



WARREN CONSULTING ENGINEERS, INC.

May 20, 2013

Ray Boike  
Buckeye Union School District  
P.O. Box 547  
Shingle Springs, CA 95682

**RE: Bass Lake Hills/Silver Dove Specific Plan**

1117 Windfield Way

Dear Ray,

Suite 110

We have reviewed Appendix D of the Bass Lake Hills Specific Plan Public Facilities Financing Plan (PFFP) and costs associated with the future elementary school on Silver Dove Way. We offer the following comments and recommendations;

El Dorado Hills

California

**Temporary School Sewer Improvements (Force Main)**

95762

The new 4" sewer force main will be an EID force main with a significant amount of horizontal curvature, and for that reason, we believe the installation costs will be greater than that proposed in the Public Facilities Financing Plan (PFFP). The PFFP estimate of \$40.00/LF would be accurate if this were an on-site private force main but because this is an EID force main, the depth of trench will be 18" +/- deeper and the horizontal curvature will make installation more labor intensive. We suggest the estimate be increased by 25% to \$50.00/LF.

**WCE Total Estimated Construction Costs w/ Soft Costs = \$591,785.00**  
(PFFP Total Estimated Construction Costs w/ Soft Costs = \$532,145.00)

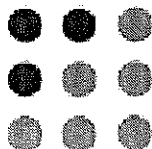
Phone  
(916) 985-1870

**Permanent School Water Improvements**

Fax  
(916) 985-1877

The proposed cost of the 12" domestic water line (including fittings) is low. EID will require PVC C900 CL150 water pipe which is currently priced at \$65.00/LF for just the pipe material. The PFFP estimate shows a total cost, including installation, of \$60.00/LF. The current installation cost (including material) for a 12" C900 pipe is \$85.00. Because this pipe will have horizontal curvature, EID will also require high deflection couplings at joints. We suggest using an estimate of \$100/LF of pipe installed.

Email  
wce@wceinc.com



The 12" gate valve cost of \$1,200.00/ea is also low. EID will require the flanged gate valves which are much more costly. We estimate the current rate for a 12" flanged gate valve to be \$5,500.00.

## Exhibit F

WCE Total Estimated Construction Costs w/ Soft Costs = **\$348,326.00**  
(PFFP Total Estimated Construction Costs w/ Soft Costs = \$207,206.40)

### Permanent School Sewer Improvements

We take no exceptions to the estimate as provided by the PFFP.

(PFFP Total Estimated Construction Costs w/ Soft Costs = \$150,782.70)

### Wetland Mitigation

The Specific Plan did not include a cost for possible wetland mitigation. From an aerial view of the area it looks like the future alignment of Silver Dove Way will be crossing through an existing drainage channel. This may be considered a wetlands and permitting/mitigation with the Army Corp of Engineers will be required. An Army Corp permitting/mitigation cost should be worked into the estimate.

### Right of Way/Easements

Table B-1 in the Specific Plan estimates all of the required right of way and easement costs associated with Silver Dove Way. These costs should be added to the utility construction estimate.

### Hard Rock

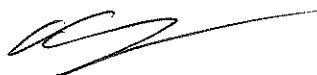
During road and utility excavation it should be assumed that hard rock will be encountered. A contingency should be added for possible hard rock removal.

### Inflation

Depending on when the school is constructed, an inflation cost should be worked into the estimate. As an example, over the past 10 years the cumulative rate of inflation is over 25%. An estimated construction start date should be determined and an inflation percentage worked into the estimate.

If you have any questions, please feel free to call me at (916) 985-1870.

Thank you,



Anthony J. Tassano