

BAL HARBOUR


- V I L L A G E -

OFFICE OF THE VILLAGE MANAGER

LETTER TO COUNCIL

NO. 136-2018

To: Mayor Gabriel Groisman and Members of the Village Council

From: Jorge M. Gonzalez, Village Manager 

Date: August 24, 2018

Subject: **Completion of Rehabilitative Sanitary Sewer System Cured In-Place Sewer Pipe Lining and Manhole Rehabilitation Project**

The purpose of this Letter to Council (LTC) is to transmit to you an update regarding the rehabilitative Sanitary Sewer System Pipe Lining Project, utilizing "Cured In-Place Pipe" (CIPP) lining technology which started Tuesday July 10, 2018 on Collins Avenue. As previously provided, this project was developed as a component of the reevaluation of our strategy for the implementation of the Utility Master Plan based on our experience gained while completing the Phase One Project. This revised project completes and surpasses the sanitary sewer portion of the previously identified Utility Master Plan Phase Two (2) Collins Avenue utility system improvements.

As detailed within the previous LTC, from July 11, 2018, CIPP is considered a trenchless technology with little to no digging involved in the process, making for a potentially more cost-effective and less disruptive method than traditional "dig and replace" pipe repair methods for restoration of damaged pipes. CIPP is a joint less, seamless, pipe-within-a-pipe with the capability to rehabilitate pipes ranging in diameters from two (2) to one hundred ten (110) inches.

As of Friday August 10, 2018, the rehabilitation of all thirty-eight (38) sanitary sewer manholes of various internal diameters on Collins Avenue was completed using calcium aluminate mortar mix which is a blend of quartz silica, fibers and pure fused calcium aluminate high strength cement. In addition, the CIPP Lining of all Collins Avenue sanitary sewer pipes of various pipe diameters sizes ranging from eight (8) to eighteen (18) inches with total length of six thousand three hundred forty-two (6,342) linear feet was successfully completed using the CIPP lining method. CIPP is designed for a life of 50 years or greater per the National Association of Sewer Service Companies.

The cost of this work including cleaning, video camera inspection, sanitary manhole rehabilitation and sanitary pipe CIPP lining totaled three hundred one thousand seven hundred and twenty six dollars (\$301,726). The original preliminary cost estimate for the

sanitary sewer system portion of the Phase Two (2) Collins Avenue utility system improvements inclusive of engineering design, construction, administration and restoration costs as detailed within the Utility Masterplan was one million four hundred ninety eight thousand one hundred dollars (\$1,498,100).

Essentially, the Master Plan envisioned the wholesale removal and replacement of over two thousand seven hundred linear feet (2,700) of existing sanitary sewer pipe and the removal then replacement of fourteen manhole structures. The project as proposed would have impacted the daily access, property hardscapes, landscapes and aesthetics of fourteen (14) Oceanfront properties for a period of several months. Also, the Master Plan did not address nor provide cost estimates for the rehabilitation of the remaining three thousand six hundred linear feet (3,600) of sanitary sewer pipe and fourteen remaining manhole structures along the Collins Avenue Corridor. Due to the new approach taken, this project did not require road or right of way digging and replacement of pipes thereby eliminating disruptive construction along Collins Avenue and significantly reduced the project timeframe.

Additionally, it should be noted that the original Master Plan cost estimate did not factor any potential legal fees or costs for required easement acquisitions or property specific hardscape and landscape costs for restoration which were presented generically. Due to the extensively enhanced frontage of the properties to be affected by the original Phase Two (2) Project, the restoration costs alone could have meaningfully elevated the cost of the project. It can be presumed that the factors detailed above along with the unaddressed rehabilitation of the remaining sanitary sewer system in this area, would have greatly impacted the actual budget and construction time period for this work.

In summary, the project was successfully completed within twenty seven (27) actual workdays at a substantial savings of one million one hundred ninety six thousand three hundred seventy four dollars (\$1,169,374). This equates to a cost reduction of over seventy eight percent (78%) compared to the original project estimate without factoring the increased scope of the work performed and the additional costs described above. The water main replacement portion of the Phase Two (2) Project is currently in the development phase and it is anticipated to be completed during the summer months of 2019.

If you have, any questions please feel free to contact John Oldenburg directly.

JMG/JAO/MA