## Appendices





For Suisun Valley Zoning Regulations, see Chapter 28 of the Code of Solano County (Zoning Regulations), amended by the Board of Supervisors on February 1, 2011 (Ordinance No. 2011-1717)



# **B** Roadway Cost Estimates

Table B-1
Phase I: Spot Improvements at ATCs

	N		st Center Near son Lane on Valley Road	Center N	and South of Tourist lear Morrison Lane on isun Valley Road		athy Road at ner School	Gom	and South of er School on rnathy Road	Road/	ear Clayton Mankas Corner I Intersection	Mankas Corner Road Approaching Mankas Corner Road		
Bid Item	Improvements Miles	Length Mile	Cost Per Mile	Length Mile	Cost Per Mile	Length Mile	Cost Per Mile	Length Mile	Cost Per Mile	Length Mile	Cost Per Mile	Length Cost Per Mile Mile	Unit	Total Cost
Clearing and grubbing	1.3	0.1	\$277,200.00	0.2	\$158,400.00	0.1	\$277,200.00	0.4	\$158,400.00	0.2	\$ 158,400.00	0.3 \$158,400.00	Mile	\$229,680.00
Unpaved shoulder	1.3	0.1	\$39,111.50	0.2	\$78,223.00	0.1	\$39,111.50	0.4	\$78,223.00	0.2	\$ -	0.3 \$78,223.00	Mile	\$78,223.00
Excavation (to a depth of 14" below grade)	1.3	0.1	\$604,920.00	0.2	\$229,453.00	0.1	\$604,920.00	0.4	\$229,453.00	0.2	\$ 292,030.00	0.3 \$229,453.00	Mile	\$385,897.70
2" Asphalt concrete	1.3	0.1	\$297,000.00	0.2	\$66,000.00	0.1	\$297,000.00	0.4	\$66,000.00	0.2	\$ 132,000.00	0.3 \$66,000.00	Mile	\$145,200.00
6" Aggregate base	1.3	0.1	\$299,201.00	0.2	\$66,489.00	0.1	\$299,201.00	0.4	\$66,489.00	0.2	\$ 132,978.00	0.3 \$66,489.00	Mile	\$146,275.90
6" Aggregate subbase fill for over-excavation	1.3	0.1	\$199,468.00	0.2	\$66,489.00	0.1	\$199,468.00	0.4	\$66,489.00	0.2	\$ 132,978.00	0.3 \$66,489.00	Mile	\$126,329.30
Decompose granite	0.2									0.2	\$ 12,672.00		Mile	\$2,534.40
Signage and Striping														
Interpretive signage allowance per mile	1.3	0.1	\$4,000.00	0.2	\$4,000.00	0.1	\$4,000.00	0.4	\$4,000.00	0.2	\$4,000.00	0.3 \$4,000.00	Mile	\$5,200.00
Bike lane striping and pavement marking	1.3	0.1	\$52,800.00	0.2	\$52,800.00	0.1	\$52,800.00	0.4	\$52,800.00	0.2	\$52,800.00	0.3 \$52,800.00	Mile	\$68,640.00
	Subtotal		\$177,371		\$144,371		\$177,371		\$288,742		\$183,572	\$216,55	7	
Earthwork allowance (50%)			\$88,686		\$72,186		\$88,686		\$144,371		\$91,786	\$108,279	)	
Utility Allowance (40%)			\$70,948		\$57,748		\$70,948		\$115,497		\$73,429	\$86,623	3	
Landscape allowance (30%)			\$53,211		\$43,311		\$53,211		\$86,623		\$55,072	\$64,96	7	
Drainage allowance (15%)			\$26,606		\$21,656		\$26,606		\$43,311		\$27,536	\$32,484	1	Subtotal
	Subtotal		\$416,822		\$339,272		\$416,822		\$678,544		\$431,394	\$508,909	)	\$2,791,800
Contingency (50%)			\$208,411		\$169,636		\$208,411		\$339,272		\$215,698	\$254,45	5	
Right-of-Way Acquisition			\$15,840		\$31,680		\$44,352		\$177,408		\$63,360	\$95,040	)	<b>Grand Total</b>
	Total		\$641,073		\$540,588		\$669,585		\$1,195,224		\$710,452	\$858,404	ı	\$4,615,300

Source: DKS Associates 2009



Table B-2
Phase II: Bike Lanes, Bridge Replacement, Shoulder Widening

Bid Item	Quantity Miles	Abernathy Road	Mankas Road	Rockville Road	Suisun Valley Road	Unit	Unit Price	Cost
Shoulder Expansion on both sides of the road								
Clearing and grubbing	10.6	2.1	1.9	2.5	4.1	Mile	\$158,400.00	\$1,679,040.00
Unpaved shoulder	10.6	2.1	1.9	2.5	4.1	Mile	\$136,889.00	\$1,451,023.40
Excavation (to a depth of 14" below grade)	10.6	2.1	1.9	2.5	4.1	Mile	\$292,030.00	\$3,095,518.00
2" Asphalt concrete	10.6	2.1	1.9	2.5	4.1	Mile	\$66,000.00	\$699,600.00
6" Aggregate base	10.6	2.1	1.9	2.5	4.1	Mile	\$66,489.00	\$704,783.40
6" Aggregate subbase fill for over-excavation	10.6	2.1	1.9	2.5	4.1	Mile	\$66,489.00	\$704,783.40
Retaining wall	1.5				1.5	Mile	\$3,168,000.00	\$4,752,000.00
Guardrail	2.7				2.7	Mile	\$264,000.00	\$712,800.00
Signage and Striping								
Interpretive signage allowance per mile	15.0	3.5	1.9	3.1	6.5	Mile	\$2,000.00	\$30,000.00
	Subtotal	\$1,658,224	\$1,497,764	\$1,971,943	\$8,701,618			
Earthwork allowance (50%)		\$829,112	\$748,882	\$985,971	\$4,350,809			
Drainage allowance (15%)		\$248,734	\$224,665	\$295,791	\$1,305,243			
	Subtotal	\$2,736,069	\$2,471,311	\$3,253,705	\$14,357,669		Subtotal	\$22,818,800.00
Contingency (50%)		\$1,368,035	\$1,235,656	\$1,626,853	\$7,178,835			
Right-of-way acquisition		\$1,552,320	\$453,024	\$1,412,928	\$1,919,808			
		\$5,656,424	\$4,159,991	\$6,293,486	\$23,456,312		<b>Grand Total</b>	\$39,566,200.00

Source: DKS Associates 2009



Table B-3 **Phase III: Flooding Improvement Costs** 

Bid Item	Quantity miles	Abernathy Road	Mankas Road	Rockville Road	Suisun Valley Road	Unit	Unit Price	Cost
8-Foot-Wide Class II Bike Lane	•							
Signage and Striping								
Interpretive signage allowance per mile	15.0	3.5	1.9	3.1	6.5	Mile	\$2,000.00	\$30,000.00
Bike Lane Striping and pavement marking	10.6	2.1	1.9	2.5	4.1	Mile	\$52,800.00	\$559,680.00
Bridges and Structures								
Bike lane expansion on bridge (22'-wide expansion)	350.0			100	250	LF	\$1,760.00	\$616,000.00
Bridge abutments per bridge	3.0			1	2	EA	\$88,000.00	\$264,000.00
Roundabout								
Roundabout modification - add multipurpose shared path	1.0	1				LS	\$27,500.00	\$27,500.00
		\$145,380	\$104,120	\$402,200	\$845,480			
Earthwork allowance (50%)		\$72,690	\$52,060	\$201,100	\$422,740			
Drainage allowance (15%)		\$21,807	\$15,618	\$60,330	\$126,822			
	Subtotal	\$239,877	\$171,798	\$663,630	\$1,395,042		Subtotal	\$2,470,400.00
Contingency (50%)		\$119,939	\$85,899	\$331,815	\$697,521			
		\$359,816	\$257,697	\$995,445	\$2,092,563		Grand Total	\$3,705,500.00

Source: DKS Associates 2009



### **Future Water Supply**

### Table C-1 **Water Use Assumptions**

Location	Use	Est. Water gpd	Peak gpm per connection	Connection size
Agriculture	Resort	3,600	3.13	3/4"
Agriculture	Roadside Stand (5)	500	0.09	3/4"
Agriculture	Restaurant/Café (2)	24,000	8.33	3/4"
Agriculture	Bakery (2)	30,000	52.08	2"
Agriculture	Winery and tasting (2-3)	12,603	5.47	3/4"
Agriculture	Bed and Breakfast	5,500	1.91	3/4"
Agriculture	Art Gallery (3)	1,000	0.58	3/4"
Agriculture	Nursery (2)	7,380	6.41	3/4"
Agriculture	Residential	24,000	0.21	3/4"
Agriculture	Employee Housing	9,000	1.56	3/4"
North Connector	Auto Service Station	1,000	1.74	3/4"
North Connector	Roadside Stand	25	0.04	3/4"
North Connector	Restaurant/Café	4,800	8.33	3/4"
North Connector	Bakery	30,000	52.08	2"
North Connector	Winery and tasting	3,151	5.47	3/4"
North Connector	Local Products Store	25	0.04	3/4"
North Connector	Agricultural trucking services and facilities	25	0.04	3/4"
North Connector	Farm equipment fabrication and repair	1,000	1.74	3/4"
North Connector	Farm equipment sales	25	0.04	3/4"
Rockville Corners	Local Products Store	40,551	0.04	3/4"
Rockville Corners	Auto Service Station	1,000	1.74	3/4"
Rockville Corners	Office Building (2)	6,570	11.40	3/4"
Rockville Corners	Church	1,750	3.04	3/4"
Rockville Corners	Retail Shop	415	0.72	3/4"
Rockville Corners	Local Products Store	25	0.04	3/4"



Table C-1
Water Use Assumptions

Location	Use	Est. Water gpd	Peak gpm per connection	Connection size
Rockville Corners	Bakery	30,000	52.08	2"
Rockville Corners	Restaurant/Café	4,800	8.33	3/4"
Rockville Corners	Roadside Stand	25	0.04	3/4"
Morrison Lane	Winery and tasting	7,877	13.70	3/4"
Morrison Lane	Local Products Store	25	0.04	3/4"
Morrison Lane	Campground	2,970	5.16	3/4"
Morrison Lane	Restaurant/Café	4,800	8.33	3/4"
Morrison Lane	Roadside Stand	25	0.04	3/4"
Morrison Lane	Residential	600	0.21	3/4"
Mankas Corner	Restaurant/Café (2)	9,600	8.33	3/4"
Mankas Corner	Art Gallery	300	0.52	3/4"
Mankas Corner	Restaurant/Café	9,600	16.67	1 1/2"
Mankas Corner	Local Products Store	25	0.04	3/4"
Mankas Corner	Art Gallery	300	0.52	3/4"
Mankas Corner	Residential	1,200	0.21	3/4"
Mankas Corner	Bed and Breakfast	1,100	1.91	3/4"
Mankas Corner	Hotel	3,600	6.25	3/4"
Mankas Corner	Winery and tasting	1,575	2.73	3/4"
Gomer School	School	600	1.04	3/4"
Gomer School	Restaurant/Café	4,000	6.94	3/4"
Gomer School	Roadside Stand	25	0.04	3/4"
Gomer School	Educational facility	250	0.43	3/4"
Gomer School	Visitor's Center	2,376	4.13	3/4"
East Rockville Road	Roadside Stand	75	0.13	
East Rockville Road	Local Products Store	75	0.13	
Iwama Market	Retail Shop	150	0.26	3/4"
Cordelia Road/Thomasson Lane	Roadside Stand	75	0.13	
Cordelia Road/Thomasson Lane	Local Products Store	75	0.13	





### **Land Use Assumptions**

### Table D-1 **Land Use Assumptions**

Location	Use	Unit	Size of Building/Unit
Agriculture	Resort	Rooms	20,000
Agriculture	Roadside Stand (5)	Sq.ft	2,500
Agriculture	Restaurant/Café (2)	Sq.ft	6,000
Agriculture	Bakery (2)	Sq.ft	4,000
Agriculture	Winery and tasting (2-3)	Sq.ft	10,000
Agriculture	Bed and Breakfast	Rooms	10
Agriculture	Art Gallery (3)	Sq.ft	6,000
Agriculture	Nursery (2)	Sq.ft	100,000
Agriculture	Residential	Residents	400
Agriculture	Employee Housing	Residents	150
North Connector	Auto Service Station	Sq.ft	3,000
North Connector	Roadside Stand	Sq.ft	500
North Connector	Restaurant/Café	Sq.ft	3,000
North Connector	Bakery	Sq.ft	2,000
North Connector	Winery and tasting	Sq ft	3,000
North Connector	Local Products Store	Sq.ft	500
North Connector	Agricultural trucking services and facilities	Sq.ft	500
North Connector	Farm equipment sales	Sq.ft	500
Rockville Corners	Local Products Store	Sq.ft	500
Rockville Corners	Bakery	Sq.ft	2,000
Rockville Corners	Restaurant/Café	Sq.ft	3,000



Table D-1
Land Use Assumptions

Location	Us	e	Unit	Size of Building/Unit
Rockville Corners	Roadside Stand		Sq.ft	500
Morrison Lane	Winery and tasting		Sq.ft	5,000
Morrison Lane	Local Products Store		Sq.ft	500
Morrison Lane	Restaurant/Café		Sq.ft	3,000
Morrison Lane	Roadside Stand		Sq.ft	500
Morrison Lane	Residential		Residents	10
Mankas Corner	Restaurant/Café (2)		Sq.ft	6,000
Mankas Corner	Local Products Store		Sq.ft	500
Mankas Corner	Art Gallery		Sq.ft	2,000
Mankas Corner	Residential		Residents	20
Mankas Corner	Bed and Breakfast		Rooms	10
Mankas Corner	Hotel		Rooms	30
Mankas Corner	Winery and tasting		Sq.ft	5,000
Gomer School	Restaurant/Café		Sq.ft	3,000
Gomer School	Roadside Stand		Sq.ft	500
Gomer School	Educational facility		Sq.ft	5,000
Gomer School	Visitor's Center		Sq.ft	5,000
East Rockville Road	Local Products Store		Sq.ft	1,500
Cordelia Road/Thomasson Lane	Roadside Stand		Sq.ft	1,500
Cordelia Road/Thomasson Lane	Local Products Store		Sq.ft	1,500



Table D-2 **Transportation Impact Fee Calculation** 

Use Type	Trips	% of Total Trips	Number	Unit	Share of Total Cost	Cost/ Unit
Tourism	5,791	46%			\$2,121,626	
Roadside stands	322	3%	6,000	sq ft	\$117,980	\$20
Restaurant/café	1,835	15%	24,000	sq ft	\$672,218	\$28
Bakery	654	5%	8,000	sq ft	\$239,706	\$30
Winery and tasting facilities	1,655	13%	23,000	sq ft	\$606,314	\$26
Local products store	172	1%	5,000	sq ft	\$62,922	\$13
Gallery	275	2%	8,000	sq ft	\$100,675	\$13
Visitor's Center	225	2%	5,000	sq ft	\$82,411	\$16
Bed and breakfast	163	1%	20	room	\$59,859	\$2,993
Resort	245	2%	30	room	\$89,789	\$2,993
Hotel	245	2%	30	room	\$89,752	\$2,992
Commercial and Service	4,185	33%			\$1,533,095	
Agricultural trucking services	17	0%	500	sq ft	\$6,292	\$13
Service station	543	4%	3,000	sq ft	\$198,773	\$66
Nursery	3,608	29%	100,000	sq ft	\$1,321,737	\$13
Farm equipment sales	17	0%	500	sq ft	\$6,292	\$13
Residential	2,397	19%			\$878,168	
Single-family dwelling	1,732	14%	172	housing unit	\$634,555	\$1,476
Agricultural employee housing	665	5%	100	housing unit	\$243,613	\$1,624
Recreation, Education, and Public Assembly	225	2%			\$82,411	
Agricultural education	225	2%	5,000	sq ft	\$82,411	\$16
Total <sup>1</sup>	12,599	100%			\$4,615,300	
Total Phase 1 Cost	\$4,615,300					
Cost per trip	\$366					

 $<sup>^{\</sup>rm 1}{\rm Trips}$  generated by the campground were removed from the estimates



Table D-3 Transportation Impact Fee Calculation Commercial Only (No Residential)

Use Type	Trips	% of Total Trips	Number	Unit	Share of Total Cost	Cost/ Unit
Tourism Uses	5,791	57%			\$2,620,175	
Roadside stands	322	3%	6,000	sq ft	\$145,704	\$24
Restaurant/café	1,835	18%	24,000	sq ft	\$830,179	\$35
Bakery	654	6%	8,000	sq ft	\$296,034	\$37
Winery and tasting facilities	1,655	16%	23,000	sq ft	\$748,788	\$33
Local products store	172	2%	5,000	sq ft	\$77,707	\$16
Gallery	275	3%	8,000	sq ft	\$124,332	\$16
Visitor's Center	225	2%	5,000	sq ft	\$101,776	\$20
Bed and breakfast	163	2%	20	room	\$73,925	\$3,696
Resort	245	2%	30	room	\$110,888	\$3,696
Hotel	245	2%	30	room	\$110,842	\$3,695
Commercial and Service Uses	4,185	41%			\$1,893,349	
Agricultural trucking services	17	0%	500	sq ft	\$7,771	\$16
Service station	543	5%	3,000	sq ft	\$245,482	\$82
Nursery	3,608	35%	100,000	sq ft	\$1,632,325	\$16
Farm equipment sales	17	0%	500	sq ft	\$7,771	\$16
Recreation, Education, and Public	225	20/			£404.776	
Assembly Uses	225	2%			\$101,776	4
Agricultural education	225	2%	5,000	sq ft	\$101,776	\$20
Total <sup>1</sup>	10,201	100%			\$4,615,300	
Total Phase 1 Cost	\$4,615,300					
Cost per trip	\$452					

 $<sup>^{\</sup>rm 1}{\rm Trips}$  generated by the campground were removed from the estimates

