended benefit of its bargain, such party may terminate this Agreement within thirty (30) days after the final determination by notice to the other. If such party so elects to terminate this Agreement, then this Agreement shall be terminated and neither party shall have any further rights, obligations or liabilities hereunder, except for any rights, obligations or liabilities which by this specific terms of this Agreement survive the termination of this Agreement.
- (j) In the event of any litigation arising out of or connected in any manner with this Agreement, the non-prevailing party shall pay the costs of the prevailing party, including its reasonable counsel and paralegal fees incurred in connection therewith through and including all other legal expenses and the costs of any appeals and appellate costs relating thereto. Wherever in this Agreement it is stated that one party shall be responsible for the attorneys fees and expenses of another party, the same shall automatically be deemed to include the fees and expenses in connection with all appeals and appellate proceedings relating or incidental thereto. This subsection (j) shall survive the termination of this Agreement.
- (k) This Agreement shall not be deemed to confer in favor of any third parties any rights whatsoever as third-party beneficiaries, the parties hereto intending by the provisions hereof to confer no such benefits or status.
- (l) Harbor Shores Condominium Association Inc. agrees that Service Company may, at its sole discretion, require certain allocations to the proposed collection and transmission systems for future connections. Harbor Shores Condominium Association Inc. further agrees that Service Company may, at its sole discretion, extend the sewer line for any reason. It is understood that there will be no reimbursement or additional credit.

(SIGNATURE PAGE IMMEDIATELY FOLLOWING)

IN WITNESS WHEREOF, Service Company and Harbor Shores Condominium Association Inc. have executed this Agreement as of the day and year first above written.

SERVICE COMPANY:

Harbor Shores Condominium Association Inc.

Key West Resort Utilities Corporation

By: _____

Print Name: _____

Title: _____

Address: Key West Resort Utilities Corporation
6450 Junior College Road
Key West, Florida 33040

By: _____

Print Name: _____

Title: _____

Address: _____

STATE OF FLORIDA)
) ss:
COUNTY OF MONROE)

The foregoing instrument was acknowledged before me this _____ day of _____, 2004, by _____, as _____, a Florida corporation, on behalf of said corporation. He/she is personally known to me or who has produced _____ as identification.

My Commission Expires: _____

STATE OF FLORIDA)
) ss:
COUNTY OF MONROE)

The foregoing instrument was acknowledged before me this _____ day of _____, 200__, by _____, as _____, a Florida corporation, on behalf of said corporation. He/she is personally known to me or who has produced _____

as identification.

My Commission Expires: _____