



**Stantec**

**ECO:LOGIC**  
ENGINEERS · CONSULTANTS

# City of Live Oak

## AB 1600 Fee Update

March 2011

*Prepared for*  
City of Live Oak

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## Appendix A: Transportation Costs provided by AECOM

## Executive Summary

The City of Live Oak (the“City”) has recently completed an update of the City’s General Plan (‘May 2010’). The General Plan anticipates considerable growth in population over the next 20 years. As the City grows, the services it provides will also need to grow to serve future development. The City of Live Oak charges development impact fees (AB 1600 fees) to new development to pay for public facilities that will benefit these users.

The development impact fees analyzed in this report include the following facility elements:

- Transportation (roads and signals)
- Public Safety (police and fire)
- General Government (general and public works/corp yard)
- Parks and Recreation (parks, recreation, and community centers)

The storm drainage analysis and fee are also incorporated into this document; however, the analysis and fee calculation was performed by West Yost & Associates and HF&H Consultants.

The City has also previously charged a development impact fee for water and sewer infrastructure benefiting future development. This fee is planned to be incorporated into the water and sewer improvements connection fees per Government Code Section 66013. ECO:LOGIC prepared a separate memo on the water and sewer connection fees detailing the methodology used to calculate the revised connection fees in November 2009.

### 1.1 PURPOSE

The purpose of this study is to update the City of Live Oak AB 1600 Fees and establish the nexus between projected new development in the City of Live Oak and additional capital facilities needed to serve the new development through buildout of the General Plan. This nexus will serve as the basis for requiring development impact fees under AB 1600 legislation, as codified by California Government Section 66000 *et seq.* This code section sets forth the procedural requirements for establishing and collecting development impact fees. These procedures require that “a reasonable relationship, or nexus, must exist between a governmental exaction and the purpose of the condition.” Specifically, each local agency imposing a fee must:

- Identify the purpose of the fee;
- Identify how the fee is to be used;
- Determine how a reasonable relationship exists between the fee’s use and the type of development project on which the fee is imposed;

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- Determine how a reasonable relationship exists between the need for the public facility and the type of development project on which the fee is imposed; and,
  - Demonstrate a reasonable relationship between the amount of the fee and the cost of public facility or portion of the public facility attributable to the development on which the fee is imposed.

The development fees to be collected for each land use type are calculated based upon the proportionate share of the total facility use that each land use represents.

## 1.2 SUMMARY OF FINDINGS

Based on the analysis contained in this study, the following major findings were reached:

- In order to maintain existing levels of service for transportation facilities, police, fire, government buildings, parks, community centers and storm drainage, the City of Live Oak will need to construct or acquire capital facilities to serve new development through buildout of the General Plan. In addition, the increase in population triggers the need for recreation facilities (i.e., a community center/gymnasium, an aquatic center and skateboard park) that are not currently available within the City. The AB 1600 Fees are necessary to fund the cost of these capital facilities that benefit new development within the City. Total improvements costs are estimated at \$615 million as shown in Table 1-1.
- The AB 1600 Fees includes an administrative cost component of two percent (2.0%). The cost to administer the fee program includes a periodic update of the Nexus Study, and the administrative costs associated with fee collection and accounting.
- For certain fee components, it is assumed that debt financing will be necessary to construct the facilities to meet level of service standards and/or service population thresholds. A financing cost component is included for these fees. This is discussed in greater detail in Section 3.

Table 1-2 on the following page summarizes the calculated fees for each of the public facility fee elements.

## 1.3 ORGANIZATION OF REPORT

The report is divided into eight chapters, including this Executive Summary. **Section 2** describes the future development within the City of Live Oak. **Section 3** describes the fee calculation methodology for each of the fee elements. **Section 4** provides the fee calculations for the general government facilities element. **Section 5** provides the fee calculations for the public safety facilities element. **Section 6** provides the fee calculations for the parks, recreation and community center facilities element. **Section 7** provides the fee calculations for the transportation element. **Section 8** includes a discussion of the implementation of the fees.

**Appendix A** includes the tables of transportation costs provided by AECOM.

Table 1-1  
**Summary of AB1600 Nexus Study Facilities Costs**

Item	Total Costs 2010\$
<b><u>Infrastructure</u></b>	
<b>Transportation</b>	
Class I Bike Paths [3]	\$3,405,000
Sinnard Avenue Overcrossing	\$11,520,000
Coleman Road At-Grade Intersection	\$6,515,000
Arterials (not inc. Hwy 99)	\$36,332,609
Major Collectors	\$49,720,000
Minor Collectors	\$287,948,840
<b>Total Transportation</b>	<b>\$395,441,449</b>
<b><u>Public Services</u></b>	
<b>Fire</b>	
Fire Stations	\$13,656,425
Vehicles/Trucks	\$3,784,698
<b>Total Fire</b>	<b>\$17,441,123</b>
<b>Police</b>	
Police Stations	\$3,896,912
Vehicle/Equipment	\$2,397,480
<b>Total Police</b>	<b>\$6,294,392</b>
<b>City Administration</b>	
General Government	\$12,975,151
Public Works/Corpyard	\$6,569,989
<b>Subtotal City Administration</b>	<b>\$19,545,140</b>
<b>Park &amp; Recreation</b>	
Active Parks	\$23,873,962
Passive Parks	\$7,884,662
Recreation Facilities	\$2,179,000
Community Center	\$8,155,366
<b>Subtotal Park &amp; Recreation</b>	<b>\$42,092,989</b>
<b>TOTAL IMPROVEMENT COSTS</b>	<b>\$480,815,093</b>

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**Table 1-2  
Summary of AB1600 Calculated Fees**

Land Use	Public Safety			General Government		Parks, Recreation, & Community Center		
	Transportation	Fire	Police	General	CorpYard	Parks	Recreation	Community Center
<b>Residential</b>								
	per Unit							
Single Family	\$3,010.09	\$1,687.61	\$609.05	\$1,178.03	\$635.71	\$3,262.96	\$224.38	\$857.46
Duplex (per unit)	\$2,867.87	\$1,205.43	\$435.03	\$841.45	\$454.08	\$2,330.68	\$160.27	\$612.47
Multi Family (per unit)	\$2,298.99	\$1,084.89	\$391.53	\$757.30	\$408.67	\$2,097.62	\$144.24	\$551.23
<b>Non-Residential</b>								
	per 1000 Sqft							
Office	\$3,641.87	\$287.01	\$103.58	\$200.34	\$108.11	\$138.73	\$9.54	\$0.00
Commercial	\$14,197.00	\$355.17	\$128.18	\$247.93	\$133.79	\$171.68	\$11.81	\$0.00
Industrial	\$2,305.52	\$355.17	\$128.18	\$247.93	\$133.79	\$171.68	\$11.81	\$0.00
Warehouse	\$1,640.66	\$149.48	\$53.95	\$104.35	\$56.31	\$72.26	\$4.97	\$0.00

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**Table 1-3  
Comparison of AB1600 Calculated Fees with Existing Fees per EDU**

	Per Equivalent Dwelling Unit	
	Existing Fee	Calculated Fee
Transportation	\$2,741.38	\$3,010.09
Fire	\$834.41	\$1,687.61
Police	\$625.22	\$609.05
General Admin	\$1,576.48	\$1,178.03
Public Works/Corp Yard	\$358.29	\$635.71
Parks & Recreation	\$2,404.34	\$3,487.34
Community Center	\$373.37	\$857.46
<b>Total</b>	<b>\$8,913.49</b>	<b>\$11,465.28</b>

## City of Live Oak and Future Development

The City of Live Oak is located in the Sacramento Valley in the northern portion of Sutter County, approximately 10 miles north of Yuba City, the county seat. The City is situated between the Sutter Buttes to the west, and the Feather River to the east, the Butte-Sutter County boundary to the north, and the unincorporated areas of Sutter County to the south.

The town of Live Oak was first settled in 1866 and was named for the beautiful groves of oak trees. With the construction of the Butte County Canal, agricultural practices flourished around Live Oak. Throughout its history, the northern Sacramento Valley has been a primarily agricultural area, as it still is. However, urban growth is changing the metropolitan centers of the valley, particularly in areas near Sacramento, which is the closest metropolitan area to Live Oak.

Population, employment and housing unit general assumptions are summarized in Table 2-1.

In 2000, the population of the City was estimated at approximately 6,229, according to the United States Census. In January 2010, the California Department of Finance (DOF) estimated the City's population had grown to 8,791, representing approximately 3.5% growth per year over the last decade.

The City's 2030 General Plan estimates that City population will range from 45,000 to 53,000 at buildout of the General Plan. This study assumes the lower range of population growth at 45,000. This represents significant population growth for the City, when compared to historical growth patterns. However, the facility needs are based on buildout, and it may be that the time frame for collecting the fees and building the capital improvements takes longer than the 20 year buildout time frame that is projected by the General Plan.

Ultimately, the City will need to stage the acquisition or construction of improvements with actual growth within the City.

### 2.1 NEXUS STUDY SERVICE POPULATION

The service population represents the basis for distributing the facility costs and calculating the fee for these facilities. For the majority of the fees the service population is assumed to be all future residents plus 24 percent of future employees. The percentage of employees that equal one resident is based on residents having access to facilities 168 hours (24 times 7) per week, and employees having access to facilities 40 hours per week.



For parks and recreation facilities, the service population is all future residents plus 6 percent of future employees. The percentage of use by employees is calculated as 2 hours per day, 5 days per week (total 10 hours per week out of 168 hours).

Community center facilities costs are only allocated to residential users. Service population factors are also shown in Table 2-1.

**Table 2-1  
General Assumptions**

<b>Assumptions</b>	<b>Note</b>	
<b>Nexus Study Time Horizon:</b>	<b>2010-2030</b>	<b>2030 General Plan</b>
<b>2010 Demographics</b>		
Existing Population:	8,791	2010 Department of Finance Schedule E-1
Existing Housing Units:	2,423	Estimated
Existing Employees in Live Oak:	900	Survey, City of Live Oak
People per Housing Unit	3.63	2010 Department of Finance Schedule E-5a
<b>GP Buildout Projected Demographics</b>		
Projected Total Population at Buildout:	45,000	2030 General Plan
Projected Housing Units at Buildout:	17,000	2030 General Plan
Projected Employees in Live Oak:	13,700	2030 General Plan
<b>Growth Projection</b>		
Projected Growth in Population:	36,209	
Projected Growth in New Housing Units:	14,577	
Project Additional Employees in Live Oak:	12,800	
<b>Employee to Resident Ratios</b>		
Employee Resident Equivalent - <i>All Fees except Parks, Recreation and Community Center Fees</i>	0.24	40 out of 168 Potential Hours of Use per Week
Employee Resident Equivalent - <i>Parks and Recreation Fees</i>	0.06	10 out of 168 Potential Hours of Use per Week

## Section 3

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# Fee Methodology

Section 66000 of the Government Code requires that a reasonable relationship exists between the need for public facilities and the type of development on which a fee is imposed. The need for public facilities is related to the level of service demanded, which varies in proportion to the number of persons served that a particular land use type generates.

The primary fee methodology used in this report is based on a level of service analysis. Using the information provided in the City's 2030 General Plan, as well as information gathered by the City of Live Oak from various City Departments, ECO:LOGIC/Stantec was able to determine the current level of service provided by each fee element.

This methodology assumes that at a minimum the City will continue to provide the same level of service in the future as is currently provided today to existing residents.

In some cases, a higher level of service may be desired or designated as a goal of the City's in its General Plan, such as in parks for example. In those instances, the City will need to rely on other sources of funds to bring the current level of service up to the targeted standard. Future user fees can not be used to fund existing deficiencies for fee elements.

After the level of service for each fee component was determined, the facilities needs list was compiled. The facility needs consist of capital facilities (primarily buildings calculated on a square foot basis) and related long term improvements such as land acquisition, capital equipment (e.g., IT equipment), and vehicles (e.g., fire trucks). Once the facility needs were assessed, ECO:LOGIC/Stantec estimated the costs for the facility improvements. Costs were estimated using the following sources of data:

- Survey of like facilities constructed by other surrounding jurisdictions
- Other AB 1600 Fee Studies (e.g., Yuba City, Ceres)
- Other public financing planning documents

Facility cost estimates were inflated from the year in which they were determined to 2010 dollars for use in this analysis. The 20-City ENR construction cost index was used. The cost inflation factors are shown in Table 3-1.

Table 3-1  
Cost Inflaters

ENR Construction Cost Index				
Year	20-City Index	Inflation Factor (to 2010)	San Francisco Index	Inflation Factor (to 2010)
	<i>March to March</i>		<i>March to March</i>	
2005	7,309	1.19	8,227	1.19
2006	7,692	1.13	8,444	1.16
2007	7,856	1.10	9,103	1.07
2008	8,109	1.07	9,150	1.07
2009	8,534	1.02	9,758	1.00
2010	8,671	1.00	9,756	1.00

Source: ENR

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For certain fee components, for which it is anticipated fee revenues will be insufficient to pay for timely construction of facilities, debt financing was assumed. The costs for financing the facilities were added to the total improvements cost estimate.

### 3.1 CALCULATING THE FEE

Facility costs were spread to each fee category based on the population served as discussed in the preceding section. The population served, for all categories except parks, recreation and the community center, includes the future city population and 24% percent of future employees. The community center facilities were allocated based on population alone. Parks and recreation facilities were allocated on future city population and 6% of future employees.

Many of the fee elements include a financing factor. Project financing can more than double the project cost as shown below in a general example:

Table 3-2  
General Example of Cost Increase due to Interest Paid over Life of Loan

Project Cost	\$10,000,000
Interest Rate	6%
Term of Loan/Bond	30
Annual Payment	\$726,489
Total Paid over Life of Loan	\$21,794,673
Amount of Interest Paid	\$11,794,673

At this point in time the City of Live Oak does not have a specific financing plan in place for these facility improvements but does foresee the need to borrow money in order to move forward with projects over the next five to ten years. Therefore, for most facilities it was assumed that the City would borrow money for approximately one-third of project costs. As such, the overall project costs were assumed to increase by one-third.

The total cost of the facilities (including interest costs where applicable) was divided by the population served to determine the cost per future person served. The cost per future person served was then multiplied by the appropriate persons served allocation factor for each land use category. As is standard practice for development impact fee programs, a two percent (2%) factor was added to the fee to cover the cost of administrating the fee program.

### 3.2 LAND USE CATEGORIES

Both residential and non-residential land use categories may be subject to the fee components. Residential land uses were separated into single family and multi-family, and single family further differentiated into low density and medium density homes. Non-residential land use categories include office, commercial, and industrial.

Table 3-2 summarizes the land use categories and persons served allocation factors applicable to each category used to allocate the total fee component costs (excluding transportation). The people per household (PPH) figures shown in Table 3-2 reflect lower factors than actual or historical PPH factors. The lower factors correspond to the assumptions used in the 2030 General Plan and reflect assumptions that PPH factors will decline over time.

Table 3-3  
Land Use Categories and Allocation Factors

Land Use	Allocation Factors	Notes
<b>Residential</b>		
	<b>Persons per Unit / Household</b>	
Single Family	2.80	
Duplex (per unit)	2.00	
Multi Family (per unit)	1.80	
<b>Non-Residential</b>		
	<b>Employees per 1000 Sqft</b>	
Office	2.00	500 square feet per employee
Commercial	2.48	Industry avg. 404 sq ft per employee
Industrial	2.48	Industry avg. 404 sq ft per employee
Warehouse	1.04	Industry avg. 960 sq ft per employee

Source: AECOM

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For residential categories, a single family unit is one unit, a duplex is two units, and multi-family would be 3 units or more. Mobile homes would also fall into the residential category. If a

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mobile home is a single home on a lot, it will be treated as a single family unit. If the mobile homes are in a mobile home park, they would be treated as a duplex unit.

The transportation fee element has different allocation factors, based on trip rates, as discussed in detail in Section 7.

Section 4

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## General Government Facilities

The General Government Facilities Element includes those facilities used by the City of Live Oak to provide basic administration and maintenance services, exclusive of public safety services. In order to serve future development the City has identified the need for new public general government facilities, which includes city administration facilities and public works/corpyard facilities.

### 4.1 GENERAL GOVERNMENT AB 1600 NEXUS FINDINGS

The following provides the AB 1600 Nexus findings in justification of the fees for General Government.

#### AB 1600 Nexus Test - General Government Facilities

Identify the Purpose of the Fee	To fund general government facilities and capital costs for administration, public works and maintenance purposes
Identify the Use of Fee	To purchase or construct general government facilities including those for administration and public works and that are generally used to provide government services
Determine how there is a reasonable relationship between the need for the public facility, the use of the fee and the type of development project on which the fee is imposed	New residential and non-residential development in the City and the City's SOI will generate additional residents and employees who will increase the demand for City services including public works and general government functions. Population and employee growth has a direct impact on the need for government services and facilities, thus a reasonable relationship exists between new development and the public works/general government facilities, which will have to be acquired, expanded, or constructed to meet increased demand. Fees collected from new development will be used exclusively for General Government Facilities as identified in Table 4-2 and Table 4-3.

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## **4.2 CITY ADMINISTRATION FACILITIES**

The City has recently adopted a new General Plan that plans for growth through 2030. As the City grows, general government facilities will need to be expanded in order to maintain the same level of service as is currently provided to existing residents. The City does not currently have a list of general government facilities planned to be constructed; rather, this study projects future needs based on square feet per employee using current City level of service standards.

### **4.2.1 FACILITY COST ASSUMPTIONS**

As the City does not have specific facilities identified for construction or bid cost information for these facilities, the cost to build these future facilities must be estimated. Several sources of information were used to estimate the per square foot cost to construct general government facilities as shown in Table 4-1.

### **4.2.2 FACILITY NEEDS – CITY ADMINISTRATION**

The facility needs for city administrative capital improvements is based on the current level of service standard that the City provides to existing residents. The current service population is comprised of both population and employees as described in Section 2.1 and is estimated at 9,005 for 2010.

There are currently 10 full time equivalent City administrative employees. By dividing the current service population by 1,000 and then dividing the current employees by the adjusted service population a level of service standard of 1.11 employees per 1,000 service population is determined as shown in Table 4-2.

Future additional City administrative employees necessary to service the projected service population is projected at 43.6 based on the future service population of 39,257 as shown in Table 4-2.

The City currently has approximately 640 square feet of building per full time equivalent (FTE) employee capacity. Using this same service standard to project the needed additional space in the future, the City will need to build approximately 27,899 square feet of additional space.

Table 4-2 also shows the estimated cost of those facilities. Using the cost per square foot of \$340 as discussed above, plus \$9.44 per square foot for equipment /furnishings, which is based on the value of equipment currently owned by the City. The total estimated cost to build the government facilities is approximately \$10.78 million.

Additional costs for the next General Plan update and the AB1600 Fee update are also included in the cost computation. These costs are spread based on the current service population versus the service population at buildout.

The total costs allocated to new development for General Government facilities is \$12.98 million.

Table 4-1  
**Facility Cost Assumptions – General Government**

General Government Facilities	2005 Live Oak AB 1600 Study		2007 Yuba City AB 1600 Fee Update [1]		2006 Placer Vineyards Public Facilities Financing Plan [2]		City of Lincoln [3]	2010 Live Oak Nexus Study Assumption
	<i>Study Value</i>	<i>Inflated Value</i>	<i>Study Value</i>	<i>Inflated Value</i>	<i>Study Value</i>	<i>Inflated Value</i>		<i>Study Value</i>
	2005\$	2010\$	2007\$	2010\$	2006\$	2010\$		2010\$
Administration	\$190.00	\$225.41 per sqft	\$320.00	\$353.20 per sqft	\$350.00	\$394.55 per sqft	\$384.00	\$340.00 per sqft
Public Works/Corpyard	n/a	n/a	\$320.00	\$353.20 per sqft	\$150.11	\$169.22 per sqft		\$270.00 per sqft

Source: City of Live Oak ; Stantec

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[1] Prepared by Goodwin Consulting Group, estimated costs for new fire station for southwest portion of SOI (\$7.2 million, 8,000 sqft)

[2] Prepared by Economic and Planning Systems, Inc. Placer Vineyards is a proposed development in South Placer County. Cost estimates prepared by Citygate for Placer County..

[3] Lincoln City Hall (\$23M, 60,000sq ft).



Table 4-2  
City Administration Facility Needs

	Year:	2010	GP Buildout	Note
<b><u>Population Assumptions</u></b>				
Population		8,791	45,000	
Employees		900	13,700	
1 Employee = [0.24] Residents		214	3,262	
<b>Employee Population Equivalent (Service Population)</b>		<b>9,005</b>	<b>48,262</b>	
<b><u>Basis</u></b>				
Current Number of Gen. Government Employees		10		
Level of Service Standard		1.11	1.11	Employees per 1,000 population
Future Service Population (2030 less 2010 Service Pop.)			39,257	
Projected Additional Employees			43.6	
<b><u>Estimated Cost of City Administration Facilities</u></b>				
Total New Acres			20.6	0.4725 acres per Employee
Total New Sqft			27,899	640 sqft per employee, based on existing sqft/employee capacity
Cost per Acre			\$50,000	Table 4-4
Cost per Sqft			\$340	Table 4-1
Cost of Equipment per Sqft			\$9.44	Based on 2010 Equipment Value
<b>Total Estimated Administration Facility Costs</b>			<b>\$10,778,949</b>	
<b>Other Costs</b>	<i>cost share =&gt;</i>	19%	81%	Based on distribution of current to future service population
General Plan Update	\$2,650,000	\$494,469	\$2,155,531	City of Live Oak 2009 cost, escalated (2%, 5 years)
AB 1600 Fee Update	\$50,000	\$9,330	\$40,670	Assumed
Subtotal Other Costs		<b>\$503,798</b>	<b>\$2,196,202</b>	
<b>Total Estimated General Government Costs</b>			<b>\$12,975,151</b>	

Source: City of Live Oak; Stantec

"gen\_imp"

### 4.2.3 FACILITY NEEDS – PUBLIC WORKS/CORP YARD

As with the city administrative facilities, the public works facilities are also based on existing City service levels. The current service population is comprised of both population and employees as described in Section 2.1 and is estimated at 9,005 for 2010.

There are currently ten full time equivalent City public works' employees. By dividing the current service population by 1,000 and then dividing the current employees by the adjusted service population a level of service standard of 1.11 employees per 1,000 service population is determined, as shown in Table 4-3.

With this current service standard a future level of employees can be projected based on the future service population of 39,257 as shown in Table 4-3. It is projected that an additional 43.6 city public works' employees will be needed to service the buildout population.

**Table 4-3  
Public Works/Corp Yard Facility Needs**

Year:	2010	GP Buildout	Note
<b>Population Assumptions</b>			
Population	8,791	45,000	
Employees	900	13,700	
1 Employee = [0.24] Residents	214	3,262	
<b>Employee Population Equivalent</b>	<b>9,005</b>	<b>48,262</b>	
<b>Basis</b>			
Current Number of Public Works Employees	10		Per City of Live Oak Employees per 1,000 population
Level of Service Standard	1.11	1.11	
Future Service Population (2030 less 2010 Service Pop.)		39,257	
Projected New Employees		43.6	
<b>Estimated Cost of CorpYard Facilities</b>			
Total New Acres		16.48	0.4725 acres per Employee
Total New Sqft		13,078	300 sqft per Employee
Cost per Acre		\$50,000	Table 4-4
Cost per Building Sqft (Including Contingency & Mngmt Fee)		\$270	Table 4-1
Cost of Equipment per Square Foot		\$2.71	Per City of Live Oak
<b>Total Estimated Corp Yard Costs</b>		<b>\$4,390,346</b>	
Vehicles		\$2,179,643	Assumes 1 vehicle per Employee @ \$50,000
<b>Total Estimated Public Works CorpYard Improvements</b>		<b>\$6,569,989</b>	

Source: City of Live Oak; Stantec

"corp\_imp"

The City currently has approximately 300 square feet of building per FTE employee. Using this same service standard to project the needed additional space in the future, the City of Live Oak will need to build approximately 13,078 square feet of additional space.

The City also anticipates that it will need to purchase land for the facilities. There are currently 0.4725 acres of public works facilities per employee. Using this same service level, it is anticipated that the City will need to acquire approximately 16.48 acres. The cost per acre is estimated at \$50,000, which is the median price of vacant land listings in the region as of May 2010. Land listings are shown in Table 4-4.

The development cost also includes equipment / furnishings at \$2.71 per square foot, which is based on current City inventory of IT equipment. In addition, it is anticipated that the City will need to purchase work trucks or vehicles to provide the public works services. The analysis assumes one vehicle per employee at a cost of \$50,000 per vehicle.

Summing all of these components gives an estimated public works/corp yard improvement cost of \$6.57 million as shown in Table 4-3.

Table 4-4  
**Live Oak and Surrounding Region Land for Sale Listings**

General Location	May 2010		
	acres	price	price per acre
Live Oak	32.38	\$638,708	\$19,725
Live Oak	15.78	\$750,000	\$47,529
Live Oak	7.31	\$695,000	\$95,075
Yuba City	2.25	\$100,000	\$44,444
Yuba City	37.00	\$1,295,000	\$35,000
Yuba City	7.00	\$1,900,000	\$271,429
Yuba City	1.21	\$550,000	\$454,545
<b>Median price per acre</b>			<b>\$47,529</b>
<b>Median price/acre rounded</b>			<b>\$50,000</b>

Sources: *Homes.com and Landwatch.com* "land price"

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### 4.3 CALCULATED GENERAL GOVERNMENT AB 1600 FEES

The AB 1600 fee is based on a cost per person served. The cost per person served is shown in Table 4-5 for the general government facilities (City Administration and Public Works). The total facility cost computed in Tables 4-2 and 4-3 are divided by the number of persons served to determine the cost per future person served.

Table 4-5  
**General Government Cost Per Person Served**

<b>Item</b>	<b>Value</b>
Total City Administration Facility Costs	\$12,975,151
Assumed Improvements Costs Debt Financed [1]	\$9,749,068
Estimated Financing Costs [2]	\$3,217,192
<b>Total Improvement Costs with Financing Costs</b>	<b>\$16,192,343</b>
Future Service Population	39,257
<b>Total Cost per Person Served</b>	<b>\$412.47</b>
Employee to Resident Factor	0.24
<b>Cost per Employee</b>	<b>\$98.21</b>

Source: Stantec

"gen\_pp"

[1] Excludes land acquisition, General Plan, and Fee Update costs.

[2] The financing costs are assumed to be one-third of total costs as discussed in Section 3.

For non-residential land uses the cost per future person served is converted to a cost per employee based on the relevant employee to resident factor.

Table 4-6 shows the residential and non-residential development impact fee for City Administration facilities. For residential land uses the cost per future person served is multiplied by the persons per household factor. A two percent (2%) administration fee is added to the fee to account for administrative costs of running the development impact fee program by the City.

For non-residential uses the number of employees per 1,000 square feet is multiplied by the cost per employee from Table 4-5 to determine the cost per 1,000 square feet. A two percent (2%) administration fee is added to the cost per 1,000 square feet to determine the development impact fees for those non-residential land uses.

Tables 4-7 and 4-8 show these calculations for the Public Work/Corp Yard.

Table 4-6  
**City Administration Development Impact Fee**

Land Use	Allocation Factors	Cost per Future Person or Employee	Cost per Household or 1000 Sqft	Admin. Fee 2%	Impact Fee per Unit or 1000 Sqft
<b>Residential</b>					per Unit
	Persons per Household				
Single Family					
Low Density	2.80	\$412.47	\$1,154.93	\$23.10	<b>\$1,178.03</b>
Medium Density	2.00	\$412.47	\$824.95	\$16.50	<b>\$841.45</b>
Multi Family	1.80	\$412.47	\$742.45	\$14.85	<b>\$757.30</b>
<b>Non-Residential</b>					per 1000 Sqft
	Employees per 1000 Sqft				
Office	2.00	\$98.21	\$196.42	\$3.93	<b>\$200.34</b>
Commercial	2.48	\$98.21	\$243.07	\$4.86	<b>\$247.93</b>
Industrial	2.48	\$98.21	\$243.07	\$4.86	<b>\$247.93</b>
Warehouse	1.04	\$98.21	\$102.30	\$2.05	<b>\$104.35</b>

Source: Stantec

"gen\_fee"

Table 4-7  
**Public Works/Corp Yard Cost Per Person Served**

Item	Value
Total Public Works Facility Costs	\$6,569,989
Estimated Financing Costs [1]	\$2,168,097
<b>Total Improvement Costs with Financing Costs</b>	<b>\$8,738,086</b>
Future Service Population	39,257
<b>Total Cost per Person Served</b>	<b>\$222.59</b>
Employee to Resident Factor	0.24
<b>Cost per Employee</b>	<b>\$53.00</b>

Source: Stantec

"corp\_pp"

[1] The financing costs are assumed to be one-third of total costs as discussed in Section 3.

Table 4-8  
Public Works/Corp Yard Development Impact Fee

Land Use	Allocation Factors	Cost per Future Person or Employee	Cost per Household or 1000 Sqft	Admin. Fee 2%	Impact Fee per Unit or 1000 Sqft
<b>Residential</b>					per Unit
	Persons per Household				
Single Family					
Low Density	2.80	\$222.59	\$623.25	\$12.46	<b>\$635.71</b>
Medium Density	2.00	\$222.59	\$445.18	\$8.90	<b>\$454.08</b>
Multi Family	1.80	\$222.59	\$400.66	\$8.01	<b>\$408.67</b>
<b>Non-Residential</b>					per 1000 Sqft
	Employees per 1000 Sqft				
Office	2.00	\$53.00	\$105.99	\$2.12	<b>\$108.11</b>
Commercial	2.48	\$53.00	\$131.17	\$2.62	<b>\$133.79</b>
Industrial	2.48	\$53.00	\$131.17	\$2.62	<b>\$133.79</b>
Warehouse	1.04	\$53.00	\$55.21	\$1.10	<b>\$56.31</b>

Source: Stantec

"corp\_fee"

## Public Safety Element

The Public Safety Facilities Element includes those facilities used by the City of Live Oak to provide police and fire services. In order to serve future development the City has identified the need for new public safety facilities, which includes fire and police buildings and related equipment (including vehicles).

### 5.1 PUBLIC SAFETY AB 1600 NEXUS FINDINGS

The following table provides the AB 1600 Nexus findings in justification of the fees for fire and police services.

**AB 1600 Nexus Test – Public Safety Facilities**

Identify the Purpose of the Fee	To fund fire and police facilities and capital costs
Identify the Use of Fee	To purchase or construct fire and police facilities including stations, capital equipment and vehicles that are generally used to provide fire and police protection services
Determine how there is a reasonable relationship between the need for the public facility, the use of the fee and the type of development project on which the fee is imposed	New residential and non-residential development in the City and the City's SOI will generate additional residents and employees who will increase the demand for City services including fire and police protection. Population and employee growth has a direct impact on the need for fire and police services and facilities, thus a reasonable relationship exists between new development and the fire and police protection facilities, which will have to be acquired, expanded, or constructed to meet increased demand. Fees collected from new development will be used exclusively for fire and police facilities as identified in Table 5.2 and Table 5-3.

### 5.2 PUBLIC SAFETY FACILITIES

The City has recently adopted a new General Plan that plans for growth through 2030. As the City grows, it will need to expand fire and police protection facilities in order to maintain the same level of service as is currently provided to existing residents. The City does not currently have a list of fire and police facilities to be constructed; rather, this study projects future needs based on square feet basis using current City level of service standards.

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### **5.2.1 FACILITY COST ASSUMPTIONS**

As the City does not have specific facilities identified for construction or bid cost information for these facilities, the cost to build these future facilities must be estimated. Several sources of information were used to estimate the per square foot cost to construct general government facilities as shown in Table 5-1.

### **5.2.2 FACILITY NEEDS – FIRE PROTECTION**

The facility needs for city fire improvements is based on the current level of service standard that the City provides to existing residents. The current service population is comprised of both population and employees as described in Section 2.1 and is estimated at 9,005 for 2010.

There are currently four full time equivalent fire fighters. By dividing the current service population by 1,000 and then dividing the current fire fighters by the adjusted service population a level of service standard of 0.44 employees per 1,000 service population is determined as shown in Table 5-3.

With this current service standard a future level of service (fire fighters) can be projected based on the future service population of 39,257 as shown in Section 2 of Table 5-3. An additional 17.44 firefighters are estimated as necessary to service the future City population.

The City currently has four fire fighters per station (one). The current fire station is 6,900 sq ft. Using this same service standard to project the needed additional space in the future, the City of Live Oak will need to build approximately 30,079 square feet of additional space.

Table 5-2 also shows the estimated cost of those facilities. Using the cost per square foot of \$450 as discussed above, the total estimated cost to build the additional fire stations would be approximately \$13.66 million. This cost estimate includes land acquisition of approximately 2.42 acres at \$50,000 per acre. In addition, the cost of vehicles and fire trucks at these new stations is estimated at \$3.78 million.



Table 5-1  
**Facility Cost Assumptions – Public Safety**

Public Safety Facilities	2007 Yuba City AB 1600 Fee Update [1]		2008 City of Ceres AB 1600 Fee Study [2]		2006 Placer Vineyards Public Facilities Financing Plan [3]		Other Cities			2010 Live Oak Nexus Study Assumption	
	Study Value	Inflated Value	Study Value	Inflated Value	Study Value	Inflated Value	Lincoln [4]	Roseville [5]	Yuba City [6]	Assumed Value	
	2007\$	2010\$	2008\$	2010\$	2006\$	2010\$				2010\$	
Fire Station	n/a	n/a per sqft	\$375	\$401 per sqft	n/a	n/a	\$438 per sqft	\$391 per sqft	\$566 per sqft	\$450 average, per sqft	
Fire Truck [3]	\$490,000	\$540,834 per truck	\$500,000	\$534,653 per truck	\$490,000	\$552,365 per truck	n/a	n/a	n/a	\$542,620 average, per truck	
Police Station	\$358.87	\$396.10 per sqft	\$300	\$321 per sqft	\$350	\$395 per sqft	n/a	n/a	n/a	\$380 average, per sqft	
Police Vehicle	\$57,000	\$62,913 per car	\$45,000	\$48,119 per car	n/a	n/a	n/a	n/a	n/a	\$55,520 average, per car	

Source: City of Live Oak; Stantec

"safety\_assumps"

[1] Prepared by Goodwin Consulting Group, estimated costs for new fire station for southwest portion of SOI (\$7.2 million, 8,000 sqft)

[2] Prepared by PMC, estimated costs for new fire station (\$3.0 million, 8,000 sqft)

[3] Fire truck is a type I figure engine with equipment.

[4] Actual costs for Fire Stations 33 and 34.

[5] Actual costs for Fire Station 7 (\$3.9 million, 10,000 sqft)

[6] Actual costs for Ohleyer Fire Station (\$5.7 million, 10,100 sqft)

**Table 5-2  
Fire Protection Facility Needs**

Year:	2010	GP Buildout	Note
<b><u>Population Assumptions</u></b>			
Population	8,791	45,000	
Employees	900	13,700	
1 Employee = [0.24] Residents	214	3,262	
<b>Employee Population Equivalent</b>	<b>9,005</b>	<b>48,262</b>	
<b><u>Basis</u></b>			
Level of Service Standard	4	4	Full-time firefighters
	0.44	0.44	Firefighters per 1,000 population
Future Service Population (2030 less 2010 Service Pop.)		39,257	
Projected New Firefighters		17.44	
<b><u>Estimated Cost of Fire Facilities</u></b>			
<b>Projected New Stations</b>		<b>4.36</b>	<b>4 Firefighters per station</b>
Total New Acres		2.42	Assumes 3.5:1 land to building ratio
Total New Sqft		30,079	6900 Sqft. Per Station (Existing)
Cost per Acre		\$50,000	
Cost per Sqft		\$450	Table 5-1
<b>Total Estimated Station Costs</b>		<b>\$13,656,425</b>	
<b><u>Fire Vehicle/Trucks</u></b>			
Projected New Trucks		8.72	2 Trucks per station
Cost per Truck		\$434,096	Table 5-1, reduced by 20% since some vehicles might be support vehicles
<b>Total Estimated Vehicle/Truck Cost</b>		<b>\$3,784,698</b>	
<b>Total Fire Improvements Estimated Costs</b>		<b>\$17,441,123</b>	

"Fire\_imp"

### 5.2.3 FACILITY NEEDS – POLICE SERVICES

The facility needs for city police improvements is based on the current level of service standard that the City provides to existing residents. The current service population is comprised of both population and employees as described in Section 2.1 and is estimated at 9,005 for 2010.

There are currently nine sworn officers. By dividing the current service population by 1,000 and then dividing the current sworn officers by the adjusted service population a level of service standard of 1.00 officers per 1,000 service population is determined as shown in Table 5-4.

The City General Plan puts forth a level of service standard consistent with the County Sheriff level of service of 1.1 officers per 1,000 service population. Using the General Plan level of service standard a future level of service (police officers) can be projected based on the future service population of 39,257 as shown in Section 2 of Table 5-3. It is projected that an additional 43.18 new police officers will be needed to service the City by buildout. However, because there is an existing deficiency, the number of officers for purposes of the cost estimation was scaled back to 42.28 officers.

The City currently has nine officers per station (one). The current police station is 2,160 sq ft. Using this same service standard to project the needed additional space in the future, the City of Live Oak will need to build approximately 10,148 square feet of additional space.

**Table 5-3  
Police Protection Facility Needs**

Year:	2010	GP Buildout	Note
<b>Population Assumptions</b>			
Population	8,791	45,000	
Employees	900	13,700	
1 Employee = [0.24] Residents	214	3,262	
<b>Employee Population Equivalent</b>	<b>9,005</b>	<b>48,262</b>	
<b>Basis</b>			
<b>Level of Service Standard</b>			
Current Sworn Officers	9		
Sworn Officers per 1,000 Population	1.00	1.10	General Plan Standard
Future Service Population (2030 less 2010 Service Pop.)		39,257	
Current/Projected New Officers	9.00	43.18	
Adjustment for Existing Deficiency / Bringing Existing LOS Up			
Current/Projected New Officers	9.90	42.28	
<b>Estimated Cost of Police Facilities</b>			
<b>Projected New Stations</b>			
Total New Acres	0.02	0.82	Assumes 3.5:1 land to building ratio 240 usable sqft for each officer
Total New Sqft	216	10,148	
<b>Cost Assumptions</b>			
Cost per Acre		\$50,000	
Cost per Sqft		\$380	Table 5-1
Cost per Vehicle		\$55,520	Table 5-1
<b>Estimated Costs</b>			
	<i>existing deficiency</i>	<i>future users</i>	
Station Costs	\$82,948	\$3,896,912	based on sqft
Vehicle Costs	\$49,968	\$2,397,480	1 officer per vehicle
<b>Total Police Improvements Estimated Costs</b>		<b>\$6,294,392</b> <b>\$132,916</b>	Allocated to Future Users Allocated to Existing Users

*"Police\_imp"*

Table 5-3 also shows the estimated cost of those facilities. Using the cost per square foot of \$380 to build the additional police stations as well as the estimated cost for additional police vehicles the total estimated cost is approximately \$6.29 million. This cost excludes existing deficiency cost of approximately \$132,916 that would bring the current level of serve up to 1.1 police officers per 1,000 service population.

### 5.3 CALCULATED PUBLIC SAFETY AB 1600 FEES

The AB 1600 fee is based on a cost per person served. The cost per person served is shown in Table 5-4 for fire protection. The total facility cost computed in Tables 5-2 plus financing costs are divided by the number of persons served to determine the cost per future person served.

For non-residential land uses the cost per future person served is converted to a cost per employee based on the relevant employee to resident factor.

Table 5-5 shows the residential and non-residential development impact fee for fire protection facilities. For residential land uses the cost per future person served is multiplied by the persons per household factor. For non-residential uses the number of employees per 1,000 square feet is multiplied by the cost per employee from Table 5-4 to determine the cost per 1,000 square feet. A two percent (2%) administration fee is added to the fees to account for the City's administrative costs of running the development impact fee program.

Table 5-4  
Fire Protection Cost Per Person Served

Item	Value
Total City Fire Facility Costs	\$17,441,123
Estimated Financing Costs [2]	\$5,755,571
<b>Total Improvement Costs with Financing Costs</b>	<b>\$23,196,693</b>
Future Service Population	39,257
<b>Total Cost per Person Served</b>	<b>\$590.90</b>
Employee to Resident Factor	0.24
<b>Cost per Employee</b>	<b>\$140.69</b>
<hr/>	
Source: Stantec	"fire_pp"

[1] The financing costs are assumed to be one-third of total costs as discussed in Section 3.

Table 5-5  
Fire Protection Facilities Fee

Land Use	Allocation Factors	Cost per Future Person or Employee	Cost per Household or 1000 Sqft	Admin. Fee 2%	Impact Fee per Unit or 1000 Sqft
<b>Residential</b>		Persons per Household			per Unit
Single Family					
Low Density	2.80	\$590.90	\$1,654.52	\$33.09	<b>\$1,687.61</b>
Medium Density	2.00	\$590.90	\$1,181.80	\$23.64	<b>\$1,205.43</b>
Multi Family	1.80	\$590.90	\$1,063.62	\$21.27	<b>\$1,084.89</b>
<b>Non-Residential</b>		Employees per 1000 Sqft			per 1000 Sqft
Office	2.00	\$140.69	\$281.38	\$5.63	<b>\$287.01</b>
Commercial	2.48	\$140.69	\$348.21	\$6.96	<b>\$355.17</b>
Industrial	2.48	\$140.69	\$348.21	\$6.96	<b>\$355.17</b>
Warehouse	1.04	\$140.69	\$146.55	\$2.93	<b>\$149.48</b>

Source: Stantec

"fire\_fee"

Table 5-6 and Table 5-7 show the same calculations for the police protection cost per person served and the police development impact fees by land use.

Table 5-6  
Police Protection Cost Per Person Served

Item	Value
Total Police Facilities Cost	\$6,294,392
Estimated Financing Costs	\$2,077,149
<b>Total Improvement Costs with Financing Costs</b>	<b>\$8,371,542</b>
Future Service Population	39,257
<b>Total Cost per Person Served</b>	<b>\$213.25</b>
Employee to Resident Factor	0.24
<b>Cost per Employee</b>	<b>\$50.77</b>

Source: Stantec

"police\_pp"

[1] The financing costs are assumed to be one-third of total costs as discussed in Section 3.

Table 5-7  
**Police Protection Facilities Fee**

<b>Land Use</b>	<b>Allocation Factors</b>	<b>Cost per Future Person or Employee</b>	<b>Cost per Household or 1000 Sqft</b>	<b>Admin. Fee 2%</b>	<b>Impact Fee per Unit or 1000 Sqft</b>
<b>Residential</b>					per Unit
	Persons per Household				
Single Family					
Low Density	2.80	\$213.25	\$597.10	\$11.94	<b>\$609.05</b>
Medium Density	2.00	\$213.25	\$426.50	\$8.53	<b>\$435.03</b>
Multi Family	1.80	\$213.25	\$383.85	\$7.68	<b>\$391.53</b>
<b>Non-Residential</b>					per 1000 Sqft
	Employees per 1000 Sqft				
Office	2.00	\$50.77	\$101.55	\$2.03	<b>\$103.58</b>
Commercial	2.48	\$50.77	\$125.67	\$2.51	<b>\$128.18</b>
Industrial	2.48	\$50.77	\$125.67	\$2.51	<b>\$128.18</b>
Warehouse	1.04	\$50.77	\$52.89	\$1.06	<b>\$53.95</b>

Source: Stantec

"police\_fee"

## Parks and Recreation, and Community Centers Element

The Parks and Recreation Element of the City’s General Plan identifies land acquisition and improvements in parks and recreation infrastructure to service new residents and employees in the City. These facilities include neighborhood parks, open space areas, and recreation facilities, i.e., an aquatic park/large pool and a skateboard park, which meet the City’s park and recreational needs for the future growth. Additional community center space is also estimated within this fee element.

### 6.1 PARKS AND RECREATION FACILITIES AB 1600 NEXUS FINDINGS

The following table provides the AB 1600 Nexus findings in justification of the fees for the Parks and Recreation Facility Improvements.

**AB 1600 Nexus Test – Parks and Recreation Facilities**

Identify the Purpose of the Fee	To fund park and recreational improvements/ developments for future residents/ non-residents of the City.
Identify the Use of Fee	To construct the parks and recreational improvement/ developments as identified in this section.
Determine how there is a reasonable relationship between the need for the public facility, the use of the fee and the type of development project on which the fee is imposed	New residential and non-residential development in the City and the City’s SOI will generate additional residents and employees who will increase the demand for additional park and recreational facilities. With population and employee growth impacting the demand of the current park and recreational facilities, new facilities and/or improvements to the current facilities will be needed to accommodate the growth. Fees collected from new development will be used exclusively to construct facilities shown in Tables 6-1, 6-2, and 6-3.

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## **6.2 PARKS AND RECREATION IMPROVEMENTS**

As City growth occurs, the demand on current park and recreation facilities and community center space will also grow. Improvements to current facilities and the development of new facilities will be critical to provide adequate space for future residents and non-residents to recreate both actively and passively. The general plan identifies various types of parks and recreational facilities and identifies a framework of how the facilities should serve residents and non-residents of the City.

There were two types of parks identified, active and passive, and additional community center space needed to serve new growth. In addition, the City has identified the need for two recreational facilities for this study. As described in the general plan, active parks are community, neighborhood or pocket parks and passive parks, e.g., parks with minimal amenities, but may include some landscaping. The aquatic park/large pool complex is based on an indoor facility spanning approximately 4 acres. The skateboard park included in this study is estimated at approximately 14,000 square feet in size.

### **6.2.1 FACILITY COST ASSUMPTIONS**

This study is based on the cost per acre for active and passive parks and uses lump sum cost for larger facilities, i.e. large swimming pool and skateboard park. Community center space is based on cost per building square foot. Cost assumptions are shown in Tables 6-1, 6-2, and 6-3 for parks, recreation, and community centers fee components, respectively.

### **6.2.2 FACILITY NEEDS – PARKS**

As stated in previous sections, the need for future parks was based on the minimum service standard set by the City. The current service standard was determined by using the current service population and park acreage. The current service population is 8,845. The City currently has 12 acres of active parks and 22.5 acres of passive parks.

The current service standard was calculated by taking the total park acreage available and dividing it by the service population then divided by 1,000 to determine the number of acres per 1,000 residents. The City's current service standard is 1.36 for active parks and 2.54 for passive parks, as shown in Table 6-1.

As identified in the City's General Plan, the service standard for both active and passive parks is 3.5 acres per 1,000 residents. Currently the City is deficient in active and passive parks; approximately 18.96 acres for active parks and 8.46 acres for passive parks. Per the General Plan standard an additional 129.40 acres of active parks and 129.40 acres of passive parkland should be maintained.



**Table 6-1  
Parks Facility Needs**

Year:	2010	2030	Note
<b>Population Assumptions</b>			
Population	8,791	45,000	
Employees	900	13,700	
1 Employee = [0.06] Residents	54	815	Assumes employees can potentially use facilities 2 hours each working day per week
<b>Employee Population Equivalent</b>	<b>8,845</b>	<b>45,815</b>	
<b>Basis</b>			
<b>Level of Service Standard</b>			
Active	12.00		Total active park acres
Passive	22.50		Total passive park acres
		<i>GP Standard</i>	
Active	1.36	3.50	Acres per 1,000 Residents
Passive	2.54	3.50	Acres per 1,000 Residents
Future Service Population (2030 less 2010 Service Pop.)		36,971	
<b>Future New Park Dev./Facilities</b>			
	<i>Existing Deficiency</i>	<i>To Serve Future Dev.</i>	
Active	18.96	129.40	
Passive	8.46	129.40	
<b>Estimated Cost of Park/Recreation Improvements</b>			
<b>Active Parks (cost per acre)</b>			
Acquisition		\$50,000	Table 4-4 City of Roseville (9 Acres), City of Lincoln (5 parks), Yuba City Study, Placer Vineyards (adjusted to account for 50% less intensity use)
Development		\$134,500	
<b>Total Active Parks</b>		<b>\$184,500</b>	
<b>Passive Parks (cost per acre)</b>			
Acquisition		\$33,333	Assumed to be 2/3 of Active Park Land Acq. 2007 Yuba City Study, inflated
Development		\$27,600	
<b>Total Passive Parks</b>		<b>\$60,933</b>	
<b>Total Costs</b>			
Active Parks		\$23,873,962	
Passive Parks		\$7,884,662	
<b>Total Park Improvement Costs</b>		<b>\$31,758,623</b>	

Source: City of Live Oak; Stantec

"Park\_Imp"

Table 6-1 includes estimated costs to develop parkland. Park development costs include land acquisition and development of land for each active and passive park per acre. Total park improvements are estimated at \$31.76 million (\$23.87 million for active parks, and \$7.88 million for passive parks). This cost excludes existing deficiencies to bring the current level of serve up to 3.5 acres of passive and active parkland per 1,000 service population, which will need to be funded by other City revenue sources or financing.

### 6.2.3 FACILITY NEEDS – RECREATION FACILITIES

There is no current service standard for recreation facilities therefore the swimming pool and skateboard park were included as lump sum costs rather than being estimated on a per acre basis.

Using cost estimates from similar and neighboring jurisdictions, the cost for a large swimming pool was estimated at \$2 million. The skateboard park was estimated to cost \$500,000. Land

acquisition costs were estimated at \$200,000 for the 4-acre parcel. Facility needs and estimated costs are shown in Table 6-2.

Because the recreation facilities will benefit both existing and new residents, new development is only apportioned its share of the total cost, or 81% of the cost. The total recreational facilities costs included in the fee program are \$2.18 million.

**Table 6-2  
Recreation Facility Needs**

Year:	2010	2030	Note
<b>Population Assumptions</b>			
Population	8,791	45,000	
Employees	900	13,700	
1 Employee = [0.06] Residents	54	815	Assumes employees can potentially use facilities 2 hours each working day per week
<b>Employee Population Equivalent</b>	<b>8,845</b>	<b>45,815</b>	
<b>Basis</b>			
<b>New Facilities</b>			
Aquatic Park/Large Pool	0	1	
Skate Park	0	1	
	<u>Existing Deficiency</u>	<u>To Serve Future Dev.</u>	
Proportionate Use of Recreation Facilities	19%	81%	Population as a percentage of total service population in 2030
<b>Estimated Recreation Facilities Costs</b>			
Land Acquisition		\$200,000	Assumed 4 acres of property at \$50,000 per acre
Swimming Pool		\$2,000,000	Assumed
Skate Park (total cost)		\$500,000	Auburn Recreation District (14,000 Sq. Ft. @ \$300,000) and estimate for Placer Vineyards (\$700,000)
<b>Total Recreation Facilities</b>		<b>\$2,700,000</b>	
<b>Recreation Facilities Costs included in Fee Program</b>		<b>\$2,179,000</b>	Amount Allocated to Future Users

Source: City of Live Oak; Stantec

"rec\_imp"

## 6.2.4 FACILITY NEEDS – COMMUNITY CENTERS

As stated in previous sections, the need for future community center space was based on the existing level of service. The current service standard was determined by using the current service population and community center square footage.

The current service population is 8,791. The City currently owns one 6,000 square foot community center. This results in a level of service standard of 682 square feet per 1,000 residents. Total projected new square feet to serve new residents is therefore 24,713, as shown in Table 6-3.

Table 6-3 also includes estimated costs to construct the community center space. Based on a cost estimate of \$330 per square foot, the total costs are estimated at \$8.16 million.

**Table 6-3  
Community Center Needs**

Year:	2010	2030	Note
<b>Population Assumptions</b>			
Population	8,791	45,000	
Employees	900	13,700	
1 Employee = [0.00] Residents	0	0	
<b>Employee Population Equivalent</b>	<b>8,791</b>	<b>45,000</b>	
<b>Basis</b>			
Existing Community Center	6,000		Total sqft
Level of Service Standard	682.52	682.52	Sqft per 1,000 population
Future Service Population (2030 less 2010 Service Pop.)		36,209	
<b>Projected New Sqft</b>		<b>24,713</b>	
<b>Estimated Cost of Community Center Facilities</b>			
Cost per Sqft (Including Contingency & Mngmt Fee)		\$330	2006 Lincoln, 2008 Ceres Nexus Studies & 2007 Placer Vineyards Financing Plan costs, Inflated
<b>Total Estimated Community Center Costs</b>		<b>\$8,155,366</b>	

Source: City of Live Oak; Stantec

"ccent\_imp"

### **6.3 CALCULATED PARKS AND RECREATION AND COMMUNITY CENTERS FACILITIES AB 1600 FEES**

As the previous sections have indicated, the AB 1600 fee is based on a cost per person served. The parks facility improvements cost per person served is shown in Table 6-4. The total improvements costs found in Table 6-1 plus any financing costs are divided by the number of persons served to determine the cost per future person served. For non-residential land uses the cost per future person served is converted to a cost per employee based on the employee to resident factor discussed in Section 2.1.

Tables 6-5 and 6-6 show the cost per person served calculation for recreation facilities and community center space. Community center space is only allocated to residential land uses.

Table 6-4  
**Parks Improvements Cost Per Person Served**

Item	Value
Total Improvements Costs	\$31,758,623
Estimated Financing Costs [1]	\$10,480,346
<b>Total Improvement Costs with Financing Costs</b>	<b>\$42,238,969</b>
Persons Served	36,971
<b>Cost per Future Person Served</b>	<b>\$1,142.49</b>
Employee to Resident Factor	0.06
<b>Cost per Employee</b>	<b>\$68.01</b>

Source: Stantec

"Park\_pp"

[1] The financing costs are assumed to be one-third of total costs as discussed in Section 3.

Table 6-5  
**Recreation Facilities Cost Per Person Served**

Item	Value
Total Improvements Costs	\$2,179,000
Estimated Financing Costs [1]	\$725,607
<b>Total Improvement Costs with Financing Costs</b>	<b>\$2,904,607</b>
Persons Served	36,971
<b>Cost per Future Person Served</b>	<b>\$78.56</b>
Employee to Resident Factor	0.06
<b>Cost per Employee</b>	<b>\$4.68</b>

Source: Stantec

"rec\_pp"

[1] The financing costs are assumed to be one-third of total costs as discussed in Section 3.

Table 6-6  
**Community Centers Cost Per Person Served**

Item	Value
Total Improvements Costs	\$8,155,366
Estimated Financing Costs [1]	\$2,715,737
<b>Total Improvement Costs with Financing Costs</b>	<b>\$10,871,102</b>
Persons Served	36,209
<b>Cost per Future Person Served</b>	<b>\$300.23</b>
Employee to Resident Factor	-
<b>Cost per Employee</b>	<b>\$0.00</b>

*Source: Stantec* *"ccent\_pp"*

[1] The financing costs are assumed to be one-third of total costs as discussed in Section 3.

Tables 6-7, 6-8 and 6-9 display the residential and non-residential development impact fees for City Park and Recreation Facilities and Community Center Improvements. A 2% administration fee is added to the fee to account for administrative costs of running the development impact fee program by the City.

Table 6-7  
**Parks Improvements Impact Fees**

Land Use	Allocation Factors	Cost per Future Person or Employee	Cost per Household or per 1000 Sqft.	Admin. Fee 2%	Impact Fee per Unit or 1000 Sqft
<b>Residential</b>		Persons per Household			
Single Family					per Unit
Low Density	2.80	\$1,142.49	\$3,198.98	\$63.98	<b>\$3,262.96</b>
Medium Density	2.00	\$1,142.49	\$2,284.98	\$45.70	<b>\$2,330.68</b>
Multi Family	1.80	\$1,142.49	\$2,056.49	\$41.13	<b>\$2,097.62</b>
<b>Non-Residential</b>		Employees per 1000 Sqft			
Office	2.00	\$68.01	\$136.01	\$2.72	<b>\$138.73</b>
Commercial	2.48	\$68.01	\$168.31	\$3.37	<b>\$171.68</b>
Industrial	2.48	\$68.01	\$168.31	\$3.37	<b>\$171.68</b>
Warehouse	1.04	\$68.01	\$70.84	\$1.42	<b>\$72.26</b>

*Source: Stantec*

*"Park\_fee"*

**Table 6-8  
Recreation Facilities Impact Fees**

<b>Land Use</b>	<b>Allocation Factors</b>	<b>Cost per Future Person or Employee</b>	<b>Cost per Household or per 1000 Sqft.</b>	<b>Admin. Fee 2%</b>	<b>Impact Fee per Unit or 1000 Sqft</b>
<b>Residential</b>		Persons per Household			per Unit
Single Family					
Low Density	2.80	\$78.56	\$219.98	\$4.40	<b>\$224.38</b>
Medium Density	2.00	\$78.56	\$157.13	\$3.14	<b>\$160.27</b>
Multi Family	1.80	\$78.56	\$141.42	\$2.83	<b>\$144.24</b>
<b>Non-Residential</b>		Employees per 1000 Sqft			per 1000 Sqft
Office	2.00	\$4.68	\$9.35	\$0.19	<b>\$9.54</b>
Commercial	2.48	\$4.68	\$11.57	\$0.23	<b>\$11.81</b>
Industrial	2.48	\$4.68	\$11.57	\$0.23	<b>\$11.81</b>
Warehouse	1.04	\$4.68	\$4.87	\$0.10	<b>\$4.97</b>

Source: Stantec

"rec\_fee"

**Table 6-9  
Community Center Impact Fees**

<b>Land Use</b>	<b>Allocation Factors</b>	<b>Cost per Future Person or Employee</b>	<b>Cost per Household or per 1000 Sqft.</b>	<b>Admin. Fee 2%</b>	<b>Impact Fee per Unit or 1000 Sqft</b>
<b>Residential</b>		Persons per Household			per Unit
Single Family					
Low Density	2.80	\$300.23	\$840.65	\$16.81	<b>\$857.46</b>
Medium Density	2.00	\$300.23	\$600.46	\$12.01	<b>\$612.47</b>
Multi Family	1.80	\$300.23	\$540.42	\$10.81	<b>\$551.23</b>
<b>Non-Residential</b>		Employees per 1000 Sqft			per 1000 Sqft
Office	2.00	\$0.00	\$0.00	\$0.00	<b>\$0.00</b>
Commercial	2.48	\$0.00	\$0.00	\$0.00	<b>\$0.00</b>
Industrial	2.48	\$0.00	\$0.00	\$0.00	<b>\$0.00</b>
Warehouse	1.04	\$0.00	\$0.00	\$0.00	<b>\$0.00</b>

Source: Stantec

"ccent\_fee"

## Transportation Element

The Transportation Element includes those facilities that will need to be constructed by the City of Live Oak to provide a continuous roadway network. In order to serve future development the City has identified the need for new transportation facilities. These facilities were costed out by AECOM and summary tables are included in Appendix A.

### 7.1 TRANSPORTATION AB 1600 NEXUS FINDINGS

The following table provides the AB 1600 Nexus findings in justification of the fees for transportation facilities.

**AB 1600 Nexus Test – Public Safety Facilities**

Identify the Purpose of the Fee	To fund transportation and roadway capital costs
Identify the Use of Fee	To purchase or construct transportation or roadway facilities including collector and arterial roads, street lights, intersection improvements, and other roadway improvements that are generally needed to provide transportation services
Determine how there is a reasonable relationship between the need for the public facility, the use of the fee and the type of development project on which the fee is imposed	New residential and non-residential development in the City and the City's SOI will generate additional residents and employees who will increase the demand for City services including transportation and roadway facilities. Population and employee growth has a direct impact on the need for transportation and roadway networks and facilities, thus a reasonable relationship exists between new development and the transportation and roadway facilities, which will have to be acquired, expanded, or constructed to meet increased demand. Fees collected from new development will be used exclusively for transportation and roadway facilities as identified in Appendix A.

### 7.2 TRANSPORTATION FACILITIES

The transportation facilities and costs were developed by AECOM for the City of Live Oak. A brief memo and more detailed cost sheets are included in Appendix A. The transportation costs are based on facilities that will benefit future development within the City. It should be noted that the fees include sewer and water costs that are not included in the Water and Sewer Connection Fees.

### 7.3 CALCULATED TRANSPORTATION FACILITIES AB 1600 FEES

Transportation facility demand from new development is based on daily trip generation rates. Trip rates are derived from the total trip generation at buildout of the General Plan as determined by KDAnderson & Associates in 2009. These rates are shown in Table 7-1. In addition Table 7-1 estimates the daily trips as would be generated by new development only (excluding existing daily trips from existing development).

Table 7-1  
New Land Use and Trip Generation under Buildout of the General Plan

Land Use	Unit	2030 General Plan		Daily Trips per Unit/Ksf	2010 Estimated		Net New Daily Trips
		Quantity	Daily Trips		Quantity	Daily Trips	
<b>Residential</b>							
Single Family Residential	Dwelling	13,897	126,463	9.10	2,136	19,436	[1] 107,027
Multiple Family Residential	Dwelling	1,869	12,990	6.95	287	1,996	[1] 10,994
<b>Subtotal Residential</b>		<b>15,766</b>	<b>139,453</b>		<b>2,423</b>	<b>21,433</b>	<b>118,020</b>
<b>Non-Residential</b>							
Commercial Mixed Use	Ksf	2,543.30	45,779	18.00	167.08	3,007	[2] 42,772
Community Commercial	Ksf	647.2	38,741	59.86	42.52	2,545	[2] 36,196
Employment / Industrial	Ksf	1,969.60	37,324	18.95	129.39	2,452	[2] 34,872
<b>Subtotal Non-Residential</b>		<b>5,160.10</b>	<b>121,845</b>		<b>338.98</b>	<b>8,004</b>	<b>113,840</b>
<b>Total Trips</b>			<b>261,298</b>				<b>231,860</b>

Source: KDAnderson & Associates, Inc. Transportation Engineers, 2009; Stantec

[1] Existing residential units are allocated between single family and multi-family based on the same distribution of units of 2030 General Plan.

[2] 2010 estimated daily trips based on existing distribution of units and employees vs. future units and employees

Existing Employees	900	7%
New Employees	12,800	93%
Total Employees at Buildout	13,700	

In order to determine the AB1600 fee the trip rates from Table 7-1 are translated into equivalent dwelling unit (EDU) factors as shown in Table 7-2.

Table 7-2  
Transportation Cost Allocation Factors (EDUs)

	Daily Trips per Unit/Ksf	EDU Factor
<b>Residential</b>		
Single Family	9.10	1.00
Duplex (per unit)	8.67	0.95
Multi Family (per unit)	6.95	0.76
<b>Non-Residential</b>		
Office [1]	11.01	1.21
Commercial [1]	42.92	4.72
Industrial [1]	6.97	0.77
Warehouse [1]	4.96	0.55

[1] ITE Trip Generation 6th edition

The transportation costs are summarized in Table 7-3. They total approximately \$394.76 million. These costs were allocated to existing and new development based on the distribution of population at buildout between existing and new residents. The project costs



include an allocation for financing costs (interest costs). Total costs allocated to new development, including the interest costs, are estimated at \$684.2 million. This cost estimate is divided by the total daily trips from new development to determine a cost per trip.

**Table 7-3  
Planned Transportation Improvement Cost Summary and Cost Per Trip**

	Est. Transportation Costs [1]	% Share to: [2]		Cost Share to:	
		Existing Dev.	New Dev.	Existing Dev.	New Dev.
Class I Bike Paths [3]	\$3,405,000	20%	80%	\$665,186	\$2,724,000
Sinnard Avenue Overcrossing	\$11,520,000	0%	100%	\$0	\$11,520,000
Coleman Road At-Grade Intersection	\$6,515,000	0%	100%	\$0	\$6,515,000
Arterials (not including Highway 99)	\$36,332,609	0%	100%	\$0	\$36,332,609
Major Collectors	\$49,720,000	0%	100%	\$0	\$49,720,000
Minor Collectors	\$287,948,840	0%	100%	\$0	\$287,948,840
<b>Subtotal Estimated Transportation Improvement Costs</b>	<b>\$395,441,449</b>			<b>\$665,186</b>	<b>\$394,760,449</b>
Engineering, Inspection & CM @ 30%					\$118,428,135
<b>Total Estimated Transportation Improvement Costs</b>					<b>\$513,188,584</b>
Estimated Financing Costs [3]					\$171,045,755
<b>Total Costs</b>					<b>\$684,234,339</b>
Total Trips					231,860
					<i>from Table 7-1</i>
<b>Cost per Trip</b>					<b>\$2,951.07</b>

Source: AECOM, Stantec

[1] Transportation cost estimates prepared by AECOM and summary tables are included in Appendix A.

[2] Costs analysis for roadways benefitting future users, for all items except the Class I Bike path which is allocated based on population.

	<u>GP Buildout Pop</u>	<u>% Distribution</u>
Existing population	8,791	20%
New population	36,209	80%
Total population	45,000	

[3] The financing costs are assumed to be one-third of total costs as discussed in Section 3.

The cost per trip is carried forward to Table 7-4 and using the EDU factors from Table 7-2 the impact fee for transportation is calculated, including a 2 percent program administration fee.

Table 7-4  
**Transportation Cost Allocation Factors (EDUs)**

Land Use	Allocation Factors	Cost per Trip	Cost per Household or 1000 Sqft	Admin. Fee 2%	Impact Fee per Unit or 1000 Sqft
	<i>see Table 7-2</i>				
<b>Residential</b>	Per Residential Unit				per Unit
Single Family	1.00	\$2,951.07	\$2,951.07	\$59.02	<b>\$3,010.09</b>
Duplex (per unit)	0.95	\$2,951.07	\$2,811.64	\$56.23	<b>\$2,867.87</b>
Multi Family (per unit)	0.76	\$2,951.07	\$2,253.91	\$45.08	<b>\$2,298.99</b>
<b>Non-Residential</b>	Per 1000 Sqft				per 1000 Sqft
Office	1.21	\$2,951.07	\$3,570.46	\$71.41	<b>\$3,641.87</b>
Commercial	4.72	\$2,951.07	\$13,918.63	\$278.37	<b>\$14,197.00</b>
Industrial	0.77	\$2,951.07	\$2,260.32	\$45.21	<b>\$2,305.52</b>
Warehouse	0.55	\$2,951.07	\$1,608.49	\$32.17	<b>\$1,640.66</b>

Source: Stantec

"road\_fee"

## **Implementation**

### **8.1 COLLECTION OF THE DEVELOPMENT IMPACT FEE**

All new development that occurs within the City of Live Oak, except as specifically exempted herein, shall pay the AB1600 Development Impact Fee (“the Fee”).

#### **New Residential Development**

The Fee will be collected from all residential development prior to the issuance of a building permit.

#### **New Non-Residential Development**

The Fee will be collected from all new non-residential development at the issuance of a building permit.

#### **Existing Development – Residential and Non-Residential**

Existing development is not required to pay the Fee.

### **EXEMPTIONS FROM THE FEE**

The Finance Director may waive any and all portions of the Fee if it can be determined that a proposed project will not impact any facility for which the Fee is collected.

The following types of development are specifically exempt from the Fee; however, each exception is subject to review and must be approved:

1. Any internal or external alteration or addition to an existing residential structure, except when additional dwelling units are created.
2. Any replacement or reconstruction of any structure that is damaged or destroyed as a result of fire, flood, explosion, wind, earthquake, riot, or other calamity or act of God. Any building replaced or reconstructed shall not be built to exceed the documented total floor area or use existing at the time of its destruction. If a structure is replaced with an alternative land use, such as replacing single family residences with a commercial building, no exemption or credit shall apply.
3. For additions, alterations, replacements, or reconstructions that are subject to the Fee, only portions of the building that create additional impacts shall be subject to the Fee. The Fee will not be charged retroactively on any portion of a building legally in existence at the time of the Fee’s adoption.

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4. Any replacement of a structure and use, in kind, providing that the City can document that the structure was legally in existence at the time the Fee was adopted. If a structure is replaced with an alternative land use, such as replacing single family residences with a commercial building, no exemption or credit shall apply.
  5. Agricultural buildings designed for storage purposes. This exemption does not apply to buildings used for human habitation, employment, or the processing, treating, and packaging of agricultural products, or for use by the public.
  6. Upon approval by the City Council of the City of Live Oak, a portion of the fee may be reduced for housing development approved for very low income occupants, as defined by the State Department of Housing and Community Development (HCD), in accordance with the City's Housing Element – Goal B, Program B.7.

## **FEES REQUIRED**

The following are examples of times that the Fee may be collected for land uses that could be potentially classified as exempt from the fees.

1. Illegal facilities and buildings, constructed prior to the adoption of the Fee, which consequently obtain a building permit to legitimize the facility or building, shall pay the applicable Fee.
2. Shell buildings:
  - a. The full Fee is payable at the time the building permit for the shell building is obtained. Fees shall not be deferred until building permits are obtained for tenant improvements.
  - b. The incremental difference between the intended and actual use of any shell building shall be collected on any building permit for tenant improvements.
3. Accessory residential structures that are converted to a separate residential dwelling unit shall pay the Fee for duplex development as long the primary residence remains on the property.
4. Temporary buildings that are authorized for more than thirty (30) days in any calendar year shall be required to pay the Fee. When the building is removed at a later date, the Fee, or a portion thereof, may be refunded or credited to a permanent structure in the Project Area. All refunds are subject to a deduction of appropriate administration fees.
5. Duplexes and Triplexes:
  - a. Duplex: one unit shall be charged at the single family, low density rate, and one unit at the single family, medium density rate.
  - b. Triplex: one unit shall be charged at the multi-family rate.

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## **INTERNAL LOANING OF FUNDS**

Inter-fund loans may be used from time-to-time to facilitate the construction of capital facilities. Any such loan shall be made in accordance with applicable law, as interpreted by the City Attorney of the City of Live Oak, and all funds shall be placed in separate accounts on either a facility or geographic basis. The additional following requirements are also placed on inter-fund loans.

1. Funds may be transferred between accounts to expedite the construction of critical projects / facilities.
2. A mechanism to repay accounts shall be established.
3. Inter-fund loan repayments shall take precedence over reimbursements to developers.
4. Inter-fund loans must be approved by the City Council.

## **FEE CREDITS OR ADJUSTMENTS**

The Fee may be reduced under certain circumstances. Any reduction in the Fee will be based upon the City's independent analysis and review of the subject property. The purpose of the Fee is to collect funds to build public infrastructure. If a property is already developed or is redeveloping an existing use, fee credits may be appropriate. Fee credits will be determined by the City on a case-by-case basis. Following are examples of situations where the City is likely to grant Fee credits.

### **Facility Construction**

New development may require the oversizing of the backbone infrastructure in order to provide a base level of service. Landowners that fund construction of facilities included in the Fee will receive credits against the Fee. Fee credits will be realized when the landowner's project develops.

### **Replacement of Existing Buildings**

Portions of the City are already developed. New development that replaces existing development is eligible for a Fee credit to the extent that the facilities to be funded by the new development are already provided to the existing development provided the existing development has not been removed more than one year. For example, a twenty-unit apartment complex that is replaced by a forty-unit apartment complex could receive up to a 50% credit in the Fee ( $20/40 = 50\%$ ).

## **REIMBURSEMENT TO DEVELOPERS**

The Fee is divided into four components of improvement: transportation, general government, public safety, parks, recreation and community center. Reimbursements for Fee components will be provided under the following conditions.

1. Developer-installed improvements shall be considered on a component basis. Various components of the Fee shall not be commingled to reimburse a developer.

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For example, only funds collected from the transportation component of the Fee shall be used to reimburse a developer who installed a roadway improvement identified as a Fee funded improvement.

2. The value of any developer-installed improvement for Fee credit or reimbursement purposes shall be based upon the cost estimates (as updated) used to establish the amount of the Fee.
3. The use of accumulated Fee revenues shall be used in the following priority order: (1) critical projects, (2) repayment of inter-fund loans, (3) repayment of accrued reimbursement to private developers.

A project is deemed to be a “Critical Project” as determined by City Staff. Fee reimbursements will be determined by the City on a case-by-case basis.

## **DEVELOPMENT AGREEMENTS**

Developers may negotiate any portion of the Fee, including its application and implementation through a Development Agreement.

## **8.2 UPDATE OF NEXUS STUDY**

### **ANNUAL REVIEW OF AB1600 DEVELOPMENT IMPACT FEES**

The Fees are subject to adjustment based on changes in developable land, cost estimates, or outside funding sources. The City will review the Fees as necessary to determine if any adjustments to the Fee are warranted, but not less than every 5 years. This review will include:

- Changes to the designated capital facilities or land uses;
- Increases in facility costs due to inflation or changes in transportation facility cost estimates; and,
- Changes in EDUs by facility depending on the type and amount of development that has occurred.

### **Inflation Adjustments**

All fees calculated in this report are reflected in year 2010 dollars. In addition to the periodic adjustments mentioned above, the fees will be inflated each year by the U.S. Department of Labor’s Bureau of Labor Statistics Consumer Price Index – All Urban Consumer, San Francisco All Items.

Appendix A

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**Transportation Costs Provided by AECOM**

## Memorandum

To Jim Goodwin Page 1

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CC Georgette Aronow, Geoffrey Rubendall, Jeff Goldman

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Subject Revised Transportation Cost Estimates

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From J. Matthew Gerken

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Date January 27, 2011

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Based on input from the impact fee team, we took one final pass through the transportation cost estimates. Working with Scott Rolls, we identified a couple mislabeled and a couple missing roadway segments. Those were added. In addition, I used a final exhibit from the water, sewer, and drainage master plans to remove any instance of overlap between the water, sewer, or drainage portions of the backbone transportation network.

Total roadway costs are estimated at approximately \$396 million, not including the Live Oak Community Trail or improvements to State Highway 99.

### Summary of Transportation Facility Costs

Facility Type	Cost Estimate
Class I Bike Paths (not including Live Oak Community Trail)	\$ 3,405,000
Sinnard Avenue Overcrossing	\$ 11,520,000
Coleman Road At-Grade Intersection	\$ 6,515,000
Arterials (not including Highway 99)	\$ 36,332,609
Major Collectors	\$ 49,720,000
Minor Collectors	\$ 287,948,840
<b>TOTAL</b>	<b>\$ 395,687,449</b>
Live Oak Community Trail (Alta)	\$ 1,951,105





**ARTERIAL 1 (98FT Right-of-Way) - New Roadway****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	98	SF	\$0.10	\$9.80
2 Excavation	6.22	CY	\$14.30	\$88.95
3 Asphaltic Concrete ( 6" Depth)	2.1	Ton	\$70.00	\$147.00
4 Aggregate Base (18" Depth)	3.51	CY	\$28.40	\$99.68
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
6 6" P.P.C. Curb, Type A (City Detail 201)	2	LF	\$8.05	\$16.10
7 5' Sidewalk (4" P.C.C)	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
9 Signing	1	LF	\$1.21	\$1.21
10 Striping	4	LF	\$0.55	\$2.20
11 Joint Trench	1	LF	\$90.00	\$90.00
12 Landscaping	27	SF	\$1.10	\$29.70
13 Sanitary Sewer	1	LF	\$195.00	\$195.00
14 Potable Water	1	LF	\$100.00	\$100.00
15 Drainage	1	LF	\$213.00	\$213.00
			<b>SUBTOTAL</b>	<b>\$1,126.42</b>
<b>ADDITIONAL COSTS</b>				
16 Construction Surveying			2.5%	\$28.16
17 Traffic Handling			5.0%	\$56.32
18 Mobilization			10.0%	\$112.64
19 Demolition			5.0%	\$56.32
20 Erosion Control			2.0%	\$22.53
21 Contingency			35.0%	\$394.25
			<b>GRAND TOTAL PER FOOT</b>	<b>\$1,796.64</b>
			<b>USE</b>	<b>\$1,800.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**ARTERIAL 2 (88FT Right-of-Way) - New Roadway****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	88	SF	\$0.10	\$8.80
2 Excavation	5.48	CY	\$14.30	\$78.36
3 Asphaltic Concrete ( 6" Depth)	2.25	Ton	\$70.00	\$157.50
4 Aggregate Base (18" Depth)	3.61	CY	\$28.40	\$102.52
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
6 5' Sidewalk (4" P.C.C )	10	SF	\$4.15	\$41.50
7 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
8 Signing	1	LF	\$1.21	\$1.21
9 Striping	5	LF	\$0.55	\$2.75
10 Joint Trench	1	LF	\$90.00	\$90.00
11 Landscaping	14	SF	\$1.10	\$15.40
12 Sanitary Sewer	1	LF	\$195.00	\$195.00
13 Potable Water	1	LF	\$100.00	\$100.00
14 Drainage	1	LF	\$213.00	\$213.00
			<i>SUBTOTAL</i>	\$1,098.33
<b>ADDITIONAL COSTS</b>				
15 Construction Surveying			2.5%	\$27.46
16 Traffic Handling			5.0%	\$54.92
17 Mobilization			10.0%	\$109.83
18 Demolition			5.0%	\$54.92
19 Erosion Control			2.0%	\$21.97
20 Contingency			35.0%	\$384.41
			<b>GRAND TOTAL PER FOOT</b>	\$1,751.83
			<b>USE</b>	<b>\$1,760.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**ARTERIAL 3 (74FT Right-of-Way) - New Roadway****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	74	SF	\$0.10	\$7.40
2 Excavation	3.7	CY	\$14.30	\$52.91
3 Asphaltic Concrete ( 6" Depth)	1.2	Ton	\$70.00	\$84.00
4 Aggregate Base (18" Depth)	2.6	CY	\$28.40	\$73.84
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
6 6" P.P.C. Curb, Type A (City Detail 201)	2	LF	\$8.05	\$16.10
7 5' Sidewalk (4" P.C.C.)	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
9 Signing	1	LF	\$1.21	\$1.21
10 Striping	4	LF	\$0.55	\$2.20
11 Joint Trench	1	LF	\$90.00	\$90.00
12 Landscaping	27	SF	\$1.10	\$29.70
13 Sanitary Sewer	1	LF	\$195.00	\$195.00
14 Potable Water	1	LF	\$100.00	\$100.00
15 Drainage	1	LF	\$213.00	\$213.00
			<i>SUBTOTAL</i>	\$999.14
<b>ADDITIONAL COSTS</b>				
16 Construction Surveying			2.5%	\$24.98
17 Traffic Handling			5.0%	\$49.96
18 Mobilization			10.0%	\$99.91
19 Demolition			5.0%	\$49.96
20 Erosion Control			2.0%	\$19.98
21 Contingency			35.0%	\$349.70
			<b>GRAND TOTAL PER FOOT</b>	<b>\$1,593.63</b>
			<b>USE</b>	<b>\$1,600.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**ARTERIAL 4 (68FT Right-of-Way) - New Roadway****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	68	SF	\$0.10	\$6.80
2 Excavation	3.26	CY	\$14.30	\$46.62
3 Asphaltic Concrete ( 6" Depth)	1.5	Ton	\$70.00	\$105.00
4 Aggregate Base (18" Depth)	1.91	CY	\$28.40	\$54.24
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
7 5' Sidewalk (4" P.C.C.)	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
9 Signing	1	LF	\$1.21	\$1.21
10 Striping	3	LF	\$0.55	\$1.65
11 Joint Trench	1	LF	\$90.00	\$90.00
12 Landscaping	14	SF	\$1.10	\$15.40
13 Sanitary Sewer	1	LF	\$195.00	\$195.00
14 Potable Water	1	LF	\$100.00	\$100.00
15 Drainage	1	LF	\$213.00	\$213.00
			<i>SUBTOTAL</i>	\$962.70
<b>ADDITIONAL COSTS</b>				
16 Construction Surveying			2.5%	\$24.07
17 Traffic Handling			5.0%	\$48.14
18 Mobilization			10.0%	\$96.27
19 Demolition			5.0%	\$48.14
20 Erosion Control			2.0%	\$19.25
21 Contingency			35.0%	\$336.95
			<b>GRAND TOTAL PER FOOT</b>	\$1,535.51
			<b>USE</b>	<b>\$1,540.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**MAJOR COLLECTOR 1 (98FT Right-of-Way) - New Roadway****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	98	SF	\$0.10	\$9.80
2 Excavation	6.22	CY	\$14.30	\$88.95
3 Asphaltic Concrete ( 6" Depth)	2.63	Ton	\$70.00	\$184.10
4 Aggregate Base (18" Depth)	4.18	CY	\$28.40	\$118.71
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
7 5' Sidewalk (4" P.C.C)	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
9 Signing	1	LF	\$1.21	\$1.21
10 Striping	4	LF	\$0.55	\$2.20
11 Joint Trench	1	LF	\$90.00	\$90.00
12 Landscaping	14	SF	\$1.10	\$15.40
13 Sanitary Sewer	1	LF	\$195.00	\$195.00
14 Potable Water	1	LF	\$100.00	\$100.00
15 Drainage	1	LF	\$213.00	\$213.00
			<i>SUBTOTAL</i>	\$1,152.15
<b>ADDITIONAL COSTS</b>				
16 Construction Surveying			2.5%	\$28.80
17 Traffic Handling			5.0%	\$57.61
18 Mobilization			10.0%	\$115.21
19 Demolition			5.0%	\$57.61
20 Erosion Control			2.0%	\$23.04
21 Contingency			35.0%	\$403.25
			<b>GRAND TOTAL PER FOOT</b>	<b>\$1,837.68</b>
			<b>USE</b>	<b>\$1,840.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**MAJOR COLLECTOR 2 (88FT Right-of-Way) - New Roadway****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	88	SF	\$0.10	\$8.80
2 Excavation	5.48	CY	\$14.30	\$78.36
3 Asphaltic Concrete ( 6" Depth)	2.25	Ton	\$70.00	\$157.50
4 Aggregate Base (18" Depth)	3.62	CY	\$28.40	\$102.81
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
6 5' Sidewalk (4" P.C.C )	10	SF	\$4.15	\$41.50
7 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
8 Signing	1	LF	\$1.21	\$1.21
9 Striping	5	LF	\$0.55	\$2.75
10 Joint Trench	1	LF	\$90.00	\$90.00
11 Landscaping	14	SF	\$1.10	\$15.40
12 Sanitary Sewer	1	LF	\$195.00	\$195.00
13 Potable Water	1	LF	\$100.00	\$100.00
14 Drainage	1	LF	\$213.00	\$213.00
			<i>SUBTOTAL</i>	\$1,098.61
<b>ADDITIONAL COSTS</b>				
15 Construction Surveying			2.5%	\$27.47
16 Traffic Handling			5.0%	\$54.93
17 Mobilization			10.0%	\$109.86
18 Demolition			5.0%	\$54.93
19 Erosion Control			2.0%	\$21.97
20 Contingency			35.0%	\$384.51
			<b>GRAND TOTAL PER FOOT</b>	\$1,752.29
			<b>USE</b>	<b>\$1,760.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**MAJOR COLLECTOR 3 (74FT Right-of-Way) - New Roadway****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	74	SF	\$0.10	\$7.40
2 Excavation	4.44	CY	\$14.30	\$63.49
3 Asphaltic Concrete ( 6" Depth)	1.73	Ton	\$70.00	\$121.10
4 Aggregate Base (18" Depth)	2.84	CY	\$28.40	\$80.66
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
7 5' Sidewalk (4" P.C.C.)	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
9 Signing	1	LF	\$1.21	\$1.21
10 Striping	3	LF	\$0.55	\$1.65
11 Joint Trench	1	LF	\$90.00	\$90.00
12 Landscaping	14	SF	\$1.10	\$15.40
13 Sanitary Sewer	1	LF	\$195.00	\$195.00
14 Potable Water	1	LF	\$100.00	\$100.00
15 Drainage	1	LF	\$213.00	\$213.00
			<i>SUBTOTAL</i>	\$1,022.69
<b>ADDITIONAL COSTS</b>				
16 Construction Surveying			2.5%	\$25.57
17 Traffic Handling			5.0%	\$51.13
18 Mobilization			10.0%	\$102.27
19 Demolition			5.0%	\$51.13
20 Erosion Control			2.0%	\$20.45
21 Contingency			35.0%	\$357.94
			<b>GRAND TOTAL PER FOOT</b>	\$1,631.19
			<b>USE</b>	<b>\$1,640.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.



**MAJOR COLLECTOR 4 (68FT Right-of-Way) - New Roadway****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	68	SF	\$0.10	\$6.80
2 Excavation	3.26	CY	\$14.30	\$46.62
3 Asphaltic Concrete ( 6" Depth)	1.5	Ton	\$70.00	\$105.00
4 Aggregate Base (18" Depth)	2.21	CY	\$28.40	\$62.76
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
7 5' Sidewalk (4" P.C.C.)	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
9 Signing	1	LF	\$1.21	\$1.21
10 Striping	3	LF	\$0.55	\$1.65
11 Joint Trench	1	LF	\$90.00	\$90.00
12 Landscaping	14	SF	\$1.10	\$15.40
13 Sanitary Sewer	1	LF	\$195.00	\$195.00
14 Potable Water	1	LF	\$100.00	\$100.00
15 Drainage	1	LF	\$213.00	\$213.00
			<i>SUBTOTAL</i>	\$971.22
<b>ADDITIONAL COSTS</b>				
16 Construction Surveying			2.5%	\$24.28
17 Traffic Handling			5.0%	\$48.56
18 Mobilization			10.0%	\$97.12
19 Demolition			5.0%	\$48.56
20 Erosion Control			2.0%	\$19.42
21 Contingency			35.0%	\$339.93
			<b>GRAND TOTAL PER FOOT</b>	\$1,549.10
			<b>USE</b>	<b>\$1,550.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**MINOR COLLECTOR (74FT Right-of-Way)****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	74	SF	\$0.10	\$7.40
2 Excavation	3.56	CY	\$14.30	\$50.91
3 Asphaltic Concrete ( 4" Depth)	1.45	Ton	\$70.00	\$101.50
4 Aggregate Base (12" Depth)	2.36	CY	\$28.40	\$67.02
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
6 5' Sidewalk (4" P.C.C W/ 6" AB)	10	SF	\$4.15	\$41.50
7 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
8 Signing	1	LF	\$1.21	\$1.21
9 Striping	3	LF	\$0.55	\$1.65
10 Joint Trench	1	LF	\$90.00	\$90.00
11 Landscaping	14	SF	\$1.10	\$15.40
12 Sanitary Sewer	1	LF	\$195.00	\$195.00
13 Potable Water	1	LF	\$100.00	\$100.00
14 Drainage	1	LF	\$213.00	\$213.00
			<i>SUBTOTAL</i>	\$976.87
<b>ADDITIONAL COSTS</b>				
15 Construction Surveying			2.5%	\$24.42
16 Traffic Handling			5.0%	\$48.84
17 Mobilization			10.0%	\$97.69
18 Demolition			5.0%	\$48.84
19 Erosion Control			2.0%	\$19.54
20 Contingency			35.0%	\$341.91
			<b>GRAND TOTAL PER FOOT</b>	\$1,558.11
			<b>USE</b>	<b>\$1,560.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**LOCAL 1 (74FT Right-of-Way)****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	74	SF	\$0.10	\$7.40
2 Excavation	2.96	CY	\$14.30	\$42.33
3 Asphaltic Concrete ( 4" Depth)	1.25	Ton	\$70.00	\$87.50
4 Aggregate Base (12" Depth)	1.54	CY	\$28.40	\$43.74
5 6" Barrier Curb (City Detail 202)	2	LF	\$21.64	\$43.28
6 6" P.P.C. Curb, Type A (City Detail 201)	2	LF	\$8.05	\$16.10
7 5' Sidewalk (4" P.C.C W/ 6" AB)	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
9 Signing	1	LF	\$1.21	\$1.21
10 Striping	2	LF	\$0.55	\$1.10
11 Joint Trench	1	LF	\$90.00	\$90.00
12 Landscaping	26	SF	\$1.10	\$28.60
13 Sanitary Sewer	1	LF	\$195.00	\$195.00
14 Potable Water	1	LF	\$100.00	\$100.00
15 Drainage	1	LF	\$213.00	\$213.00
			<i>SUBTOTAL</i>	\$959.75
<b>ADDITIONAL COSTS</b>				
16 Construction Surveying			2.5%	\$23.99
17 Traffic Handling			5.0%	\$47.99
18 Mobilization			10.0%	\$95.98
19 Demolition			5.0%	\$47.99
20 Erosion Control			2.0%	\$19.20
21 Contingency			35.0%	\$335.91
			<b>GRAND TOTAL PER FOOT</b>	\$1,530.81
			<b>USE</b>	<b>\$1,540.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**LOCAL 2 (60FT Right-of-Way)****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	60	SF	\$0.10	\$6.00
2 Excavation	1.88	CY	\$14.30	\$26.88
3 Asphaltic Concrete ( 4" Depth)	0.95	Ton	\$70.00	\$66.50
4 Aggregate Base (12" Depth)	1.28	CY	\$28.40	\$36.35
5 6" Barrier Curb (City Detail 202)	0.8	LF	\$21.64	\$17.31
6 6" Roll Curb (City Detail 202)	1.2	LF	\$10.50	\$12.60
7 5' Sidewalk (4" P.C.C W/ 6" AB)	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	LF	\$49.00	\$49.00
9 Signing	1	LF	\$1.21	\$1.21
10 Striping	2	LF	\$0.55	\$1.10
11 Joint Trench	1	LF	\$90.00	\$90.00
12 Landscaping	12	SF	\$1.10	\$13.20
13 Sanitary Sewer	1	LF	\$195.00	\$195.00
14 Potable Water	1	LF	\$100.00	\$100.00
15 Drainage	1	LF	\$213.00	\$213.00
			<b>SUBTOTAL</b>	<b>\$869.66</b>
<b>ADDITIONAL COSTS</b>				
16 Construction Surveying			2.5%	\$21.74
17 Traffic Handling			5.0%	\$43.48
18 Mobilization			10.0%	\$86.97
19 Demolition			5.0%	\$43.48
20 Erosion Control			2.0%	\$17.39
21 Contingency			35.0%	\$304.38
			<b>GRAND TOTAL PER FOOT</b>	<b>\$1,387.10</b>
			<b>USE</b>	<b>\$1,390.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of barrier curb. At rolled curb sections aggregate base quantities extend to back of sidewalk.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**BIKE PATH****Proposed Work - New Class 1 Bike Path with Landscaping**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	14	SF	\$0.12	\$1.68
2 Excavation	0.25	CY	\$17.16	\$4.29
3 Asphaltic Concrete ( 2" Depth)	0.125	Ton	\$84.00	\$10.50
4 Aggregate Base (6" Depth)	0.185	CY	\$34.08	\$6.30
5 Signing	1	LF	\$0.24	\$0.24
6 Striping	1	LF	\$0.30	\$0.30
7 Landscaping	4	SF	\$1.32	\$5.28
			<i>SUBTOTAL</i>	\$28.59
ADDITIONAL COSTS				
8 Construction Surveying			2.5%	\$0.71
9 Mobilization			10.0%	\$2.86
10 Demolition			5.0%	\$1.43
11 Erosion Control			2.0%	\$0.57
12 Contingency			35.0%	\$10.01
			<b>GRAND TOTAL PER FOOT</b>	<b>\$44.18</b>
			USE	<b>\$50.00</b>

## Notes:

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 1ft .
- 4 Right-of-way acquisition costs are not included in the estimate.
- 5 Engineering and Construction Costs are not included in the estimate.

**ARTERIAL 1 (98FT Right-of-Way) - Upgrade Existing Arterial  
Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT		UNIT	UNIT PRICE	PER FT COST
	(NEW)	(UPGRADE)			
1 Clearing & Grubbing	98	24.5	SF	\$0.10	\$2.45
2 Excavation	6.22	1.555	CY	\$14.30	\$22.24
3 Asphaltic Concrete ( 6" Depth)	2.1	0.525	Ton	\$70.00	\$36.75
4 Aggregate Base (18" Depth)	3.51	0.8775	CY	\$28.40	\$24.92
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
6 6" P.P.C. Curb, Type A (City Detail 201)	2	2	LF	\$8.05	\$16.10
7 5' Sidewalk (4" P.C.C)	10	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
9 Signing	1	1	LF	\$1.21	\$1.21
10 Striping	4	4	LF	\$0.55	\$2.20
11 Joint Trench	1	1	LF	\$90.00	\$90.00
12 Landscaping	27	13.5	SF	\$1.10	\$14.85
13 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
14 Potable Water	1	0	LF	\$100.00	\$0.00
15 Drainage	1	1	LF	\$213.00	\$213.00
<b>SUBTOTAL</b>					<b>\$557.50</b>
<b>ADDITIONAL COSTS</b>					
16 Construction Surveying				2.5%	\$13.94
17 Traffic Handling				5.0%	\$27.87
18 Mobilization				10.0%	\$55.75
19 Demolition				5.0%	\$27.87
20 Erosion Control				2.0%	\$11.15
21 Contingency				35.0%	\$195.12
<b>GRAND TOTAL PER FOOT</b>					<b>\$889.21</b>
<b>USE</b>					<b>\$890.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.
- 10 "Upgrade existing" includes 25% more roadway with new curbs, joint trench, but assumes retention of some existing utilities

**ARTERIAL 2 (88FT Right-of-Way) - Upgrade Existing Arterial**  
**Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT (NEW)	QUANTITY/FT (UPGRADE)	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	88	22	SF	\$0.10	\$2.20
2 Excavation	5.48	1.37	CY	\$14.30	\$19.59
3 Asphaltic Concrete ( 6" Depth)	2.25	0.5625	Ton	\$70.00	\$39.38
4 Aggregate Base (18" Depth)	3.61	0.9025	CY	\$28.40	\$25.63
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
6 5' Sidewalk (4" P.C.C )	10	10	SF	\$4.15	\$41.50
7 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
8 Signing	1	1	LF	\$1.21	\$1.21
9 Striping	5	3	LF	\$0.55	\$1.65
10 Joint Trench	1	1	LF	\$90.00	\$90.00
11 Landscaping	14	7	SF	\$1.10	\$7.70
12 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
13 Potable Water	1	0	LF	\$100.00	\$0.00
14 Drainage	1	1	LF	\$213.00	\$213.00
<i>SUBTOTAL</i>					\$534.14
<b>ADDITIONAL COSTS</b>					
15 Construction Surveying				2.5%	\$13.35
16 Traffic Handling				5.0%	\$26.71
17 Mobilization				10.0%	\$53.41
18 Demolition				5.0%	\$26.71
19 Erosion Control				2.0%	\$10.68
20 Contingency				35.0%	\$186.95
<b>GRAND TOTAL PER FOOT</b>					\$851.95
USE					<b>\$860.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.
- 10 "Upgrade existing" includes 25% more roadway with new curbs, joint trench, but assumes retention of some existing utilities

**ARTERIAL 3 (74FT Right-of-Way) - Upgrade Existing Arterial**  
**Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT (NEW)	QUANTITY/FT (UPGRADE)	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	74	18.5	SF	\$0.10	\$1.85
2 Excavation	3.7	0.925	CY	\$14.30	\$13.23
3 Asphaltic Concrete ( 6" Depth)	1.2	0.3	Ton	\$70.00	\$21.00
4 Aggregate Base (18" Depth)	2.6	0.65	CY	\$28.40	\$18.46
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
6 6" P.P.C. Curb, Type A (City Detail 201)	2	2	LF	\$8.05	\$16.10
7 5' Sidewalk (4" P.C.C.)	10	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
9 Signing	1	1	LF	\$1.21	\$1.21
10 Striping	4	3	LF	\$0.55	\$1.65
11 Joint Trench	1	1	LF	\$90.00	\$90.00
12 Landscaping	27	13.5	SF	\$1.10	\$14.85
13 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
14 Potable Water	1	0	LF	\$100.00	\$0.00
15 Drainage	1	1	LF	\$213.00	\$213.00
<i>SUBTOTAL</i>					\$525.13
<b>ADDITIONAL COSTS</b>					
16 Construction Surveying				2.5%	\$13.13
17 Traffic Handling				5.0%	\$26.26
18 Mobilization				10.0%	\$52.51
19 Demolition				5.0%	\$26.26
20 Erosion Control				2.0%	\$10.50
21 Contingency				35.0%	\$183.79
<b>GRAND TOTAL PER FOOT</b>					<b>\$837.58</b>
USE					<b>\$840.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.
- 10 "Upgrade existing" includes 25% more roadway with new curbs, joint trench, but assumes retention of some existing utilities



**ARTERIAL 4 (68FT Right-of-Way) - Upgrade Existing Arterial  
Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT		UNIT	UNIT PRICE	PER FT COST
	(NEW)	(UPGRADE)			
1 Clearing & Grubbing	68	17	SF	\$0.10	\$1.70
2 Excavation	3.26	0.815	CY	\$14.30	\$11.65
3 Asphaltic Concrete ( 6" Depth)	1.5	0.375	Ton	\$70.00	\$26.25
4 Aggregate Base (18" Depth)	1.91	0.4775	CY	\$28.40	\$13.56
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
7 5' Sidewalk (4" P.C.C.)	10	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
9 Signing	1	1	LF	\$1.21	\$1.21
10 Striping	3	3	LF	\$0.55	\$1.65
11 Joint Trench	1	1	LF	\$90.00	\$90.00
12 Landscaping	14	7	SF	\$1.10	\$7.70
13 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
14 Potable Water	1	0	LF	\$100.00	\$0.00
15 Drainage	1	1	LF	\$213.00	\$213.00
				<i>SUBTOTAL</i>	\$500.51
<b>ADDITIONAL COSTS</b>					
16 Construction Surveying				2.5%	\$12.51
17 Traffic Handling				5.0%	\$25.03
18 Mobilization				10.0%	\$50.05
19 Demolition				5.0%	\$25.03
20 Erosion Control				2.0%	\$10.01
21 Contingency				35.0%	\$175.18
				<b>GRAND TOTAL PER FOOT</b>	<b>\$798.31</b>
				<b>USE</b>	<b>\$800.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.
- 10 "Upgrade existing" includes 25% more roadway with new curbs, joint trench, but assumes retention of some existing utilities

**MAJOR COLLECTOR 1 (98FT Right-of-Way) - Upgrade Existing Collector**

**Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT (NEW)	QUANTITY/FT (UPGRADE)	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	98	24.5	SF	\$0.10	\$2.45
2 Excavation	6.22	1.555	CY	\$14.30	\$22.24
3 Asphaltic Concrete ( 6" Depth)	2.63	0.6575	Ton	\$70.00	\$46.03
4 Aggregate Base (18" Depth)	4.18	1.045	CY	\$28.40	\$29.68
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
7 5' Sidewalk (4" P.C.C)	10	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
9 Signing	1	1	LF	\$1.21	\$1.21
10 Striping	4	4	LF	\$0.55	\$2.20
11 Joint Trench	1	1	LF	\$90.00	\$90.00
12 Landscaping	14	7	SF	\$1.10	\$7.70
13 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
14 Potable Water	1	0	LF	\$100.00	\$0.00
15 Drainage	1	1	LF	\$213.00	\$213.00
<i>SUBTOTAL</i>					\$548.28
<b>ADDITIONAL COSTS</b>					
16 Construction Surveying				2.5%	\$13.71
17 Traffic Handling				5.0%	\$27.41
18 Mobilization				10.0%	\$54.83
19 Demolition				5.0%	\$27.41
20 Erosion Control				2.0%	\$10.97
21 Contingency				35.0%	\$191.90
<b>GRAND TOTAL PER FOOT</b>					<b>\$874.51</b>
USE					<b>\$880.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.
- 10 "Upgrade existing" includes 25% more roadway with new curbs, joint trench, but assumes retention of some existing utilities

**MAJOR COLLECTOR 2 (88FT Right-of-Way) - Upgrade Existing Collector**

**Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
	(NEW)	(UPGRADE)			
1 Clearing & Grubbing	88	22	SF	\$0.10	\$2.20
2 Excavation	5.48	1.37	CY	\$14.30	\$19.59
3 Asphaltic Concrete ( 6" Depth)	2.25	0.5625	Ton	\$70.00	\$39.38
4 Aggregate Base (18" Depth)	3.62	0.905	CY	\$28.40	\$25.70
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
6 5' Sidewalk (4" P.C.C)	10	10	SF	\$4.15	\$41.50
7 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
8 Signing	1	1	LF	\$1.21	\$1.21
9 Striping	5	5	LF	\$0.55	\$2.75
10 Joint Trench	1	1	LF	\$90.00	\$90.00
11 Landscaping	14	7	SF	\$1.10	\$7.70
12 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
13 Potable Water	1	0	LF	\$100.00	\$0.00
14 Drainage	1	1	LF	\$213.00	\$213.00
				<b>SUBTOTAL</b>	<b>\$535.31</b>
<b>ADDITIONAL COSTS</b>					
15 Construction Surveying				2.5%	\$13.38
16 Traffic Handling				5.0%	\$26.77
17 Mobilization				10.0%	\$53.53
18 Demolition				5.0%	\$26.77
19 Erosion Control				2.0%	\$10.71
20 Contingency				35.0%	\$187.36
				<b>GRAND TOTAL PER FOOT</b>	<b>\$853.82</b>
				<b>USE</b>	<b>\$860.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.
- 10 "Upgrade existing" includes 25% more roadway with new curbs, joint trench, but assumes retention of some existing utilities

**MAJOR COLLECTOR 3 (74FT Right-of-Way) - Upgrade Existing Collector**

**Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT (NEW)	QUANTITY/FT (UPGRADE)	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	74	18.5	SF	\$0.10	\$1.85
2 Excavation	4.44	1.11	CY	\$14.30	\$15.87
3 Asphaltic Concrete ( 6" Depth)	1.73	0.4325	Ton	\$70.00	\$30.28
4 Aggregate Base (18" Depth)	2.84	0.71	CY	\$28.40	\$20.16
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
7 5' Sidewalk (4" P.C.C.)	10	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
9 Signing	1	1	LF	\$1.21	\$1.21
10 Striping	3	3	LF	\$0.55	\$1.65
11 Joint Trench	1	1	LF	\$90.00	\$90.00
12 Landscaping	14	7	SF	\$1.10	\$7.70
13 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
14 Potable Water	1	0	LF	\$100.00	\$0.00
15 Drainage	1	1	LF	\$213.00	\$213.00
<i>SUBTOTAL</i>					\$515.50
<b>ADDITIONAL COSTS</b>					
16 Construction Surveying				2.5%	\$12.89
17 Traffic Handling				5.0%	\$25.78
18 Mobilization				10.0%	\$51.55
19 Demolition				5.0%	\$25.78
20 Erosion Control				2.0%	\$10.31
21 Contingency				35.0%	\$180.43
<b>GRAND TOTAL PER FOOT</b>					<b>\$822.23</b>
<b>USE</b>					<b>\$830.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.
- 10 "Upgrade existing" includes 25% more roadway with new curbs, joint trench, but assumes retention of some existing utilities

**MAJOR COLLECTOR 4 (68FT Right-of-Way) - Upgrade Existing Collector**

**Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT		UNIT	UNIT PRICE	PER FT COST
	(NEW)	(UPGRADE)			
1 Clearing & Grubbing	68	17	SF	\$0.10	\$1.70
2 Excavation	3.26	0.815	CY	\$14.30	\$11.65
3 Asphaltic Concrete ( 6" Depth)	1.5	0.375	Ton	\$70.00	\$26.25
4 Aggregate Base (18" Depth)	2.21	0.5525	CY	\$28.40	\$15.69
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
7 5' Sidewalk (4" P.C.C.)	10	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
9 Signing	1	1	LF	\$1.21	\$1.21
10 Striping	3	3	LF	\$0.55	\$1.65
11 Joint Trench	1	1	LF	\$90.00	\$90.00
12 Landscaping	14	7	SF	\$1.10	\$7.70
13 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
14 Potable Water	1	0	LF	\$100.00	\$0.00
15 Drainage	1	1	LF	\$213.00	\$213.00
				<i>SUBTOTAL</i>	\$502.64
<b>ADDITIONAL COSTS</b>					
16 Construction Surveying				2.5%	\$12.57
17 Traffic Handling				5.0%	\$25.13
18 Mobilization				10.0%	\$50.26
19 Demolition				5.0%	\$25.13
20 Erosion Control				2.0%	\$10.05
21 Contingency				35.0%	\$175.92
				<b>GRAND TOTAL PER FOOT</b>	<b>\$801.70</b>
				<b>USE</b>	<b>\$810.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.
- 10 "Upgrade existing" includes 25% more roadway with new curbs, joint trench, but assumes retention of some existing utilities

**MINOR COLLECTOR (74FT Right-of-Way) - Upgrade Existing Collector**

**Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT (NEW)	QUANTITY/FT (UPGRADE)	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	74	18.5	SF	\$0.10	\$1.85
2 Excavation	3.56	0.89	CY	\$14.30	\$12.73
3 Asphaltic Concrete ( 4" Depth)	1.45	0.3625	Ton	\$70.00	\$25.38
4 Aggregate Base (12" Depth)	2.36	0.59	CY	\$28.40	\$16.76
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
6 5' Sidewalk (4" P.C.C W/ 6" AB)	10	10	SF	\$4.15	\$41.50
7 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
8 Signing	1	1	LF	\$1.21	\$1.21
9 Striping	3	3	LF	\$0.55	\$1.65
10 Joint Trench	1	1	LF	\$90.00	\$90.00
11 Landscaping	14	7	SF	\$1.10	\$7.70
12 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
13 Potable Water	1	0	LF	\$100.00	\$0.00
14 Drainage	1	1	LF	\$213.00	\$213.00
<i>SUBTOTAL</i>					\$504.05
<b>ADDITIONAL COSTS</b>					
15 Construction Surveying				2.5%	\$12.60
16 Traffic Handling				5.0%	\$25.20
17 Mobilization				10.0%	\$50.40
18 Demolition				5.0%	\$25.20
19 Erosion Control				2.0%	\$10.08
20 Contingency				35.0%	\$176.42
<b>GRAND TOTAL PER FOOT</b>					<b>\$803.96</b>
USE					<b>\$810.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

**LOCAL 1 (74FT Right-of-Way) - Upgrade Existing Local Road**  
**Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
	(New)	(Upgrade)			
1 Clearing & Grubbing	74	18.5	SF	\$0.10	\$1.85
2 Excavation	2.96	0.74	CY	\$14.30	\$10.58
3 Asphaltic Concrete ( 4" Depth)	1.25	0.3125	Ton	\$70.00	\$21.88
4 Aggregate Base (12" Depth)	1.54	0.385	CY	\$28.40	\$10.93
5 6" Barrier Curb (City Detail 202)	2	2	LF	\$21.64	\$43.28
6 6" P.P.C. Curb, Type A (City Detail 201)	2	2	LF	\$8.05	\$16.10
7 5' Sidewalk (4" P.C.C W/ 6" AB)	10	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
9 Signing	1	1	LF	\$1.21	\$1.21
10 Striping	2	2	LF	\$0.55	\$1.10
11 Joint Trench	1	1	LF	\$90.00	\$90.00
12 Landscaping	26	13	SF	\$1.10	\$14.30
13 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
14 Potable Water	1	0	LF	\$100.00	\$0.00
15 Drainage	1	1	LF	\$213.00	\$213.00
<i>SUBTOTAL</i>					\$514.73
<b>ADDITIONAL COSTS</b>					
16 Construction Surveying				2.5%	\$12.87
17 Traffic Handling				5.0%	\$25.74
18 Mobilization				10.0%	\$51.47
19 Demolition				5.0%	\$25.74
20 Erosion Control				2.0%	\$10.29
21 Contingency				35.0%	\$180.16
<b>GRAND TOTAL PER FOOT</b>					<b>\$821.00</b>
USE					<b>\$830.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of curb.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.

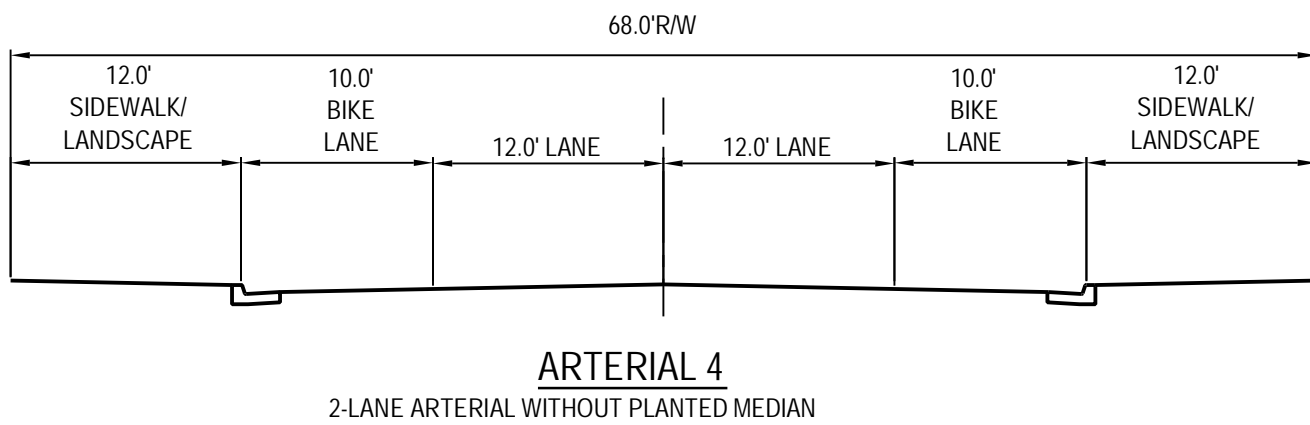
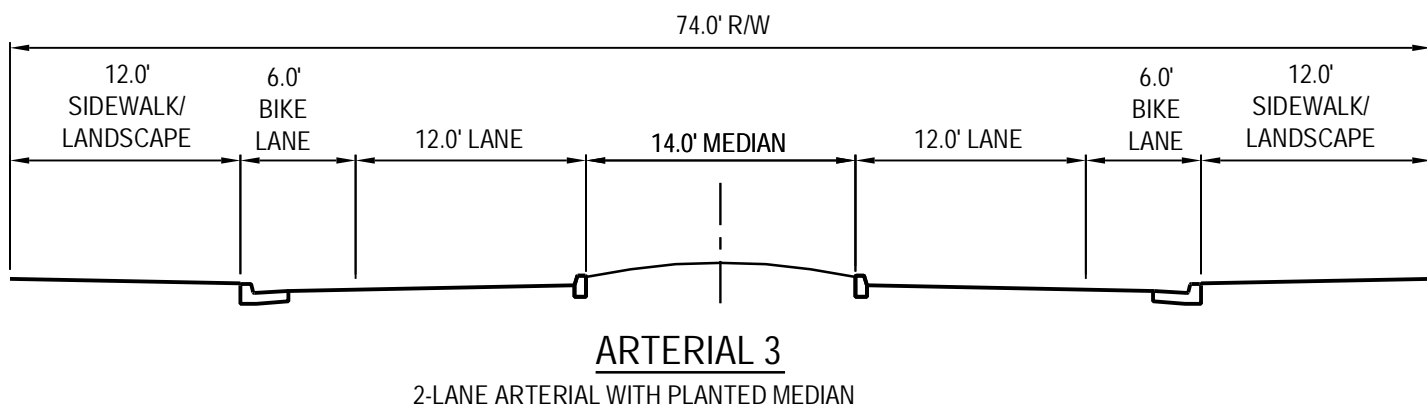
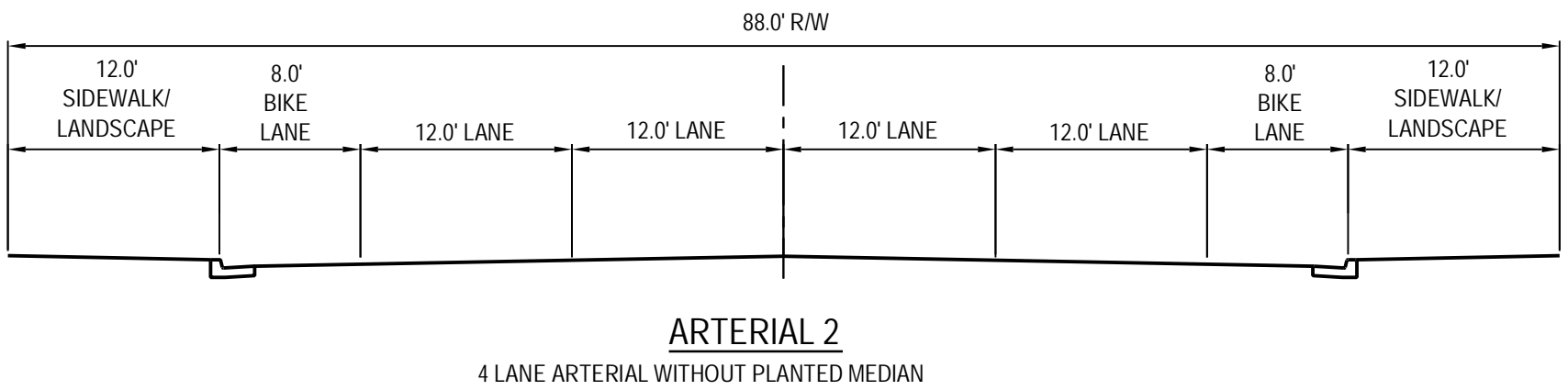
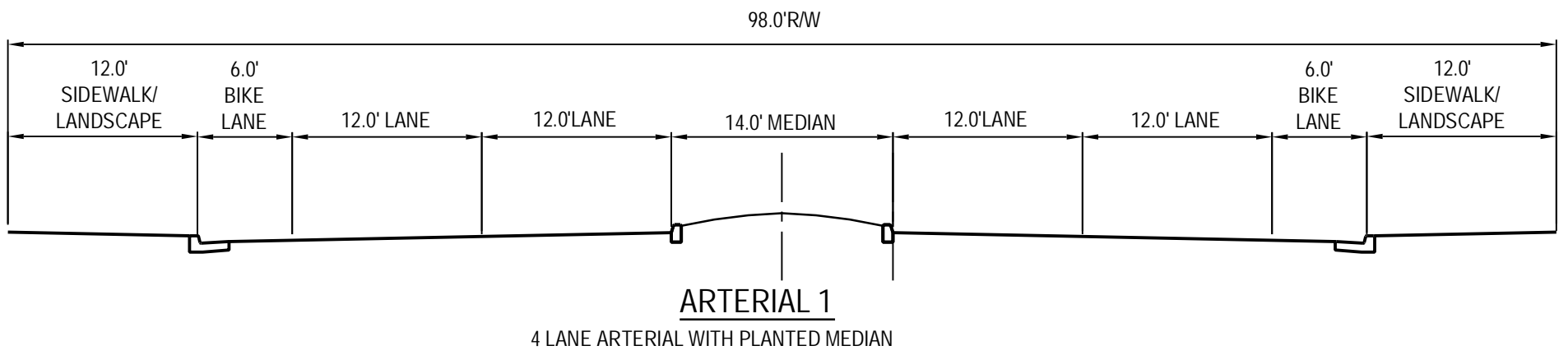
**LOCAL 2 (60FT Right-of-Way) - Upgrade Existing Local Road**  
**Proposed Work - Upgrade Existing Roadway**

ITEM	QUANTITY/FT (NEW)	QUANTITY/FT (UPGRADE)	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	60	15	SF	\$0.10	\$1.50
2 Excavation	1.88	0.47	CY	\$14.30	\$6.72
3 Asphaltic Concrete ( 4" Depth)	0.95	0.24	Ton	\$70.00	\$16.63
4 Aggregate Base (12" Depth)	1.28	0.32	CY	\$28.40	\$9.09
5 6" Barrier Curb (City Detail 202)	0.8	0.8	LF	\$21.64	\$17.31
6 6" Roll Curb (City Detail 202)	1.2	1.2	LF	\$10.50	\$12.60
7 5' Sidewalk (4" P.C.C W/ 6" AB)	10	10	SF	\$4.15	\$41.50
8 Street Lights & Conduit - 75' spacing (staggered)	1	1	LF	\$49.00	\$49.00
9 Signing	1	1	LF	\$1.21	\$1.21
10 Striping	2	2	LF	\$0.55	\$1.10
11 Joint Trench	1	1	LF	\$90.00	\$90.00
12 Landscaping	12	6	SF	\$1.10	\$6.60
13 Sanitary Sewer	1	0	LF	\$195.00	\$0.00
14 Potable Water	1	0	LF	\$100.00	\$0.00
15 Drainage	1	1	LF	\$213.00	\$213.00
<i>SUBTOTAL</i>					\$466.26
<b>ADDITIONAL COSTS</b>					
16 Construction Surveying				2.5%	\$11.66
17 Traffic Handling				5.0%	\$23.31
18 Mobilization				10.0%	\$46.63
19 Demolition				5.0%	\$23.31
20 Erosion Control				2.0%	\$9.33
21 Contingency				35.0%	\$163.19
<b>GRAND TOTAL PER FOOT</b>					<b>\$743.68</b>
USE					<b>\$750.00</b>

**Notes:**

- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
- 2 Clearing & Grubbing assumes minimal tree removal
- 3 Excavation is assumed to be balanced and the depth of excavation is assumed to be less than 2ft .
- 4 Estimate assumes all existing pavement is replaced.
- 5 Aggregate Base quantities extend to back of barrier curb. At rolled curb sections aggregate base quantities extend to back of sidewalk.
- 6 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
- 7 Sanitary Sewer and Potable water costs do not include service connections.
- 8 Right-of-way acquisition costs are not included in the estimate.
- 9 Engineering and Construction Costs are not included in the estimate.





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PROJECT NO: 60043290
DRAWN BY: E.M.
CHECKED BY: G.M.R.
SCALE: NTS

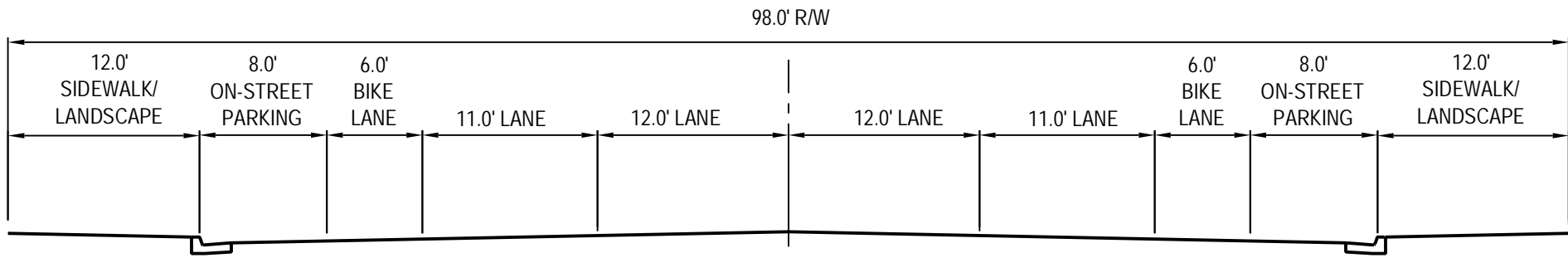


**AECOM**  
2101 WEBSTER STREET, SUITE 1900  
OAKLAND, CALIFORNIA 94612  
PHONE: 510-763-2929  
FAX: 510-834-5220

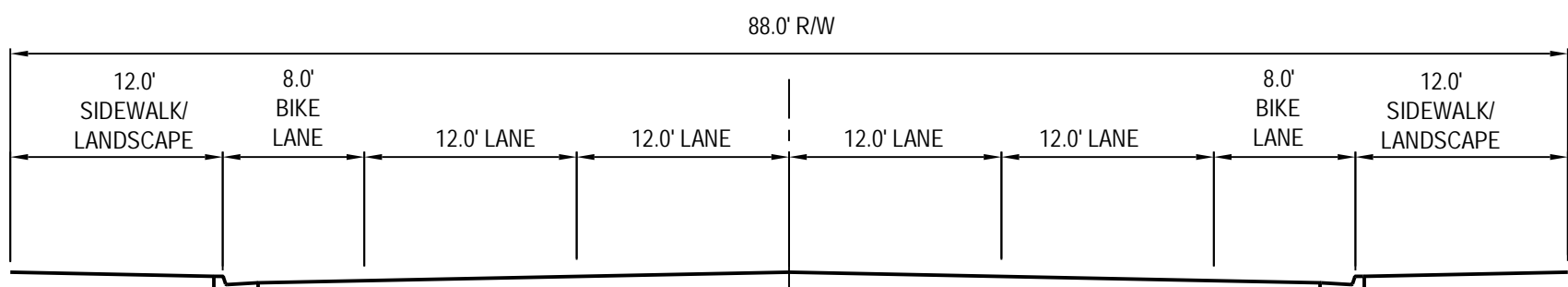


9955 LIVE OAK BOULEVARD  
LIVE OAK, CA 95953  
(530) 695-2112 PHONE  
(530) 695-2595 FAX

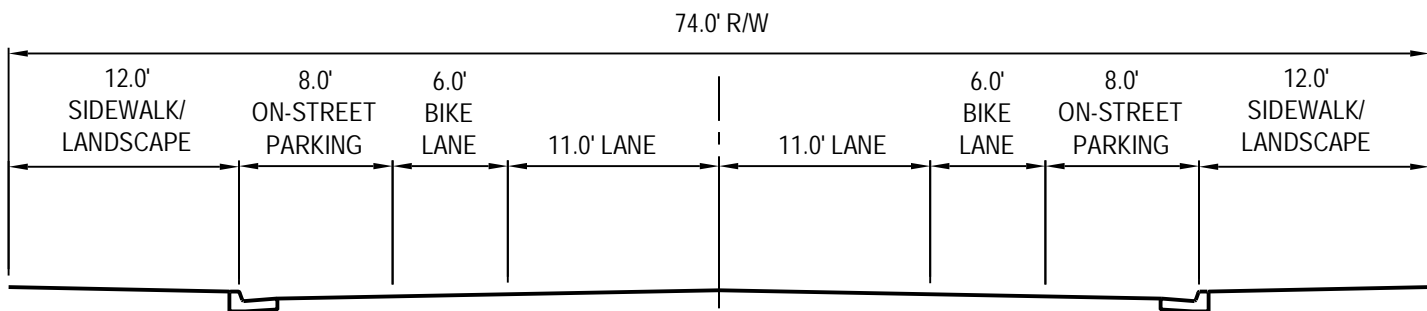
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SHEET	REV



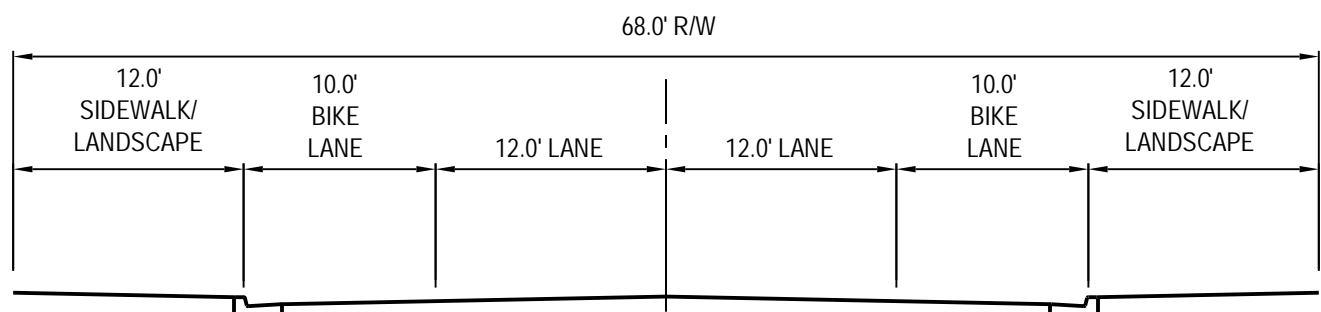
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**MAJOR COLLECTOR 2**  
4-LANE MAJOR COLLECTOR WITHOUT ON-STREET PARKING



**MAJOR COLLECTOR 3**  
2-LANE MAJOR COLLECTOR WITH ON-STREET PARKING



**MAJOR COLLECTOR 4**  
2-LANE MAJOR COLLECTOR WITHOUT ON-STREET PARKING

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DATE:  
JULY 29, 2010

PROJECT NO: 60043290  
DRAWN BY: E.M.  
CHECKED BY: G.M.R.  
SCALE: NTS



**AECOM**

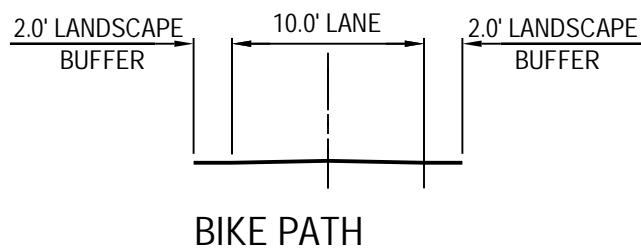
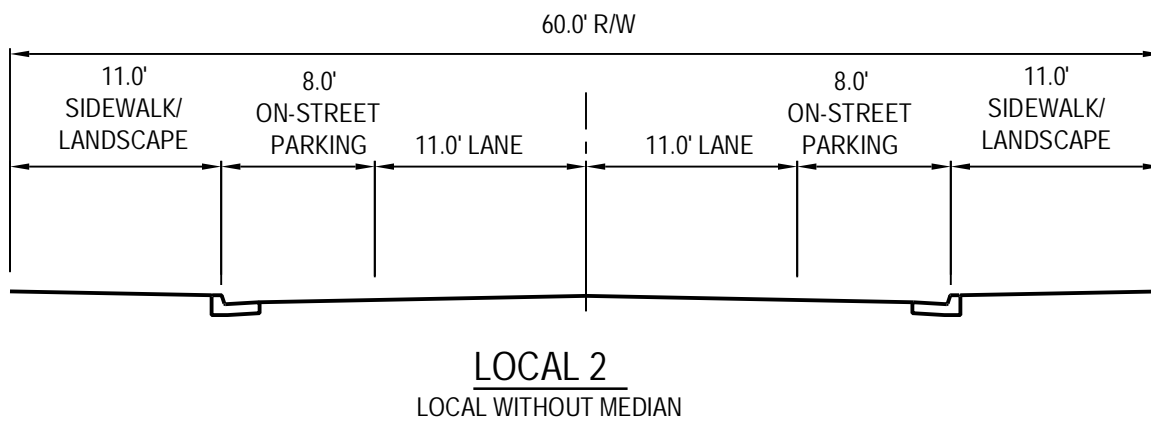
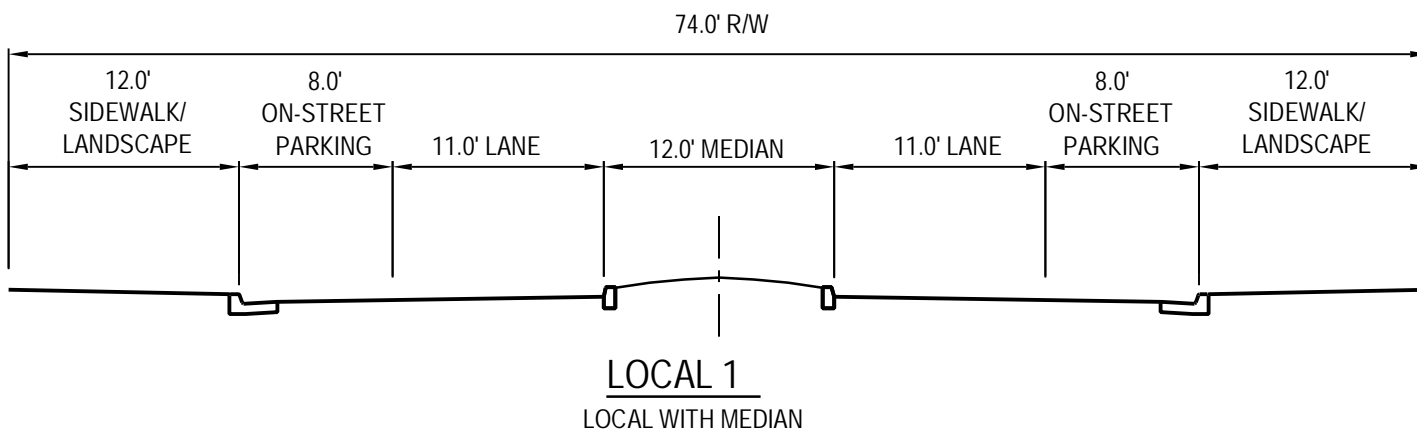
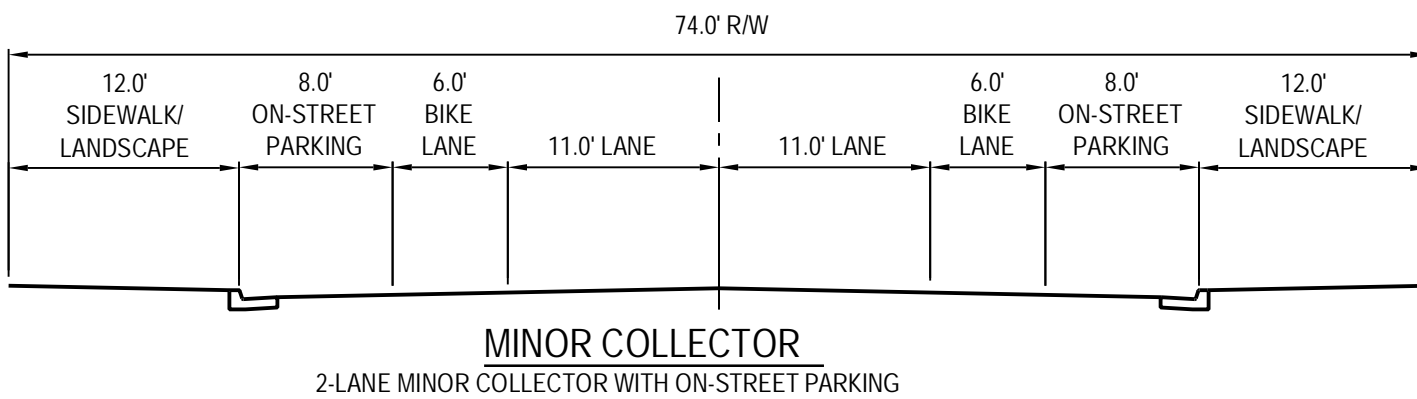
2101 WEBSTER STREET, SUITE 1900  
OAKLAND, CALIFORNIA 94612  
PHONE: 510-763-2929  
FAX: 510-834-5220



9955 LIVE OAK BOULEVARD  
LIVE OAK, CA 95953  
(530) 695-2112 PHONE  
(530) 695-2595 FAX

**CITY OF LIVE OAK**  
**GENERAL PLAN UPDATE**  
CROSS SECTIONS  
MAJOR COLLECTOR

DRAWING NUMBER:	
SHEET	REV



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DATE:  
JULY 29, 2010

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PROJECT NO: 60043290  
DRAWN BY: E.M.  
CHECKED BY: G.M.R.  
SCALE: NTS



**AECOM**

2101 WEBSTER STREET, SUITE 1900  
OAKLAND, CALIFORNIA 94612  
PHONE: 510-763-2929  
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LIVE OAK, CA 95953  
(530) 695-2112 PHONE  
(530) 695-2595 FAX

**CITY OF LIVE OAK  
GENERAL PLAN UPDATE**

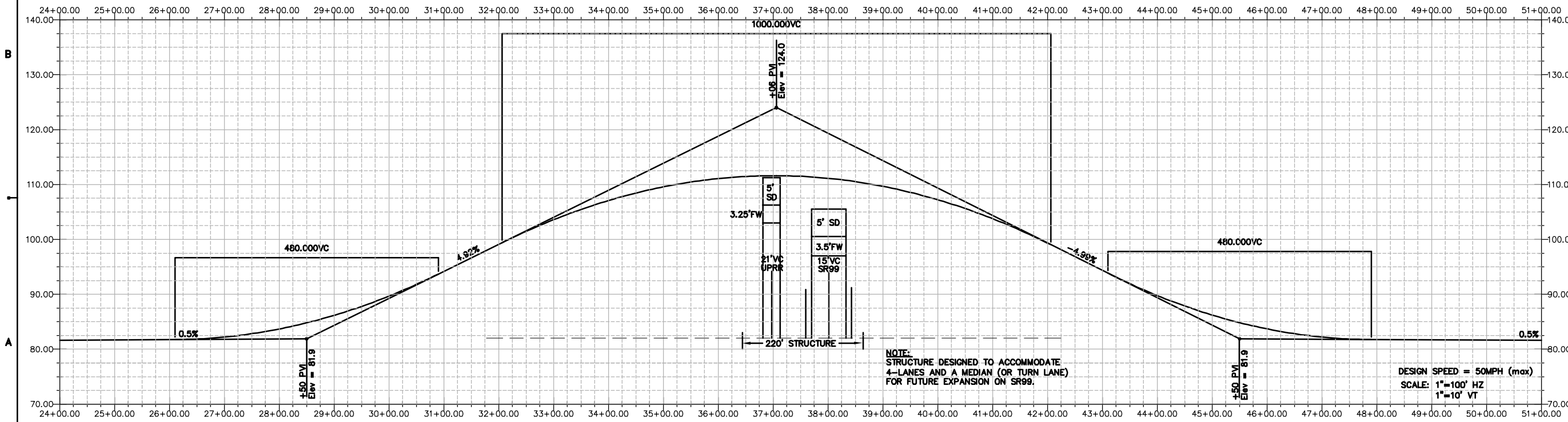
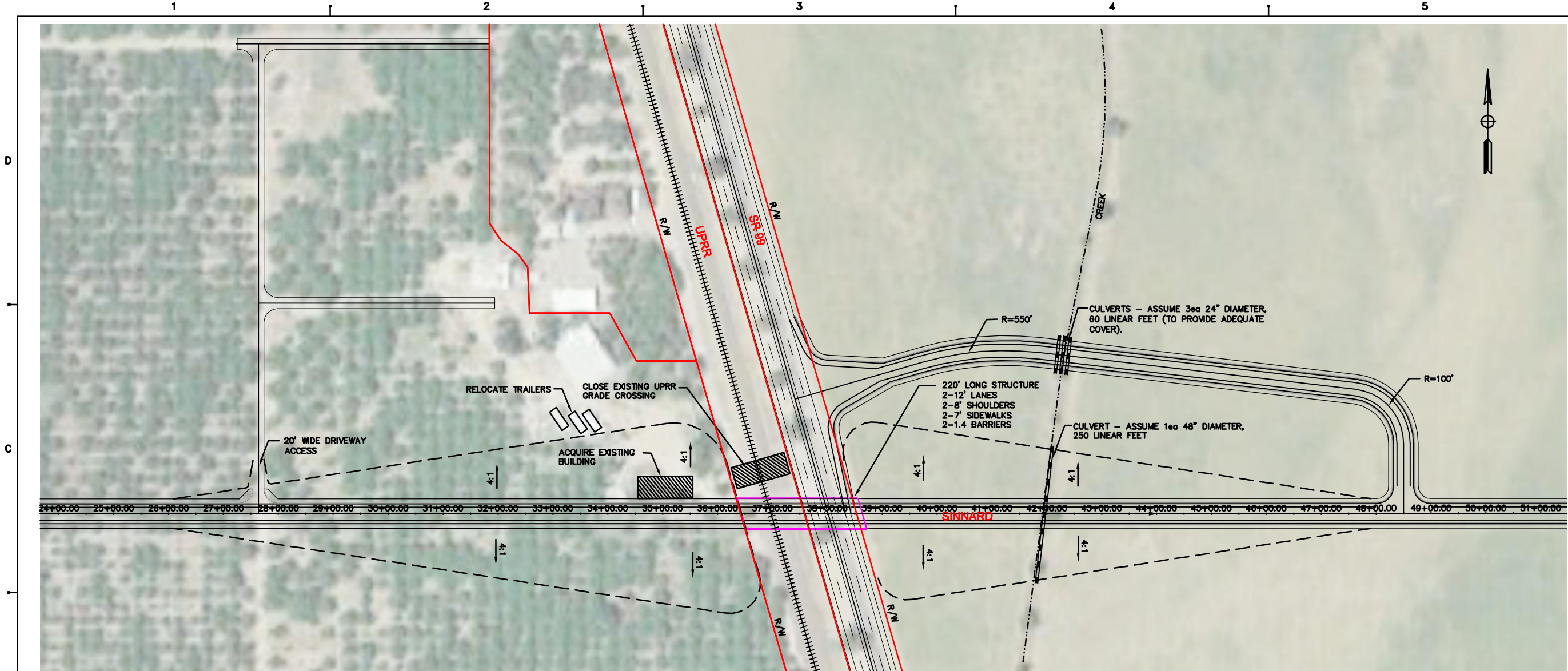
CROSS SECTIONS  
MINOR COLLECTOR,  
LOCAL AND BIKE PATH

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DRAWING NUMBER:

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SHEET	REV
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CLIENT:  
**CITY OF LIVE OAK**  
 GENERAL PLAN UPDATE



9955 LIVE OAK BOULEVARD  
 LIVE OAK, CA 95953  
 (530) 695-2112 PHONE  
 (530) 695-2595 FAX

DESIGNER:  
**AECOM**  
 2101 WEBSTER STREET, SUITE 1900  
 OAKLAND, CALIFORNIA 94612  
 PHONE: 510-763-2929  
 FAX: 510-834-5220

REGISTRATION:  


REV	DATE	DESCRIPTION
-	04/02/2010	10% DESIGN

PROJECT NO:  
 DRAWN BY: K. OAKS  
 CHECKED BY: G. RUBENDALL  
 SCALE: 1"=100'  
 DRAWING DATE:

KEY PLAN:

DRAWING TITLE:  
**SINNARD AVE.  
 OVERCROSSING**

DRAWING NUMBER:

SHEET \_\_\_\_\_ REV \_\_\_\_\_  
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NOT FOR CONSTRUCTION

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## CONCEPTUAL COST ESTIMATE

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### Sinnard Avenue Overcrossing At SR99 and UPRR

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### Proposed Two Lane Arterial Overcrossing With a Two Lane Access Road to SR-99

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### SUMMARY OF ESTIMATE

SINNARD AVE. OVERCROSSING	<u>\$10,219,840</u>
TWO LANE ACCESS ROAD TO SR99	<u>\$1,300,022</u>
TOTAL CONCEPTUAL COST	<u>\$11,520,000</u>

Notes:

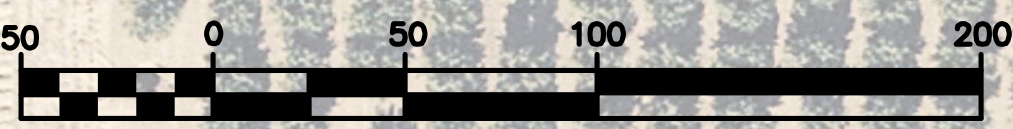
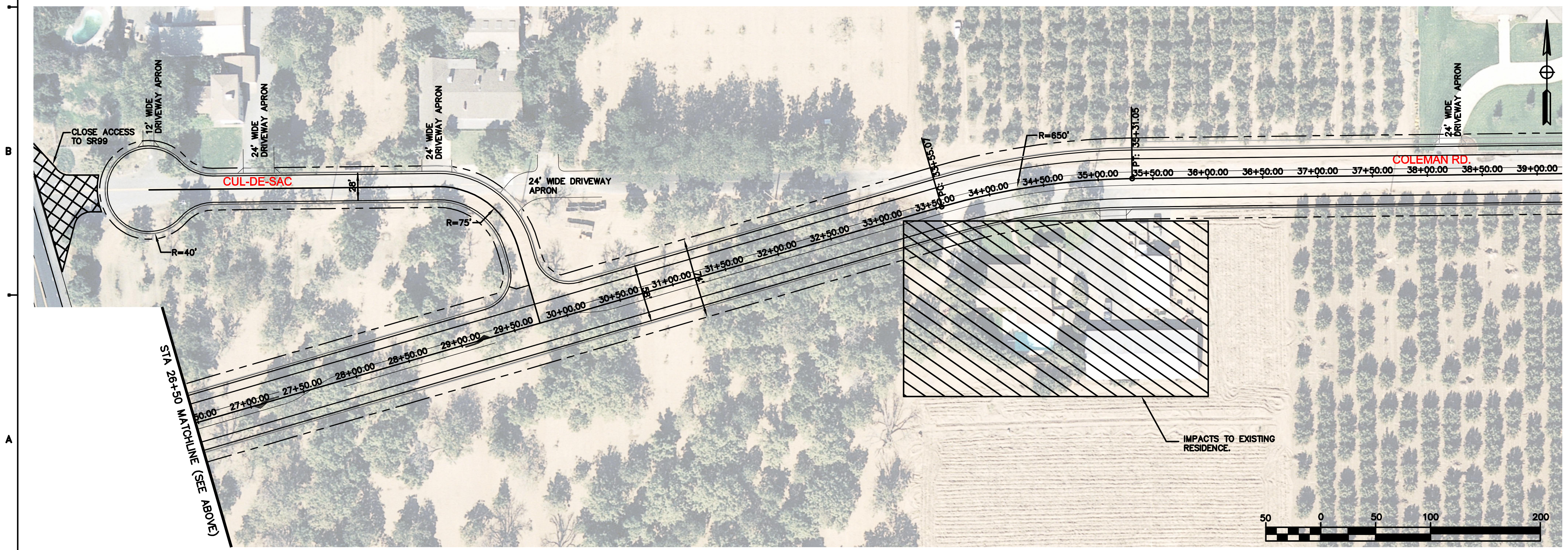
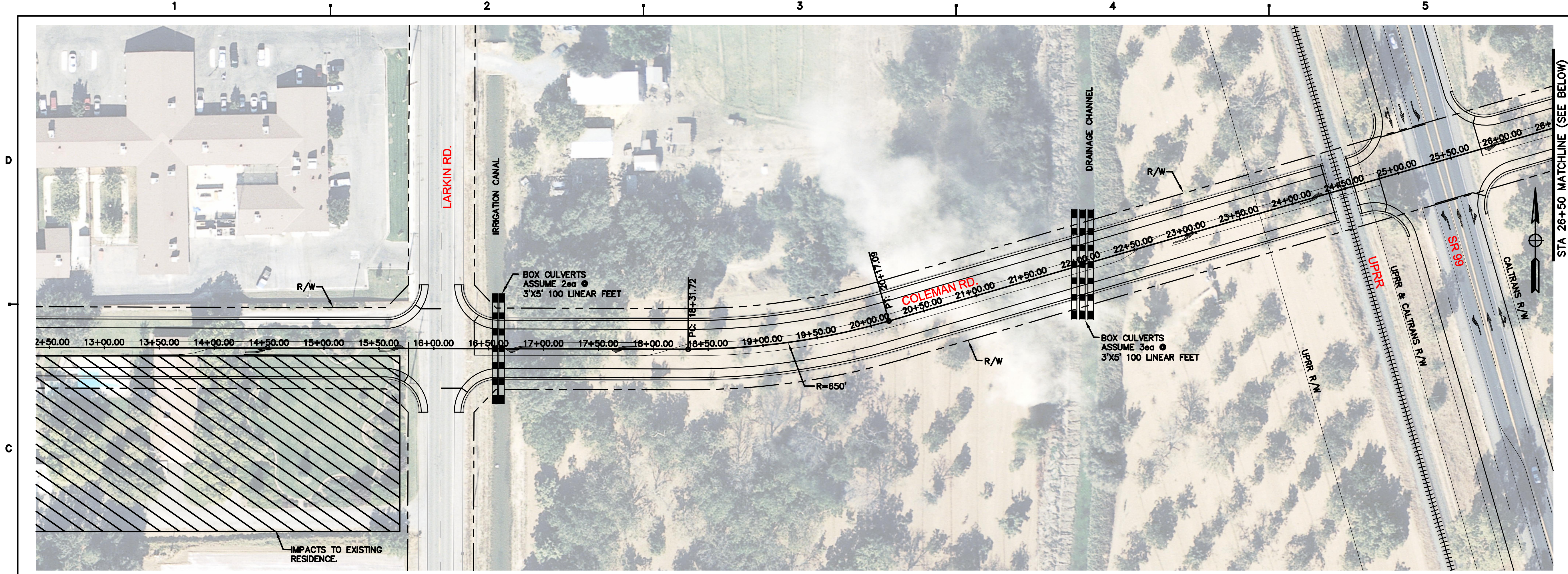
- 
- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
  - 2 Clearing & Grubbing assumes tree removal within the existing orchard area.
  - 3 Costs associated with demolition are minimal and are included in the contingency.
  - 4 Estimate for Sinnard avenue assumes new pavement; all existing pavement is replaced.
  - 5 Aggregate Base quantities extend to back of curb.
  - 6 Estimate does not include widening SR99.
  - 7 Right-of-way acquisition costs are not included in the estimate.
  - 8 Engineering and construction costs are not included in the estimate.
-

**SINNARD AVE. OVERCROSSING****Proposed Work - New Structure, New Roadway and Drainage.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	397,437	SF	\$0.16	\$63,589.92
2 Roadway Excavation	5,200	CY	\$14.30	\$74,360.00
3 Embankment Fill	250,000	CY	\$10.00	\$2,500,000.00
4 Asphaltic Concrete ( 6" Depth)	3441	Ton	\$70.00	\$240,870.00
5 Aggregate Base (18" Depth)	6,454	CY	\$28.40	\$183,299.28
6 6" Barrier Curb (City Detail 202)	5,600	LF	\$21.64	\$121,184.00
7 5' Sidewalk (4" P.C.C)	27,350	SF	\$4.15	\$113,502.50
8 Structure	12,505	SF	\$200.00	\$2,501,000.00
9 Street Lights & Conduit - 75' spacing (staggered)	2,800	LF	\$49.00	\$137,200.00
10 Signing	2,800	LF	\$1.20	\$3,360.00
11 Striping	14,000	LF	\$0.55	\$7,700.00
12 Landscaping	13,470	SF	\$1.10	\$14,817.00
13 Roadway Drainage	2,800	LF	\$213.00	\$596,400.00
14 48" dia cross culvert	250	LF	\$230.00	\$57,500.00
			<i>SUBTOTAL</i>	\$6,614,782.70
ADDITIONAL COSTS				
15 Construction Surveying			2.5%	\$165,369.57
16 Traffic Handling			5.0%	\$330,739.14
17 Mobilization			10.0%	\$661,478.27
18 Erosion Control			2.0%	\$132,295.65
19 Contingency			35.0%	\$2,315,173.95
			<b>GRAND TOTAL PER FOOT</b>	<b>\$10,219,839.27</b>
			USE	\$10,219,840.00

**Two-Lane Access Road To SR99****Proposed Work - New Roadway and Drainage.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	75,985	SF	\$0.10	\$7,598.50
2 Excavation	5,630	CY	\$14.30	\$80,509.00
3 Asphaltic Concrete (6" Depth)	1960	Ton	\$70.00	\$137,200.00
4 Aggregate Base (18" Depth)	3,545	CY	\$28.40	\$100,678.00
5 6" Barrier Curb (City Detail 202)	2,662	LF	\$21.64	\$57,605.68
6 5' Sidewalk (4" P.C.C)	19,430	SF	\$4.15	\$80,634.50
7 Street Lights & Conduit - 75' spacing (staggered)	1,248	LF	\$49.00	\$61,152.00
8 Signing	1,248	LF	\$1.21	\$1,510.08
9 Striping	3,744	LF	\$0.55	\$2,059.20
10 Landscaping	21,970	SF	\$1.10	\$24,167.00
11 Roadway Drainage	1,248	LF	\$213.00	\$265,824.00
12 24" dia. Cross Culverts	180	LF	\$125.00	\$22,500.00
			<i>SUBTOTAL</i>	\$841,437.96
ADDITIONAL COSTS				
13 Construction Surveying			2.5%	\$21,035.95
14 Traffic Handling - Includes UPRR Crossing			5.0%	\$42,071.90
15 Mobilization			10.0%	\$84,143.80
16 Erosion Control			2.0%	\$16,828.76
17 Contingency			35.0%	\$294,503.29
			GRAND TOTAL PER FOOT	\$1,300,021.65
			USE	\$1,300,030.00



CLIENT:  
**CITY OF LIVE OAK  
GENERAL PLAN UPDATE**



9855 LIVE OAK BOULEVARD  
LIVE OAK, CA 95853  
(530) 695-2112 PHONE  
(530) 695-2595 FAX

DESIGNER:



2101 WEBSTER STREET, SUITE 1900  
OAKLAND, CALIFORNIA 94612  
PHONE: 510-763-2929  
FAX: 510-834-5220

REGISTRATION:



04/02/2010 10% DESIGN

REV	DATE	DESCRIPTION

PROJECT NO:  
DRAWN BY: K. OAKS  
CHECKED BY: G. RUBENDALL  
SCALE: 1"=50'  
DRAWING DATE:

KEY PLAN:

DRAWING TITLE:  
**COLEMAN RD.  
AT-GRADE  
CROSSING**

DRAWING NUMBER:

NOT FOR CONSTRUCTION



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## CONCEPTUAL COST ESTIMATE

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### Coleman Road Intersection at SR99 and UPRR

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### Proposed Three-Lane Collector with an At-Grade Crossing at UPRR and SR99

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### SUMMARY OF ESTIMATE

COLEMAN ROAD	<u>\$4,701,040</u>
CUL-DE-SAC	<u>\$566,610</u>
AT-GRADE INTERSECTION - SR99 WIDENING	<u>\$1,247,280</u>
TOTAL CONCEPTUAL COST	<u>\$6,515,000</u>

Notes:

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- 1 Costs are estimated using prices adjusted for 2010 and are based on Caltrans Contract Cost Data and bid results from Public Works projects.
  - 2 Clearing & Grubbing assumes minimal tree removal.
  - 3 Estimate for Coleman Rd. assumes new pavement; all existing pavement is replaced.
  - 4 Aggregate base quantities extend to back of curb on Coleman and to the back of sidewalk on the cul-de-sac.
  - 5 Joint Trench Includes Gas, Electrical Lines, and Cable TV.
  - 6 Sanitary Sewer and Potable water costs do not include service connections.
  - 7 Right-of-way acquisition costs are not included in the estimate.
  - 8 Engineering and construction costs are not included in the estimate.
-

**COLEMAN ROAD (74FT Right-of-Way)****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	191,180	SF	\$0.10	\$19,118.00
2 Excavation	9,441	CY	\$14.30	\$135,006.30
3 24' Driveway Apron	2	EA	\$1,600.00	\$3,200.00
4 Asphaltic Concrete ( 6" Depth)	5610	Ton	\$70.00	\$392,700.00
5 Aggregate Base (18" Depth)	8,310	CY	\$28.40	\$236,004.00
6 Rail Crossing (track Panels)	1,480	SF	\$6.70	\$9,916.00
7 6" Barrier Curb (City Detail 202)	5,064	LF	\$21.64	\$109,584.96
8 5' Sidewalk (4" P.C.C )	21,000	SF	\$4.15	\$87,150.00
9 Street Lights & Conduit - 75' spacing (staggered)	2,700	LF	\$49.00	\$132,300.00
10 Signing	2,700	LF	\$1.21	\$3,267.00
11 Striping	15,324	LF	\$0.55	\$8,428.20
12 Joint Trench	2,530	LF	\$90.00	\$227,700.00
13 Landscaping	10,348	SF	\$1.10	\$11,382.80
14 Sanitary Sewer	2,700	LF	\$195.00	\$526,500.00
15 Potable Water	2,700	LF	\$100.00	\$270,000.00
16 Drainage	2,700	LF	\$213.00	\$575,100.00
17 3'x5' Box Culverts	500	LF	\$400.00	\$200,000.00
			<i>SUBTOTAL</i>	\$2,947,357.26
ADDITIONAL COSTS				
18 Construction Surveying			2.5%	\$73,683.93
19 Traffic Handling			5.0%	\$147,367.86
20 Mobilization			10.0%	\$294,735.73
21 Demolition			5.0%	\$147,367.86
22 Erosion Control			2.0%	\$58,947.15
23 Contingency			35.0%	\$1,031,575.04
			<b>GRAND TOTAL PER FOOT</b>	<b>\$4,701,034.83</b>
			USE	\$4,701,040.00

**CUL-DE-SAC (38FT Right-of-Way)****Proposed Work - New Roadway, Potable Water, Drainage, Sanitary Sewer, and Joint trenching.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	19,980	SF	\$0.10	\$1,998.00
2 Excavation	1,480	CY	\$14.30	\$21,164.00
3 24' Driveway Apron	3	EA	\$1,600.00	\$4,800.00
4 12' Driveway Apron	1	EA	\$800.00	\$800.00
5 Asphaltic Concrete ( 4" Depth)	335	Ton	\$70.00	\$23,450.00
6 Aggregate Base (12" Depth)	500	CY	\$28.40	\$14,200.00
7 6" Roll Curb (City Detail 202)	941	LF	\$8.05	\$7,575.05
8 5' Sidewalk (4" P.C.C)	4,665	SF	\$4.15	\$19,359.75
9 Street Lights & Conduit - 75' spacing (staggered)	405	LF	\$49.00	\$19,845.00
10 Signing	405	LF	\$1.21	\$490.05
11 Striping	405	LF	\$0.55	\$222.75
12 Joint Trench	405	LF	\$90.00	\$36,450.00
13 Landscaping	5,410	SF	\$1.10	\$5,951.00
14 Sanitary Sewer	405	LF	\$195.00	\$78,975.00
15 Potable Water	405	LF	\$100.00	\$40,500.00
16 Drainage	405	LF	\$213.00	\$86,265.00
			<i>SUBTOTAL</i>	\$362,045.60
ADDITIONAL COSTS				
17 Construction Surveying			2.5%	\$9,051.14
18 Traffic Handling			2.0%	\$7,240.91
19 Mobilization			10.0%	\$36,204.56
20 Demolition			5.0%	\$18,102.28
21 Erosion Control			2.0%	\$7,240.91
22 Contingency			35.0%	\$126,715.96
			<b>GRAND TOTAL PER FOOT</b>	<b>\$566,601.36</b>
			USE	\$566,610.00

**AT GRADE INTERSECTION (SR 99 WIDENING AT COLEMAN ROAD)****Proposed Work - New Roadway, Drainage, and Traffic Signal.**

ITEM	QUANTITY/FT	UNIT	UNIT PRICE	PER FT COST
1 Clearing & Grubbing	20,595	SF	\$0.10	\$2,059.50
2 Excavation	1,015	CY	\$14.30	\$14,514.50
3 Asphaltic Concrete ( 6" Depth)	775	Ton	\$70.00	\$54,250.00
4 Aggregate Base (18" Depth)	1,145	CY	\$28.40	\$32,518.00
5 Concrete Slab - Rail Crossing	1,480	SF	\$80.00	\$118,400.00
6 Street Lights & Conduit - 75' spacing (staggered)	583	LF	\$49.00	\$28,567.00
7 Traffic Signal (SR99 and Rail Crossing)	1	LS	\$450,000.00	\$450,000.00
8 Signing	583	LF	\$1.21	\$705.43
9 Striping	4,800	LF	\$0.55	\$2,640.00
10 Drainage	300	LF	\$213.00	\$63,900.00
			<i>SUBTOTAL</i>	\$767,554.43
ADDITIONAL COSTS				
11 Construction Surveying			2.5%	\$19,188.86
12 Traffic Handling - Includes UPRR Crossing			8.0%	\$61,404.35
13 Mobilization			10.0%	\$76,755.44
14 Demolition			5.0%	\$38,377.72
15 Erosion Control			2.0%	\$15,351.09
16 Contingency			35.0%	\$268,644.05
			GRAND TOTAL PER FOOT	\$1,247,275.95
			USE	\$1,247,280.00