

# **FINAL**

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## **2005 Update of the Subregional Transportation Mitigation Program (STMP)**

**For the West Contra Costa Transportation  
Advisory Committee (WCCTAC)**

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## CHAPTER 1. INTRODUCTION AND SUMMARY

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### Introduction

This analysis provides the technical basis for establishing the required nexus between anticipated future development in West Contra Costa County and the need for certain local and regional transportation facilities. The specific tasks performed in preparing this analysis and their results are summarized below. The West Contra Costa Transportation Advisory Committee's (WCCTAC) Subregional Transportation Mitigation Program (STMP) was established in 1997. This is the first update of the STMP program to ensure that the various aspects of the program reflect current conditions. For the 2005 STMP update, WCCTAC retained a team led by TJKM Transportation Consultants to update technical aspects of the program.

The 2005 STMP update includes an updated project list with cost estimates for all improvement projects to be potentially funded by STMP fees.

This report presents the results of the efforts of the project team to update the WCCTAC STMP. This update effort involved the major tasks described below.

1. The amount of new development that will occur in the WCCTAC area between 2005 and 2030 was determined.
2. A new estimate was prepared of the trip generation that will result from development of the expected future land uses within the WCCTAC area. Trip generation rates from the Institute of Transportation Engineers (ITE) publication *Trip Generation* were utilized.
3. Future deficiencies on the transportation network were determined based on findings of the staff of WCCTAC, its member agencies, and the consultant team.
4. A list of projects needed to accommodate future traffic was determined.
5. Updated traffic improvement project cost estimates were prepared which reflect the latest concept designs for the projects and the latest completion status of the various projects.
6. An updated cost per trip was calculated along with the corresponding updated STMP schedule of fees.
7. A reasonable relationship between the impacts of the new growth and the fees proposed in the STMP was ascertained. State law requires that there must be a roughly proportional benefit from the proposed fees to the projects supplying the funds.

### Summary

#### *Chapter 2 – Expected Growth In Households, Employment and Peak Hour Trips*

According to ABAG's Projections 2003, the overall estimated growth in the WCCTAC area is estimated at 17,910 households (a 20.3 percent increase in 25 years) and 28,810 jobs (an increase of over 35 percent). Using standard available trip generation rates, the total increase in peak hour trips in the a.m. period is expected to be 28,571. Richmond and Hercules account for over 75 percent of the new trips.

### ***Chapter 3 – Project List and Priorities***

The recommended list of new transportation improvements to serve the WCCTAC area was developed by the WCCTAC Technical Advisory Committee and the consultants. The WCCTAC Board reviewed a preliminary list of projects in August 2004. The recommend list of new projects is shown below. Costs and details of the individual projects are described in Chapter 3 of this report.

1. Richmond Intermodal Station
2. Interchanges on I-80 at San Pablo Dam Road and at Central and on Highway 4 at Willow Avenue
3. Capitol Corridor capital and/or operational improvements
4. Ferry service from Richmond and/or Hercules/Rodeo
5. BART access and/or parking improvements
6. Bay Trail Gap Closure
7. San Pablo Dam Road improvements in downtown El Sobrante
8. San Pablo Avenue Corridor Improvements
9. N. Richmond road connection project
10. Hercules Transit Center relocation
11. Del Norte Area Transit Oriented Development project (public improvements)

The 11 projects have a total cost of \$371 million. Of this amount, approximately \$273 million is anticipated to be funded by other sources or does not satisfy nexus requirements, leaving \$98 million for funding by the updated 2005 STMP.

### ***Chapter 4 – STMP Previous Collections and Potential Yield From 2005 Update***

The existing STMP was adopted in 1997. A total of near \$2.942 million has been collected to date, or about \$39,200 per month. Most of the funds collected have been spent on the Richmond Intermodal project and the Highway 4 West Project. The 1997 Nexus Analysis indicated that \$24.5 million could be collected for the next 13 years if the maximum fee amounts were adopted, but WCCTAC adopted a fee that was lower by approximately 80 percent so that \$5.1 million was the expected yield. The adopted rates amount to about \$440 per peak hour trip, instead of the \$2,100 indicated by the nexus study. If these same rates were applied to the expected growth in the next 25 years, the yield would be \$12.6 million with the lower rates and \$60.0 million with the full rates.

### ***Chapter 5 – Program Costs and Fee Calculation***

In updating the cost per trip, the total costs of all proposed projects were determined and the outside funding and non-eligible costs were subtracted to yield a total amount to be included in the program. The program amount is \$101,043,000, and when divided by the amount of peak hour trips generated by the new development, 28,810, the 2005 STMP cost per trip is \$3,507 if all projects were to be fully funded. This figure is about 67 percent more than the \$2,100 cost per trip determined in 1997. A rate schedule is recommended to fund this full amount. However, WCCTAC may choose to provide only partial funding of the project list. In 1997, the final fees were set to cover about 20 percent of the recommended program.

### ***Chapter 6 – Nexus Findings***

California legislation requires that charges on new developments bear a reasonable relationship to the needs created by, and the benefits accruing to that development. California courts have long used that reasonableness standard or nexus to test to evaluate the constitutionality of exactions, including

development fees. Based on the analysis included in the body of this report, it can be concluded that the future development and the need for their associated improvements meet or exceed the basic requirements set forth in Government Code sections beginning with 66000 to govern development fees.

Of the \$371 million worth of needed improvements identified in this analysis, over \$121 million in outside funding sources have been identified. These outside sources primarily include Contra Costa County Measure J, which is the extension of the one-half percent sales tax levied for transportation improvements. Measure J, which is intended to fund improvements which will correct both existing and future deficiencies, is a partner to the STMP extension, which by law must only fund future transportation deficiencies associated with new development. Measure J was approved by Contra Costa County voters in the general election on November 2, 2004. Of the total deficiencies identified in the 11 proposed STMP projects, only about 27 percent of the funding comes from the STMP. Over \$150 million worth of costs of the 11 projects fails to satisfy the nexus requirements and was not included in the program.

The methodology of this report ensured that only the portion of the projects included in the STMP project list is necessitated by the growth in traffic between 2005 conditions and 2030 conditions. Thus, there is a reasonable relationship between the proposed use of the STMP and the proposed land use development projects on which the fee will be imposed. In the same manner there is a reasonable relationship between the need for facilities included in the STMP and the proposed land use development projects.

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**CHAPTER 2. EXPECTED GROWTH IN HOUSEHOLDS, EMPLOMENT AND  
PEAK HOUR TRIPS IN THE WCCTAC AREA**

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**Household Growth**

ABAG's Projections 2003 was used to determine the residential and employment growth in the West County area between 2005 and 2030. The growth in households for the WCCTAC area is shown in Table I.

The overall residential growth for the area is estimated at 17,910 households, representing a 20.3 percent increase for the 25 year period. Richmond is projected to have about 61 percent of the residential growth, and Hercules is anticipated to have nearly 19 percent of the growth. Hercules will be the fastest growing area, with a 50 percent increase in households in the 25-year period.

**TABLE I: HOUSEHOLD GROWTH IN WEST CONTRA COSTA COUNTY – 2005 TO 2030**

	<i>Households</i>				
	<b>2005</b>	<b>2030</b>	<b>Growth</b>	<b>Share of Growth (%)</b>	<b>Rate of Growth (%)</b>
El Cerrito	13,160	13,650	490	2.7	3.7
Hercules	6,860	10,270	3,410	19.0	49.7
Pinole	10,700	12,500	1,800	10.1	16.8
Richmond	43,640	54,590	10,950	61.1	25.1
Rodeo-Crockett	4,520	4,680	160	0.9	13.3
San Pablo	9,170	10,270	1,100	6.2	3.5
<b>Totals</b>	<b>88,050</b>	<b>105,960</b>	<b>17,910</b>	<b>100.0</b>	<b>20.3</b>

**Note:** Forecasts are for each city's Sphere of Influence (SOI) except for the Rodeo-Crockett unincorporated area. Kensington is included in the El Cerrito SOI, Montalvin Manor and Tara Hills are in the Pinole SOI, N. Richmond and El Sobrante are in the Richmond SOI, and Rollingwood is in the San Pablo SOI.

**Source:** ABAG Projections 2003

**Employment Growth**

Employment is expected to grow more rapidly than residential development. A growth of over 35 percent is forecast by ABAG for the WCCTAC area, representing an actual job growth of nearly 29,000 positions. Richmond will account for 57 percent of the job growth, with Hercules accounting for about 18 percent. Hercules job growth rates are nearly 150 percent, while El Cerrito, Pinole and Richmond are expected to register growth of around 30 percent. The Crockett-Rodeo unincorporated area is expected to grow by nearly 60 percent. Table II summarizes the anticipated employment growth in the WCCTAC area.

**TABLE II: EMPLOYMENT GROWTH IN WEST CONTRA COSTA COUNTY – 2005 TO 2030**

	<i>Employment</i>				
	<b>2005</b>	<b>2030</b>	<b>Growth</b>	<b>Share of Growth (%)</b>	<b>Rate of Growth (%)</b>
El Cerrito	8,170	10,300	2,130	7.4	26.1
Hercules	3,430	8,490	5,060	17.6	147.5
Pinole	6,110	7,920	1,810	6.3	29.6
Richmond	52,390	68,750	16,360	56.8	31.2
Rodeo-Crockett	3,590	5,730	2,140	7.4	59.6
San Pablo	8,460	9,770	1,310	4.5	15.5
<b>Totals</b>	<b>82,150</b>	<b>110,960</b>	<b>28,810</b>	<b>100.0</b>	<b>35.1</b>

**Note:** Forecasts are for each city's Sphere of Influence except for the Rodeo-Crockett unincorporated area. See Table I note for details.

**Source:** ABAG Projections 2003

The anticipated growth in households and employment in the WCCTAC area will result in new peak hour trips on the transportation network. These are described in the next section.

### **Trip Generation**

In order to determine the amount of traffic that is associated with the expected new development in the west county area, TJKM applied trip generation rates to the components of the new growth.

As in the original STMP, the 2005 update relies on the a.m. peak hour commute period as the primary analysis period. The a.m. peak hour period is used in order to not overburden the application of the traffic fees on retail development. While residential uses and most employment based land uses such as offices and business parks have similar a.m. and p.m. peak hour trip rates, retail uses typically are three to four times as heavy in the p.m. period as the a.m. period. Use of the a.m. rates for all uses tends to spread the fee application more uniformly.

As noted above, there is expected to be a total of 17,910 new households in the WCCTAC area over a 25-year period. Since some of these households will be in multiple family dwelling units and some will be in single-family dwelling units, TJKM assumed an average of the trip generation rates for the two residential land use types. The average a.m. trip rate of 0.63 trips per dwelling unit was applied to the total number of households to yield a total of 11,285 new residential-based trips.

For non-residential uses, a trip rate that is based on numbers of employees, and is representative of various uses such as offices, business parks, manufacturing and retail uses in the a.m. period, was selected. The rate selected was 0.60 trips per employee. When that number is applied to the 28,810 growth in employment over the 25-year period, the number of new a.m. peak hour trips generated by these uses totals 17,286 trips.

These figures are shown in Table III. The table shows the total of the new a.m. trips from both residential and non-residential growth, 28,571, and also shows the amount of the new trips that are allocated to each of the WCCTAC agencies. Richmond growth is expected to generate about 59 percent of the new trips, Hercules about 18 percent and the other areas generally between about 5 and 10 percent. The contributions of other agencies are shown in the table below.

**TABLE III: NEW A.M. PEAK HOUR TRIPS IN WEST CONTRA COSTA COUNTY – 2005 TO 2030**

	<b>New Peak Hour Trips</b>			<b>Share of Total %</b>
	<b>From Households<sup>1</sup></b>	<b>From Employment<sup>2</sup></b>	<b>Total Trips</b>	
El Cerrito	309	1,278	1,587	5.6
Hercules	2,149	3,036	5,185	18.1
Pinole	1,134	1,086	2,220	7.8
Richmond	6,899	9,816	16,715	58.5
Rodeo-Crockett	101	1,284	1,385	4.8
San Pablo	693	786	1,479	5.2
<b>Totals</b>	<b>11,285</b>	<b>17,286</b>	<b>28,571</b>	<b>100.0</b>

Source: TJKM

<sup>1</sup> Growth in households from Table 1 multiplied by 0.63, the average a.m. peak hour trip rate for single-family and multi-family dwelling units. The Institute of Transportation Engineers Trip Generation, 2003 Edition, is the source of this information.

<sup>2</sup> Growth in employment from Table 2 multiplied by 0.60, a representative a.m. peak hour trip rate for employment uses.

The amount of new trips is used in the calculation of the 2005 STMP update cost per a.m. peak hour trip, as described in subsequent chapters of this report.

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## CHAPTER 3. SELECTION AND COST OF PROJECTS

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The recommended list of projects to be included in the updated STMP is shown in Table IV below. The projects are described in greater detail in the remaining portions of this chapter.

**TABLE IV: STMP PROJECTS AND AVAILABLE FUNDING**

<i>Project</i>	<i>Total Cost</i>	<i>Measure J</i>	<i>Other Funds</i>	<i>Unfunded Amount</i>	<i>Recommended STMP</i>
1. Richmond Intermodal station	\$36,000,000		\$21,000,000	\$15,000,000	<b>\$15,000,000</b>
2. Interchanges on I-80 at San Pablo Dam Road and at Central and on Highway 4 at Willow Avenue.	46,200,000	30,000,000		16,200,000	<b>14,280,000</b>
3. Capital Corridor Improvements	48,200,000	7,500,000	3,000,000	37,700,000	<b>13,255,000</b>
4. Ferry service from Richmond and/or Hercules/Rodeo	91,000,000	45,000,000		46,000,000	<b>12,650,000</b>
5. BART access and/or parking improvements	92,100,000	15,000,000		77,100,000	<b>25,330,000</b>
6. Bay Trail Gap Closure	5,490,000		348,000	5,142,000	<b>1,510,000</b>
7. San Pablo Dam Road improvements in downtown El Sobrante	6,900,000			6,900,000	<b>1,900,000</b>
8. San Pablo Avenue Corridor Improvements	6,000,000			6,000,000	<b>1,650,000</b>
9. N. Richmond road connection project	7,950,000			7,950,000	<b>4,000,000</b>
10. Hercules Transit Center relocation	6,000,000			6,000,000	<b>1,650,000</b>
11. Del Norte Area TOD	25,000,000			25,000,000	<b>6,875,000</b>
<b>STMP Totals</b>	<b>\$370,840,000</b>	<b>\$97,500,000</b>	<b>\$24,348,000</b>	<b>\$248,992,000</b>	<b>\$98,100,000</b>

### Project Descriptions

#### *1. Richmond Intermodal Station*

The Richmond Intermodal Station/Transit Village is located in downtown Richmond. Other public improvements (e.g. the center platform) have already been completed using state/federal/local funds (approximately \$22,000,000). The transit village is under construction and the housing on the west side is more than halfway complete. Funding is needed to complete the following public

improvements: parking garage, station building, the transit center, and public improvements on the east side of the station.

Cost: \$36,000,000

Other Potential Funding Source(s): Private developer contributions, state/federal transportation funds and Measure J.

Project Nexus Discussion: The total cost of this project is \$36 million, of which approximately \$21 million is funded by various sources. Although in the WCCTAC area only 27.5 percent of future traffic (see Chapter 6 for a detailed finding) is based on 25-year growth, in this case the project was previously justified (in 1997) based mainly on future deficiencies. However, only an estimated 40 percent of the project is justified by virtue of serving transportation demands of future growth. Thus, \$15 million of the total cost of \$36 million is included in the STMP.

STMP Funding: \$15,000,000

## ***2. Interchanges on I-80 at San Pablo Dam Road and Central Avenue and on Highway 4 at Willow***

I-80 / San Pablo Dam Road – Upgrade and improve the interchange including provisions for bicyclists and pedestrians. The project will enhance operations and vehicular, bicycle, pedestrian safety in the vicinity of the interchange.

Cost: \$16.7 million

I-80 / Central Avenue – Modify and realign the interchange and ramp at Central Avenue.

Cost: \$22.5 million

I-80/SR4 Interchange at Willow Avenue – Relocate and realign ramps at Willow Avenue to meet current standards for improved local access and freeway movements.

Cost: \$3.0 million to \$7.0 million

Potential funding source(s): Measure J (\$30 million); City of Hercules Redevelopment Agency; private developer contributions; state/federal transportation funds.

Project Nexus Discussion: Improvements to the three interchanges have an estimated total cost of \$46,200,000. However, two of the interchanges – the I-80 interchanges with San Pablo Dam Road and with Central Avenue – are currently deficient and only 27.5 percent (25-year traffic growth within the WCCTAC area) of their improvement costs can be assigned to the STMP. On the other hand, the need for the Willow Avenue interchange improvements is based in large part on future growth in the Hercules area. In this case, 50 percent of the costs are assigned to the STMP. The breakdown of the \$14.28 million STMP assignment is \$10.78 million for the two I-80 interchanges and \$3.5 million for the Willow Avenue interchange.

STMP Funding: \$14,280,000

### ***3. Capitol Corridor***

Hercules Passenger Rail Station – Hercules passenger rail station (including parking, station platform, signage and plazas, rail improvements, etc.). Capital improvements along the corridor in West Contra Costa (track improvements, drainage, fencing, safety improvements, etc.)

Cost: \$28.2 million for Hercules passenger rail station and \$20 million for capital improvements.

Potential Funding Sources: Measure J (\$7.5 million for the station); \$3 million TCRP funds (station); state/federal transportation funds.

Project Nexus Discussion: This project is among those whose justification is related to existing conditions and deficiencies as well as needs caused by future growth. Accordingly, 25-year traffic growth increase within the WCCTAC area, 27.5 percent, has been applied to the total project cost of \$48.2 million to result in a STMP allocation of \$13.3 million.

STMP Funding: \$13,255,000

### ***4. Ferry Service to San Francisco from Richmond and/or Hercules/Rodeo***

New ferry service to San Francisco from Richmond and/or Hercules/Rodeo utilizing high-speed vessels. Funds will be used for capital improvements such as vehicles, landside improvements, parking lighting, transit feeder service, signage, etc. Both ferry services will be in close proximity to existing and future residential and commercial projects on West County's shorelines.

Cost: \$23 million for Richmond (vessels - \$12 million; terminal - \$11 million); \$23 million for Hercules/Rodeo (vessels - \$12 million; terminal - \$11 million). Total - \$46 million.

Other Potential Funding Sources: Measure J (\$45 million for operations); \$1 bridge toll; state/federal transportation funds; fare box.

Project Nexus Discussion: This project is among those whose justification is related to existing conditions and deficiencies as well as needs caused by future growth. It is assumed that a significant portion of future ferry ridership will come from existing travelers. Accordingly, 25-year traffic growth increase within the WCCTAC area, 27.5 percent, has been applied to the total project cost of \$46 million to result in a STMP allocation of \$12.65 million.

STMP Funding: \$12,650,000

### ***5. BART Access and / or Parking Improvements***

As a component of BART's Smart Growth Program, funds would be used for parking, aesthetic and/or access improvements, station capacity improvements, sidewalks, lighting/restroom renovations, bicycle storage, expanded automatic fare collection equipment, etc. in the West County area (El Cerrito Plaza, El Cerrito Del Norte, and/or Richmond).

Cost: \$92.1 million for the West County area.

Other Potential Funding Sources: Measure J (\$15 million); state/federal transportation funds.

Project Nexus Discussion: This project is among those whose justification is related to existing conditions and deficiencies as well as needs caused by future growth. Accordingly, 25-year traffic growth increase within the WCCTAC area, 27.5 percent, has been applied to the total WCCTAC area project cost of \$92.1 million to result in a STMP allocation of \$25.33 million.

STMP Funding: \$25,330,000

#### ***6. Bay Trail Gap Closure***

Close gaps in the Bay Trail in West Contra Costa County, including, but not limited to the following: (1) the one-mile gap along the Richmond Parkway between Pennsylvania and Gertrude Avenues; (2) the 1.8 mile gap north of Freethy to Payne Drive in Richmond; (3) the two-mile gap from Payne Drive to Cypress Avenue in Richmond; (4) the one-mile gap from Pinole Shores to Railroad Avenue in Pinole; and (5) the 1.8 mile gap from Railroad Avenue to Parker Avenue in Hercules.

Cost: \$5.49 million

Other Potential Funding Sources: EBRPD sources, private developers, other (to be determined).

Project Nexus Discussion: This project is among those whose justification is related to existing conditions and deficiencies as well as needs caused by future growth. Accordingly, 25-year traffic growth increase within the WCCTAC area, 27.5 percent, has been applied to the total WCCTAC area project cost of \$5.49 million to result in a STMP allocation of \$1.51 million.

STMP Funding: \$1,510,000

#### ***7. San Pablo Dam Road Improvements in Downtown El Sobrante***

Revitalization of the downtown business district in El Sobrante including traffic calming, additional signals, pedestrian improvements, turn lanes, etc. that are identified in the Downtown El Sobrante Transportation and Land Use Plan (and subsequent documents).

Cost: \$6.9 million

Potential funding source(s): Measure J, County funds, other state and federal transportation funds.

Project Nexus Discussion: This project is among those whose justification is related to existing conditions and deficiencies as well as needs caused by future growth. Accordingly, 25-year traffic growth increase within the WCCTAC area, 27.5 percent, has been applied to the total WCCTAC area project cost of \$6.9 million to result in a STMP allocation of \$1.9 million.

STMP Funding: \$1,900,000

#### ***8. San Pablo Avenue Corridor Improvements***

Transportation for Livable Communities infrastructure improvements on San Pablo Avenue through West Contra Costa County and within a half-mile walking distance of San Pablo Avenue in either

direction. Also includes improvements as part of the San Pablo Avenue SMART Corridor project that is currently underway in Alameda and Contra Costa Counties on San Pablo Avenue.

Cost: \$6 million

Potential funding source(s): Measure J, Transportation for Livable Communities, state and federal transportation funds.

Project Nexus Discussion: This project is among those whose justification is related to existing conditions and deficiencies as well as needs caused by future growth. Accordingly, 25-year traffic growth increase within the WCCTAC area, 27.5 percent, has been applied to the total WCCTAC area project cost of \$6,000,000 to result in a STMP allocation of \$1.65 million.

STMP Funding: \$1,650,000

### ***9. North Richmond Road Connection Project***

Extend Seventh Street northward approximately 0.1 miles to connect to an eastward extension of Pittsburg Avenue. Pittsburg Avenue would be extended eastward approximately 0.3 miles to connect to the Seventh Street extension. The extension will facilitate truck and vehicle traffic passing through North Richmond from the Richmond Parkway.

Cost: \$7.95 million

Potential funding source(s): Measure J, state and federal transportation funds, County redevelopment funds, County funds.

Project Nexus Discussion: This project is among those whose justification is related to existing conditions and deficiencies as well as needs caused by future growth. However, this project mainly aims to serve growth in truck traffic resulting from new development in the North Richmond area. It is assumed that at least one-half of the traffic on this project will relate to new development in the area. The STMP assignment is 50 percent of the total cost, or \$4 million.

STMP Funding: \$4.0 million

### ***10. Hercules Transit Center***

Relocate and expand the Hercules Transit Center on the east side of Highway 4 to provide improved access to/from Highway 4 and improved local circulation.

Cost: \$6 million

Potential funding source(s): Private developer contributions; Hercules Redevelopment Agency funds; state and federal transportation funds.

Project Nexus Discussion: This project is among those whose justification is related to existing conditions and deficiencies as well as needs caused by future growth. Accordingly, 25-year traffic growth increase within the WCCTAC area, 27.5 percent, has been applied to the total WCCTAC area project cost of \$6.0 million to result in a STMP allocation of \$1.65 million.

STMP Funding: \$1,650,000

### ***11. Del Norte Area Transit Oriented Development project (public improvements)***

Planning, engineering, environmental studies, and construction of the public transportation-related improvements at the El Cerrito Del Norte BART station's Transit Oriented Development project. Funding will provide improvements including, but not limited to: parking facilities; bicycle, pedestrian, and/or bus transit access improvements; signage; lighting; improvements to station access or station waiting areas; ADA improvements; improvements to adjacent streets, street crossings, or signals; and/or Ohlone Greenway improvements.

Cost: \$25 million

Potential funding sources: Private developer contributions; state and federal transportation funds (for example, Transportation for Livable Communities funds); Measure J funds.

Project Nexus Description: This project is among those whose justification is related to existing conditions and deficiencies as well as needs caused by future growth. Accordingly, the 25-year traffic growth increase within the WCCTAC area, 27.5 percent, has been applied to the total project cost of \$25 million to result in a STMP allocation of \$6.875 million.

STMP Funding: \$6,875,000

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## CHAPTER 4. STMP PREVIOUS COLLECTIONS AND 2005 UPDATE POTENTIAL FEE REVENUES

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### Collections To Date

The STMP was approved in 1997 and the first funds were received in April of 1998. Between April of 1998 and July of 2004 a total of \$2,942,031.39 has been collected, including \$97,255.90 in interest. For this 75-month period, the average monthly receipts have been approximately \$39,200.

During this period, the funds were allocated as shown in Table V.

**TABLE V: DISTRIBUTION OF FUNDS RECEIVED TO DATE**

<i>Project</i>	<i>Allocation</i>	<i>Percent</i>	<i>Payment</i>	<i>Balance</i>
Richmond Intermodal	\$ 232,697.54	7.91	\$ 135,391.31	\$ 97,306.23
Highway 4 West	\$ 2,393,722.86	81.36	\$ 2,100,435.39	\$ 293,287.47
El Cerrito Plaza BART Parking	\$ 232,697.54	7.91	\$ 0	\$ 232,697.54
WCCTAC Administration	\$ 38,782.92	1.32	\$ 34,137.94	\$ 4,644.98
CCTA Administration	\$ 44,130.47	1.50	\$ 43,576.70	\$ 553.77
<b>Total</b>	<b>\$ 2,942,031.34</b>	<b>100.00</b>	<b>\$ 2,313,541.34</b>	<b>\$ 628,490.00</b>

*Source: CCTA*

If this monthly rate of receipts would continue for a 20-year period, the total receipts would be over \$9.4 million in current dollars, not including any interest. This is one measure of the amount of funds that could be received over a 25 year period beginning in 2005 if the same fees would prevail and the same rate of development were to continue.

The Nexus Analysis prepared in 1997 indicated that the fees established at that time should yield about \$5.1 million over 13 years (1997 to 2010). This calculates to an average of about \$33,000 per month, so the actual receipts of about \$39,200 per month, including interest, are conservatively close to the original estimates.

It should be noted that the 1997 Nexus Analysis showed that WCCTAC could legally establish fees whose revenues would total \$24.5 million. However, at the time it was felt that it was appropriate to reduce the financial burden on both commercial and residential development. Single-family residential fees were established at \$700 per unit instead of the allowable \$2,345. Multi-family residential fees were reduced from \$1,002 to \$560. Retail, office and industrial fees were established at \$0.20 per square foot, instead of allowable rates ranging from \$1.37 to \$2.88 per square foot of development.

### Potential Fee Revenues From 2005 Update

As noted above, the 1997 Nexus Analysis justified a total cost of \$24.5 million in funds to be paid by the fee. This amounts to a rate of about \$2,100 per peak hour trip. However, the amount of fee actually enacted amounted to about \$440 per peak hour trip, or about 20 percent of the maximum amount. As noted in Table III, there is an estimated 28,571 a.m. peak hour trips associated with the expected growth in development in the 25-year period beginning in 2005. Using the 1997 rates, this amount of trips would account for \$12.6 million at the reduced rate of \$440 per trip over the 25-year period or \$60.0 million at the full rate of \$2,100 per peak hour trip.

Recommendations for the fees associated with the 2005 STMP update are described in the next chapter.

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**CHAPTER 5. PROGRAM COSTS AND FEE CALCULATION**

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**Updated Cost per Trip Estimate**

Table VI presents a summary of the STMP improvement project costs, required adjustments to account for past STMP activities, the projected future trips to be added by new development, and the resulting estimated STMP improvement cost per trip. The total cost of the STMP projects to be included is \$370,840,000. Adjustments to the fee are as follows:

- Outside Funding - \$121,848,000: These are anticipated funds from outside sources that will offset the costs of projects in the STMP. See Table IV for details.
- Exceeds Nexus - \$150,892,000: These are funds that exceed the nexus test described in Chapter 3 and 6.

These adjustments are applied to the fee calculation as shown in Table VI. The updated fee calculation is based on trip generation estimates in Table 3 and the cost estimates of the STMP improvement projects presented in Table IV. The updated cost per trip is \$3,507, using a total STMP project cost of \$101,043,000 and a total of 28,810 new a.m. peak hour trips. The STMP improvement projects cost and the STMP portion of these costs as well as the calculated new STMP cost per trip are shown in Table VI.

Table VII presents the new STMP schedule of fees. The land use categories in this fee schedule reflect the current situation with the STMP.

**TABLE VI: 2005 COST PER TRIP ESTIMATE**

<i>STMP Improvement Projects</i>	<i>STMP Portion of 1997 Costs</i>	<i>Actual STMP Fee Adopted In 1997</i>	<i>STMP Portion of 2005 Costs</i>	<i>Change from 1997 STMP</i>
All Projects	\$ 64,267,500	--	\$ 370,840,000	+ \$ 306,572,500
<b>Subtotal</b>	<b>\$ 64,267,500</b>	<b>--</b>	<b>\$ 370,840,000</b>	<b>+ \$ 306,572,500</b>
Outside Funding	\$ 39,841,000	--	\$ 121,848,000	+ \$ 82,007,000
Exceeds Nexus	--	--	\$ 150,892,000	+ \$ 150,892,000
<b>Net Improvement Costs</b>	<b>\$ 24,426,500</b>	<b>\$ 5,100,000</b>	<b>\$ 98,100,000</b>	<b>+ \$ 73,673,500</b>
Plus Administrative Costs (3%)	(Included in total)	--	\$ 2,943,000	--
<b>Total STMP Funding</b>	<b>\$ 24,426,500</b>	<b>\$ 5,100,000</b>	<b>\$ 101,043,000</b>	<b>+ \$ 76,616,500</b>
Total Peak Hour Trips Added by New Development	11,589	11,589	28,810	+ 17,223
<b>STMP Cost Per Trip</b>	<b>\$ 2,100</b>	<b>\$ 440</b>	<b>\$ 3,507</b>	<b>+ \$ 1,407</b>

**TABLE VII: 2005 RECOMMENDED STMP RATES AND FEES AND FEES**

<b>Land Uses</b>	<b>Peak Hour Trip Rates</b>	<b>Units of Use</b>	<b>2005 Fee Rates* (full funding)</b>	<b>1997 Fee Rates (full funding)</b>	<b>1997 Fee Rates as Adopted</b>
Single-family Residential	0.74	DU	\$2,595	\$ 1,554	\$700
Multi-family Residential	0.47	DU	\$1,648	\$ 987	\$560
Senior Housing	0.21	DU	\$701	--	--
Hotel	0.56	Room	\$1,964	--	--
Retail	0.52	KSF	\$1.82 sf	\$ 0.34	\$0.20
Office	1.00	KSF	\$3.51 sf	\$ 2.79	\$0.20
Industrial	0.70	KSF	\$2.45 sf	\$ 1.89	\$0.20
Storage facility	0.15	KSF	\$0.53 sf	-	-
Church	0.45	KSF	\$1.58 sf	-	-
Hospital	1.20	KSF	\$4.21 sf	-	-

DU= Dwelling Unit; sf = square foot  
 KSF = Thousand Square Feet  
 Note: Based on \$3,507 per peak hour trip

**Other Factors In STMP Update**

Trip Adjustments The peak hour trip rate for the retail category was adjusted to account for trip lengths as described in the 1997 study. The base a.m. rate for retail was reduced by 50 percent to account for reduced trip lengths as compared with non-retail uses. Trip rates for the office category were reduced from 1.33 trips per thousand square feet (ksf) to 1.00 trips per ksf; industrial trip rates were reduced from 0.90 to 0.70.

Exempt Development In the 1997 study, it was found that slightly more than 10 percent of the land use depicted as future growth already had some level of land use entitlements and would be exempt from the STMP payments. These exemptions were either because a) a vested tentative map had been issued, or b) a development agreement had been completed which specifically excludes assessment of any additional fees. It will continue to be appropriate for fees to be waived in these cases, although it is unlikely that development agreements have been approved subsequent to 1997 that eliminate participation in WCCTAC STMP fees.

Special Cases As was the case in 1997, it remains appropriate for developers to request a special traffic study if it is felt that their particular land use proposal either does not fit into one of the land use categories or if the particular development may generate less traffic than the category provides. The methodology for conducting such a study shall be approved by the WCCTAC upon recommendation of the WCCTAC-TAC. The appropriate governing/permitting agency shall be responsible for reviewing and approving the individual traffic studies.

Establishment of Final WCCTAC STMP Fee WCCTAC may decide, as it did in 1997, not to levy the full fee that has been established as a part of this study. If so, the results will be reflected in an adjustment to this study.

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## CHAPTER 6. NEXUS FINDINGS

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Forecasts of future traffic volumes were made to provide the data needed to establish the reasonable connection between new development's travel demand and the need for and costs of the proposed projects within the WCCTAC area. ABAG's Projections 2003 was used to determine the amount of growth in land use in the west county area between 2005 and 2030. Subsequently, traffic usage related to the growth was calculated as described in Chapter 2.

Using the traffic generation results and the estimated project costs, the portion of the estimated project costs that can reasonably be connected with the need generated by projected new development has been calculated.

The following process was used to established the amount of a project that can attributed to growth and thereby be eligible for STMP funding:

Amount of households in 2005	88,050 (from Table 1)
Amount of employees in 2005	82,150 (from Table 2)
Household trips in 2005 = 88,050 x 0.63*	55,472
Employment trips in 2005 = 82,150 x 0.60*	49,290
Total trips in 2005 = 55,472 + 49,290	104,762
Growth in trips between 2005 and 2030	28,810 (from Table 3)
Percent of traffic related to 25 year growth = 28,810/104,762	27.5 %

\*Trip rates – see page 5 for details

Therefore, as noted in the Project Nexus Discussion in Chapter 3 for each of the 11 STMP projects, a minimum of 27.5 percent of the cost of each project was assigned to the STMP, unless a lesser amount of funds is necessary to fully fund the proposed project. In a few cases, a greater percentage was utilized when conditions dictated.

It is noted that of the \$371 million worth of needed improvements identified in this analysis, over \$121 million in outside funding sources have been identified. These outside sources primarily include proposed Contra Costa County Measure J, which is the extension of the one-half percent sales tax levied for transportation improvements. Measure J, which is intended to fund improvements which will correct both existing and future deficiencies, is a partner to the STMP extension, which by law must only fund future transportation deficiencies associated with new development. Measure J was approved by Contra Costa County voters in the general election on November 2, 2004. In addition, the project nexus analyses indicated that \$150,892,000 of the projects does not meet the minimum nexus requirement. Thus, of the total deficiencies identified in the 11 proposed STMP projects, only 27 percent of the funding comes from the STMP.

The methodology of this report is to ensure that only the portion of the projects included in the STMP project list is necessitated by the growth in traffic between 2005 conditions and 2030 conditions. Thus, there is a reasonable relationship between the proposed use of the STMP and the proposed land use development projects on which the fee will be imposed. In the same manner there is a reasonable relationship between the need for facilities included in the STMP and the proposed land use development projects.

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## CHAPTER 7. STUDY PARTICIPANTS

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### **TJKM Transportation Consultants Personnel**

Chris D. Kinzel, P.E.	Project Engineer
Brad Thornton	Project Engineer
Dan Harrison	Project Planner
Evi Pagh	Word Processing/Production

### **The Reed Group**

Robert Reed	Principal
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Lisa Hammon, Managing Director	WCCTAC
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Aleida Chavez	WestCAT
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