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Orinda takes a deep dive into storm drains

By Sora O'Doherty



Failed metal culvert that was replaced with concrete culvert under Miner Road in 2017.
Photo Sora O'Doherty

Having completed most repairs of residential roads by the end of 2019, Orinda's public works department has turned its attention to arterials and collectors and to public storm drains. On Feb. 4 Orinda Senior Engineer Scott Christie provided an update to the city council on the storm drain project. The importance of storm drain maintenance was underlined by the Miner Road sinkhole, that caused the city so much trouble in 2017. The main challenge facing the city is where to find the approximately \$28 million shortfall for the public storm drain program.

Storm drains smaller than 36 inches in diameter were replaced during recent road repaving, but larger ones require permitting. In the 2015 through 2019 paving projects, approximately 10,000 feet of pipe was either replaced or lined at a cost of \$3.9 million. Lining old pipes is a technique used to give longer life to existing drains.

City staff have been working with the Citizens Infrastructure Oversight Commission to produce a comprehensive storm drain repair plan. Earlier work by the city to identify public storm drain deficiencies, such as the 2016 Storm Drain Master Plan by Schaaf & Wheeler has been supplemented by Drake Haglan & Associates, contracted in 2019 to provide cost estimates and a prioritization scheme for storm drains. The prioritization scheme balances four criteria and applies different weights, or importance scores, to each. The most heavily weighted score is that of the pipe condition, which accounts for 45% of its priority, followed by the importance of the roadway at 30%, the size of the pipe at 15% with the remaining 10% weight attributed to whether capacity upsizing is recommended for the pipe.

The estimated total cost for repairing or replacing all public storm drains is nearly \$30 million, divided roughly by one-third for pipes that will need repair or replacement in the next three to five years and the other two-thirds devoted to pipes that will need repair or replacement in the next five to 10 years. Full funding is not currently available, and some \$28 million needs to be raised to complete the project.

The plan is to repair or replace all metal pipes and only repair or replace non-metal pipes, such as concrete box culverts, when the need is discovered. The plan only includes storm drain pipes within the city right-of-way, which is estimated to include 1,470 public pipe segments totaling about 89,000 linear feet. City drainage maps show at least 1,800 private pipe segments, totaling about 145,000 linear feet, but these are not included in the plan.

At the same meeting the city council approved awards of two contracts to Miksis Services, Inc. The first is a construction contract to rehabilitate four high priority storm drain pipes. The construction agreement is for \$176,090, plus a 16% contingency fee that results in a total authorized contract amount of \$205,000. Miksis Services Inc. also was awarded a construction contract to repair a culvert in the city draining easement on El Camino Moraga. That contract authorizes expenditure of up to \$34,200.

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