

Village Green - 2011 Sewer Replacement

- Location:** Courts 6 & 7 (and due to unforeseen pipe damage, a section of 8-inch sewer main extending halfway to Court 14 under the Green).
- Contractor:** General contractor: Troxler & Sons Construction (Simi Valley, CA)
Subcontractor: Mocon Corporation (Indio, CA) for trenchless re-piping work
- Contract Type:** Design/build with a time and material clause for unknown items.
- Bid Process:** Request-for-proposals conducted in the winter/spring 2011. Bids from 9 contractors were sought representing a mix of general plumbing contractors and “trenchless technology” sewer specialists. VGOA Management determined that using a general contractor experienced with concrete repair, soil compaction and backfilling overseeing a trenchless specialist as a subcontractor would be more advantageous, both from a quality and cost perspective. The Board approved the final contract at its June 2011 meeting.
- Costs:** Total cost was approximately \$420,000. Initial contract cost was set at \$260,000 which included proper soil compaction and backfilling of trenches after excavations and re-piping as well as “as-built” documentation. Also, the Board approved up to \$1,500 per patio to return any patios disturbed by the work to as good or better condition and prevent future settling to elements of the patios, which has occurred in prior sewer renovations. There were 10 major change orders totaling approximately \$160,000 which included roughly \$75,000 in this patio repair category. These change orders are detailed below and included unforeseen items as well as additional concrete and patio repairs to address non-sewer related “trip and fall” repairs which were cheaper to address with the contractor on-site than putting off to another time.
- Duration:** July – November 2011. Work completed in 108 days, which was ahead of the contract estimate of 150 days. VGOA issued a notice to proceed on June 30th and actual repiping work began on July 27th and finished on November 23rd. There was no work permitted on weekends or holidays.
- Scope:** Sewer connections for 76 units as well as the laundry rooms for Courts 6 & 7 were upgraded with long-lasting HDPE pipe replacing brittle, broken clay piping compromised by leaks and tree roots. 71 patios were excavated in some way. 57 sewer laterals between buildings/patios and the main court sewer lines were replaced along with new related connections including 84 new “clean-out” access valves installed to allow for easy routine maintenance.
- Oversight:** Unlike previous sewer upgrades, the general manager and maintenance supervisor were closely involved with work inspections and sign-offs. All

change orders were approved in advance. This allowed for a high degree of confidence to ensure the work was done properly, without the use of various patch and repair methods which could weaken the integrity of the overall system. Trenches and patios were properly backfilled and compacted so patio settling will be less likely avoiding expensive problems in the future. All work was also inspected and approved by LA City inspectors.

Planning Phase: In preparation for the bid phase of the project, VGOA management relied upon camera inspection data from 2009 done by a previous contractor, Mr. Sewer, Inc. In addition, several walk-throughs were conducted by Mr. Fay and Mr. Graves to visually confirm the laterals identified by the 2009 camera work. In this way, the scope of work was collected and described in the bid contract. As it turned out, the 2009 inspection data was incomplete and additional laterals were discovered causing the project work to be more extensive than as bid.

Owner Outreach: Affected owners were noticed in mid-July regarding the sewer project. They were invited to view a presentation by the general manager on two separate dates to have the work explained to them. The first presentation was on Saturday, July 16th and the other was just before the July Board Meeting held on Tuesday, July 26th. Additionally, as the work progressed, owners were individually noticed about when the work would reach their units. In some cases, this notice was incomplete or very late in arriving due to occasional unforeseen or unexpected events not uncommon to excavation projects of this size and scope.

Owner Reactions: A survey was sent out on November 16 by the Court Council to impacted owners asking for feedback on their experiences during the sewer renovation. The survey was due back on December 5th. The survey response was low, with only 15 returned out of 76 distributed, likely due to the holiday season. However, these responses and other anecdotal evidence collected suggest that owners were generally very positive about the experience. The professionalism of the contractors, in particular, was cited.

The main complaints were that VGOA management needed to do a better job of informing and educating residents ahead of the project start. The compressed time between the initial owner outreach and the project start did not allow some owners enough time to prepare. In addition, adjustments to the project schedule and sequence were not always received in a timely fashion leading to a number of incidents where owners were caught off-guard and in some cases had their possessions disturbed. VGOA management was aware of these incidents and hope to keep these to a minimum or eliminate them altogether in the next phase.

Lessons Learned: VGOA management anticipated a 20% increase in the cost of this project due to unknown factors. Ultimately, the project came in roughly 29% over budget, however much of this extra work was necessary and should have been included in the bid phase but was left out due to incomplete data. Management believes

that with better camera inspection work and the later discovery of sewer plans from the archives, this problem will be less likely to reoccur. Therefore a much lower variance in the 2012 sewer work is expected.

Management will also try to implement a better “real-time” notification program, which will include daily scheduling updates and messages by email/phone to residents affected by the work. In addition, there will be advance coordination with the arborist to ensure that any sewer work takes into account the condition of trees that may be impacted by the excavation work.

Next Phase:

The sequencing of the sewer renovations has been driven in part by the frequency of sewer backup incidents. Courts 6 & 7 represented the most problem-plagued sewer sector of the courts yet to be renovated. All sewer elements in Courts 11 and 12 are being recommended by VGOA management to be replaced next due to their distressed condition as well as limited elements of Court 10 which were not addressed during the previous repair to this court in 2007. These repairs will allow this whole area of the property to connect directly to the city sewer lines through all-new infrastructure which will enhance performance well into the future.

Change Orders:

- (1) ~80 feet of laundry room lateral connections and related costs (~\$35,100)
- (2) ~100 feet of 6-inch sewer main and related costs in Court 6 (~\$11,100)
- (3) ~85 feet of 8-inch sewer main under main Green and related costs (~\$13,000)
- (4) Bldg 31 – install of 6-inch main and related costs (~\$9,500)
- (5) Bldgs 28, 29 and 30 – patio/walkway concrete repairs and cast iron upgrades (~\$25,400)
- (6) Bldg 31 – patio/walkway concrete repairs (~\$15,400)
- (7) Bldgs 32 and 33 – patio/walkway concrete repairs (~\$14,300)
- (8) Bldgs 34, 35 and 36 – patio/walkway concrete repairs (~\$16,400)
- (9) Bldgs 37, 38 and Partial 36 – patio/walkway concrete repairs (~\$10,800)
- (10) 5 additional laterals in Courts 6 & 7 (~\$7,500)