



West Berkeley Transportation Services Fee (TSF) Nexus Study

DRAFT

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Executive Summary

The purpose of the proposed West Berkeley Transportation Services Fee (WB TSF) is to ensure that new development contributes its fair share of funding for the capital improvements and Transportation Demand Management (TDM) programs that will reduce the transportation impacts from new development. Prior to approval of an impact fee, a Nexus Study is required, which must explain the reasonable relationship between the proposed fee, its uses, and the type of development project on which the fee will be imposed. In brief summary, this Nexus Study is based on the following information and assumptions.

- A Capital Improvement Program specific to West Berkeley (WB CIP) of \$86.2 M
- Outside funding (state and federal grants) will supplement local and TSF funding
- New development is responsible for 23% of the cost of local improvements and 8% of the cost of regional improvements (after outside funding is subtracted)
- The resulting fair cost share of improvements for new development is \$6.17 M, with the remainder to be funded from other sources
- Based on the 2,246 vehicle trips (PM peak hour) projected from new development subject to the fee, the resulting nexus is \$2,748 per new PM peak trip.

Using West Berkeley trip generation rates for existing and proposed land uses, the maximum justifiable fee per dwelling unit (du) or square foot of non-residential development averages \$1.83/square foot and is described by use below:

Executive Summary - Table A: Maximum Justifiable Fee by Use

Use	Sub-Use	Proposed Fee
Residential	Residential – Corridor	\$ 632 per du
	Residential – Non-corridor	\$ 1,209 per du
Office	General office	\$3.90 per sq ft
Retail	Specialty Retail	\$5.11 per sq ft
	Retail (New Car Sales)	\$6.05 per sq ft
	Restaurant (high turnover)	\$17.04 per sq ft
	Restaurant (low turnover)	\$14.84 per sq ft
Industrial/Manufacturing	General Light Industry	\$2.64 per sq ft
	Warehouse	\$1.10 per sq ft
	Heavy industrial	\$1.37 per sq ft
R&D	R&D	\$2.83 per sq ft

Introduction

West Berkeley is a diverse area with commercial, industrial, and residential development. For the purposes of this Nexus Study, it is defined as the area of Berkeley between Emeryville and Oakland on the south, Albany on the north, San Pablo Avenue on the east and Interstate 80/580 on to the west. This area of Berkeley is a key travel corridor, providing the City's primary linkage with Interstate 80/580 and facilitating north/south travel between Oakland, Emeryville, Albany and other cities along the San Pablo Avenue corridor.

The Berkeley Redevelopment Agency funded the West Berkeley Circulation Master Plan Report (WBCMP Report) to analyze and identify capital improvements that would improve traffic and circulation in the area. One of the recommendations in the WBCMP Report is establishment of a transportation impact fee to help fund these improvements. This study provides the required analysis for the City to adopt such a fee.

A Draft Environmental Impact Report (DEIR) was prepared in January 2010 for zoning ordinance changes known as the "West Berkeley Project". The DEIR provided updated traffic analysis and growth projections that have been reviewed by City staff and were utilized in developing the proposed Transportation Services Fee (TSF). Transportation improvements that were identified in the WBCMP Report were included as mitigations in the DEIR.

Development impact fees are subject to constitutional limitations, which are codified in California in the Mitigation Fee Act (Gov. Code §§ 66000 *et seq.*). Section 66001(a) requires a local government proposing to exact a development impact fee to:

- (1) Identify the purpose of the fee.
- (2) Identify the use to which the fee is to be put. If the use is financing public facilities, the facilities shall be identified. That identification may... be made by reference to a capital improvement plan... or... other public documents that identify the public facilities for which the fee is charged.
- (3) Determine how there is a reasonable relationship between the Fee's use and the type of development project on which the fee is imposed.
- (4) Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed.

The local agency must also "determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed." (Gov. Code §66001(b).)

Policy Support

In addition to, and supporting their inclusion in the West Berkeley Project DEIR, Berkeley has various policies supporting both the capital improvements and Transportation Demand Management (TDM) programs identified in the WBCMP Report and development of the Transportation Services Fee (TSF) to help fund them.

General Plan - The City of Berkeley's General Plan Policy T-6 Transportation Services Fee states, "Ensure that new development does not impact existing transportation services and facilities." Action: "Prepare a nexus study (pursuant to Government Code Section 66000 et seq.) to enable imposition and collection of a Transportation Impact Fee for new development projects." Reducing automobile reliance and vehicle miles traveled are Transportation Element Objectives, as are maintaining and improving public transportation and creating a model bicycle- and pedestrian-friendly city. The Capital Improvement Plan (CIP) for the proposed WB TSF includes multimodal capital improvements that enhance the physical infrastructure available to vehicle, pedestrian, cyclists and transit users as well as reduce conflict with vehicular mode users.

Other Plans – The CIP for the proposed WB TSF will support specific capital projects supported by both the West Berkeley Area Plan and the General Plan Transportation Element policies. Additional support is found in both the Pedestrian Plan (adopted June 2010) and Bike Plan (updated 2005) as well as the University Avenue Strategic Plan (November 1996) and San Pablo Avenue Public Improvement Plan (October 2003).

Zoning Ordinance – Section 23E.28.100 –Transportation Services Fee states: "A Transportation Services Fee (TSF) may be required for all new construction of gross floor area in commercial and manufacturing districts, pursuant to resolution of the Council." West Berkeley has one commercial zoning district (C-W) and four manufacturing districts (M, MM, MU-R and MU-LI) as well as several residential zones.

Policy Support for TDM Program – The General Plan and Transportation Element of the General Plan support development of a TDM program Citywide, inclusive of West Berkeley. In particular, Policy T-10 Trip Reduction states the goal is to "To reduce automobile traffic and congestion and increase transit use and alternative modes in Berkeley, support, and when appropriate require, programs to encourage Berkeley citizens and commuters to reduce automobile trips."

Fee Purpose

The purpose of the proposed WB TSF is ensure that new development contributes its fair share of funding for the capital improvements and Transportation Demand Management (TDM) programs that will reduce new development's impacts. Specific improvements have been identified in the TSF Capital Improvement Program (CIP) that have a demonstrated ability to reduce the impacts of new development during the most congested portions of the day. These improvements include transit, bicycle, pedestrian, rail crossing, and auto access improvements, including physical enhancements such as bus bulb outs or queue jumps to increase transit service efficiency. The fee will not support operational needs of transit or new transit services. The only program supported by the fee is the development of a West Berkeley TDM program including an integrated parking strategies plan.

The WB TSF will supplement State and Federal funding that may also be available to support the proposed capital projects, including:

- SAFETEA-LU – Federal Highway Administration's (FHWA) Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users
- ARRA – Federal American Recovery and Reinvestment Act of 2009
- HESP/HSIP – Federal Highway Safety Improvement Program (HSIP) - a FHWA program with separate funding, replacing the Hazard Elimination Program
- Caltrans/ SR2S – Caltrans has a number of programs including the Safe Routes to School grant program which the City recently was awarded for use in part in West Berkeley
- STIP – State funded Regional Transportation Improvement Plan
- 1B and 1C Bonds – These Caltrans administered grants include a program target to rail safety improvements and Transit Oriented Development

The City will seek approximately 80% of the funding for the following major infrastructure projects serving regional through traffic from these sources:

- Gilman I-80 Interchange
- Gilman RxR Grade Separation
- University I-80 Interchange.

The remaining 20% of the cost of these projects is assumed to be funded locally. The WB TSF will make up the portion of the local funding that cannot be attributed to existing deficiencies. Local funding, including the General Fund, Highway Users Tax (HUTA), and West Berkeley Project Area tax increment financing, will be used to address the local share attributable to existing deficiencies. Additional information about external assumptions for funding is provided in the "New Development's Contributions (Impact)" Section of this report.

The range of funding sources identified in the WBCMP Report and the possible modes they may serve are summarized below in Table 1.

Table 1: Funding Sources and Potential for Applying to Alternate Modes of Travel

	Federal				State			Local/Regional		
	SAFETEA-LU	HESP/HSIP	ARRA	EPA's SSI	Caltrans	STIP	1B and 1C Bonds	Measure B	Regional	City
Rail	x	x								X
Automobile	x	x	x			x	x			X
Pedestrian	x				x		x	x		X
Transit			x	x	x	x	x		x	X
Bicycle	x					x		x		x

Fee Use/Cost of Improvements (Benefit)

In 2008, the West Berkeley Circulation Master Plan (WBCMP) Report identified multimodal improvements to the transportation network in West Berkeley to address future development under existing zoning and the ongoing impacts from regional traffic growth. The proposed projects included:

- Grade Separation at the Gilman Street rail crossing
- Rail safety investments at the 3rd Street right-of-way
- I-80 Interchange safety and access improvements
- Local Roadway reconfigurations
- Bicycle and Pedestrian Network and Crossing Improvements
- Transit Capital Investments to improve transit operations
- Initial Transportation Demand Management (TDM) Program Development including development of a parking management program

The list of each improvement proposed to be funded by the WB TSF and its cost are included in Appendix A. In summary, nearly \$86.2M (2010 dollars) in capital and program needs was identified. This estimate includes:

- \$58 M in high priority improvements identified in the WBCMP Report (2008 cost estimates) for a majority of the improvements,
- Approximately \$11 M for improvements not included in the WBCMP Report but listed as mitigation for the WB Project DEIR (estimate by Wilbur Smith Associates),

- \$15 M in increased cost for the Gilman Grade Separation above that published in the WBCMP Report (Transportation Division expert judgment and analysis subsequent to the publishing of the WBCMP Report), and
- Approximately \$1.2 M from applying 2.3% total inflation to the 2008 estimates to arrive at estimates in 2010 dollars.
- \$1M to seed a WB Transportation Demand Management Program.

The funding proposed for the TDM Program will be targeted to development and implementation of a parking management program, which both the WBCMP Report and the West Berkeley Project Draft Environmental Impact Report (DEIR) identified as the key component for successful TDM in West Berkeley. Should funding exceed the costs of establishment of a parking management program, the funding may be used to support other TDM programs, including:

- Expand WB shuttle and improve marketing and coordination
- Provide TDM program services for small businesses
- Increase bike parking
- Develop mandatory and optional TDM regulations and incentives for new development and existing businesses
- Integrate West Berkeley with Citywide wayfinding program

The West Berkeley Project DEIR describes how these improvements would mitigate the combined traffic impacts of the WB Project zoning amendments, local and regional growth, and existing local and regional uses of West Berkeley's circulation network. The DEIR provides information about growth and trip generation as described further in the Nexus Study, as well as the environmental analysis for the proposed capital projects.

Of the total capital and TDM program of \$86.2M, 40% (\$35M) is to build a grade separation at the Gilman railway crossing and another 28% (\$24M) is for interchange improvements at Gilman and University. The remaining 32% (\$27.2 M) will provide locally serving bike, pedestrian, rail safety, transit, and TDM improvements. The included interchanges have long been identified as significant safety concerns, not only for motorists but for pedestrians and bicyclists. The proposed improvements will address unacceptable congestion, and help knit together the many parks, bikeways and amenities on the west side of the freeway with the rest of Berkeley. Further while 68% of the total costs in the WB CIP are related to regional serving auto improvements, most of the funding for these improvements will be from State and Federal sources, rather than the proposed TSF. Local costs associated with the regional facilities make up just 15% of the fee's proposed uses (\$944,000 of \$6.17M).

Table 2, below, summarizes the improvement cost by mode. **Appendix A** enumerates each improvement fundable by the proposed WB TSF, also grouped by mode.

Table 2: Summary of WB TSF CIP & TDM Program

Project Improvement Type	Cost Estimate (2010)
Highway Interchanges and Approaches (including grade separation at rail)	\$59 M
Local Rail Safety	\$10.7 M
Local Roadway	\$3.1 M
Local Bicycle	\$5.6 M
Local Pedestrian	\$1.6 M
Local Transit Infrastructure	\$5.2 M
Transportation Demand Management (TDM) Program	\$1 M
TOTAL	\$86.2 M

New Development's Contributions (Impact)

In summary, the proportion of the costs to be covered by West Berkeley development is derived by two factors:

1. *Outside Funding Assumptions* - Likely share of the projects to be funded by regional, State or Federal funding sources, reflecting the regional use of impacted facilities and thus not attributable to West Berkeley development
2. *Existing Deficiency Assumptions* - Determination of the percentage of the cost that can reasonably be attributed to existing deficiencies and thus not attributable to new development

Applying these two assumptions, \$6.17 M of the \$86.2 package (approximately 7%) is the share of the proposed improvements fairly attributable to new West Berkeley development. The WB TSF is applied based on development projects' expected trip generation. After determining the cost per vehicle trip, the fee would be assessed on new development on a square footage or dwelling unit basis. The fee rate would be based on the type of development and would be proportional to the expected volume of traffic to be generated by the project, adjusted for the West Berkeley existing vehicular mode split. Further detail follows.

Outside Funding Assumption - The "Local Funding" column in the table below shows the percentage of the categories of capital improvements that can reasonably be attributed to City of Berkeley (i.e., "Local Funding") of which a portion is attributable to the TSF. Applying these assumptions to the specific improvements to be included in the TSF, \$34.5M of the \$86.2M (40%) will be needed from local sources. See **Appendix B: Table 1**.

Table 3: Sources of Funding for Capital Improvements

Improvement	Outside Funding	Local Funding
Regional Improvements: Highway interchanges and approaches (including grade separation at rail)	80%	20%
Local road and pedestrian improvements	-0-	100%
Local rail safety, bike, transit, and TDM improvements	20%	80%

The assumption that 80% of Interchange projects will be federally supported reflects a reduction from the maximum Federal grant achievable (88.5%), but is significantly higher than some grants which may require as high as a 50% match. Further, a Federal grant may not be fully funded and local funding may need to cover a larger proportion of the planning and design phases of large developments at significant costs. Finally, additional costs may arise after the grant is awarded and additional gaps may remain, reflecting a gap to be addressed at the state, regional or local level. Therefore, 80% is a reasonable assumption for outside funding for regional improvements. While 100% of Local Road and Pedestrian projects are assumed to fall solely to local sources to fund, prior grant success rates indicate 20% of bike and transit projects can be expected to be externally funded. Review of the proposed WB TSF and its CIP could include updates on the applicability of these assumptions and revise the fee in subsequent years up or down accordingly.

Existing Deficiency Assumption - After determining the proportion of improvements that can generally be expected to be externally funded, the next step in the process of arriving at a TSF is a determination of the percentage of the remaining cost that can reasonably be attributed to new development. This Nexus Study assumes that new development is responsible for 23% of the cost of local improvements and the proposed WB TDM Program and 8% of the cost of regional improvements¹. A summary of the basis of these assumptions follows the table below, which provides an overview of the calculations showing that \$6.17 Million is new development's share of the improvements needed to address its transportation impacts.

¹ Additional information regarding these assumptions is provided in Appendix B: Table 1

Table 4: Calculation of Nexus Amount for TSF Fee

Project Type	Cost Estimate (2010)	Local Funding Required	Existing Development Share	New Development Share
Highway Interchanges and Approaches (including grade separation at rail)	\$59 M	20% = \$11.8 M	92% = \$10.9 M	8% = \$944,000
Local Rail Safety Improvements	\$10.7 M	80% = \$8.6 M	77% = \$6.6 M	23% = \$1.98 M
Local Roadway Improvements	\$3.1 M	100% = \$3.1 M	77% = \$2.4 M	23% = \$720,000
Local Bicycle Improvements	\$5.6 M	80% = \$4.5 M	77% = \$3.5 M	23% = \$1.04M
Local Pedestrian Improvements	\$1.6 M	100% = \$1.6 M	77% = \$1.2 M	23% = \$360,000
Local TDM & Transit Improvements	\$6.2 M	80% = \$ 4.9 M	77% = \$3.8 M	23% = \$1.13 M
TOTAL	\$86.2 M	\$34.5 M	\$28.4 M	\$6.17 M

Regional Serving Projects - Projects with significant regional impacts (assumed here to include each roadway with a freeway interchange) were analyzed in the West Berkeley Transportation Traffic Model (a model programmed as part of the WBCMP Report efforts, using software allowing modeling specific to each West Berkeley intersection). Specifically, 11 intersections known as “gateways” at the edges of West Berkeley (at the Albany and Emeryville borders and San Pablo Avenue and Eastshore roadways), were analyzed to determine the proportion of year 2030 traffic during the evening peak commute attributed to existing West Berkeley development and regional traffic, and thus not subject to fee. The model revealed that the project development would account for an average 8% increase at each “gateway” intersection in the 2030 evening peak commute. Based on this, new development’s share of the cost of these capital improvements will be assessed at 8%.

Local Serving Projects - Currently there is approximately 10.8 M sq ft of existing built development in West Berkeley (source: County Assessor database - 2006). The expected total of existing and new development is projected to be 14.5M square feet. The WB Project DEIR

assumed that cumulative development between 2010 and 2030 would add 2.1 M new non-residential square footage and just fewer than 1,800 dwelling units (approximately 1.7M square feet of new residential development). This 3.8 M square feet of development is 26% of the total built area expected to be contributing to trips in 2030. However as summarized in Table 5 below, the fee will not be imposed on projects with issued building permits or development agreements that exclude application of the fee. Therefore, new development will be responsible for 23% of the local share of proposed capital improvements and the WB TDM Program.

Table 5: WB Project EIR Land Use Assumptions By Type (Cumulative)

Use	Sq. Ft. to be Developed	% of New Sq. Ft.
Residential	1,750,892	46%
R&D	1,187,874	31%
Office	148,566	4%
Manufacturing/Industrial	737,104	19%
Commercial/retail	16,082	0.4%
Total New	3,840,518	100%
Existing	10,841,814	NA
Total Square Footage 2030	14,682,332	NA
New Development - not subject to the fee	470,104	12.80%
New Development Subject to Fee	3,370,414	NA
New Development Subject to Fee % of Total Square Footage	23.0%	NA

Phasing

Of the total development, 63% is projected to be developed between 2015 and 2030. The other 37% of the project development is expected by 2015 and includes projects already approved, but not yet developed.

Table 6: WB Project EIR Land Use Assumptions Phases

Square Feet to be Built by Land Use Type per WB Project DEIR						
Use	2015	2015 + project	2030	2030 +Project	Cumulative (2030)	Cumulative (2030) +Project
Residential	568,293	568,293	1,153,806	1,153,806	1,750,892	1,750,892
Office	14,547	14,547	148,566	148,566	148,566	148,566
R&D	96,547	376,548	134,019	959,893	230,566	1,187,874
Manufacturing/ Industrial	301,273	421,273	714,897	315,831	1,016,170	737,104
Commercial/ Retail	42,229	42,449	(26,367)	(26,367)	16,082	16,082
Total New Sq Ft	1,022,889	1,423,110	2,124,921	2,551,729	3,162,276	3,840,518
Existing	10,841,814	10,841,814	10,841,814	10,841,814	10,841,814	10,841,814
All	11,864,703	12,264,924	12,966,735	13,393,543	14,004,090	14,682,332
% increase	27%	37%	55%	66%	82%	100%
% Total	7%	10%	14%	17%	22%	26%

Reasonable Relationship

The above sections describe the basis of the assumptions for the amount of growth anticipated in West Berkeley. The next step in calculating a transportation impact fee is to explain the relationship between square footage, types of uses, and trips to the maximum justifiable fee. The WB Project EIR and WBCMP Report established a rigorous method for projecting expected

trip generation in West Berkeley based on existing travel patterns and modified Institute of Transportation Engineers (ITE) rates by use type and proximity to transit corridors.²

Trip Generation Rates

The period during which the circulation network in West Berkeley is most congested is during the evening peak commute hours. Therefore, a reduction in vehicular trips during the PM peak is the metric used for determining the improvements needed and to establish the WB TSF.

The WB Project DEIR establishes that 2,491 total new vehicle trips during the PM peak hour could be generated by the 3.8 M in net new square feet of West Berkeley development from 2010 to 2030. To arrive at this projection, Wilbur Smith and Associates took the ITE published standard trip generation rates and adjusted the rates downward depending on actual survey data from West Berkeley trip generators. Survey data used to revise the ITE rates included Trip to Work data from the 2000 Census and other trip data from the 2000 MTC Bay Area Travel Survey (BATS). Additionally a pass-by percentage (or the assumed likelihood a trip for one purpose is combined with another purpose) was taken based on the land use.

In addition, trip generation adjustments were applied to uses locating near transit rich “corridors.” These corridors are the arterials offering the highest transit service in West Berkeley as well as neighborhood serving retail. The only corridors in West Berkeley meeting these criteria are on San Pablo and University Avenue. In areas adjacent to these corridors, an additional adjustment was made to the ITE manual rates, which are typically based on more suburban trip generation rates, resulting in adjusted PM peak vehicle trips. More details on the method outlined here is available at the following link:

http://www.ci.berkeley.ca.us/uploadedFiles/Planning_and_Development/Level_3_-_Redevelopment_Agency/Appendix%20B%20Trip%20Generation%20Methodology%20Final.pdf and in Appendix C: WB TSF Trip Generation Assumptions.

Applying these factors to ITE classifications, the following resulting PM peak hour trip generation rates were established for typical types of land use in West Berkeley as summarized in Table 7.

² Transit corridors in West Berkeley include both University and San Pablo Avenues. Each of these corridors are zoned C-W. Ashby Avenue is also zoned C-W but lacks the concentration of bus routes to be considered a transit corridor.

Table 7: Trip Generation Rates in West Berkeley by Land Use

Use	ITE Land Use [A]	PM Trip Generation Rate [B]
Residential		
Residential - Corridor	223	0.23
Residential - Non-Corridor	221	0.44
Office	Office (General office)	710
Retail		
Specialty Retail	814	1.86
Retail (New Car Sales)	841	2.2
Restaurant (High turnover)	932	6.2
Restaurant (Low turnover)	931	5.4
Industrial/Manufacturing		
General Light Industry	110	0.98
Warehouse	150	0.4
Heavy industrial	120	0.5
R&D	R&D	760
Average		0.7

(A) Source: WB Project EIR Appendix H - Trip Generation. ITE Trip rates were adjusted to City-specific rates per Census and BATS and pass-by %. Rate is for vehicles per PM peak hour. Residential rate per dwelling unit (961.5 sq ft) and non-residential rate is per 1,000 sq ft. No new TDM measures assumed applied but credit for mode split among existing population applied.

(B) Trip generation rates as included in the WB Project Draft EIR March, 2010 See Appendix H Page 1509-1516 at http://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3_-_Redevelopment_Agency/WB_DEIR_Technical_Appendix.pdf

Trip Generation per Development Assumptions

Based on the analysis in the WB Project DEIR and as described above, new development in West Berkeley is projected to create 2,491 new PM peak hour trips. These trips are expected to be created by the uses as summarized in Table 8 below.

Table 8: Trip Generation Projections for West Berkeley from local development per WB DEIR with Adjustment

New WB Construction 2010-2030	PM Peak Vehicle Trips	PM Peak Vehicle Trips subject to the Fee
Residential	448	410
R&D	1,408	1,391
Manufacturing/Industrial	577	438
Commercial/retail	58	8
Total New	2,491	2,247

Cost Per New Trip

As discussed above in “West Berkeley Contributions”, \$6.17 M is the cost of improvements that is assignable to new local development in West Berkeley subject to the fee. Spreading this cost over 2,247 PM peak hour trips results in a justifiable cost for West Berkeley of \$2,748 per PM vehicle trip.

Cost Per Square Foot by Use

Table 9 uses a vehicle trip cost of \$2,748 and the established trip generation projections in Table 8 to derive the following per square foot or dwelling unit maximum cost for each category of use.

Table 9: WB TSF – Maximum Justifiable Fee per Use

Use	Sub-Use	Proposed Fee
Residential		
	Residential – Corridor	\$ 632 per du
	Residential – Non-corridor	\$ 1209 per du
Office		
	Office (General office)	\$3.90 per sq ft
Retail		
	Specialty Retail	\$5.11 per sq ft
	Retail (New Car Sales)	\$6.05 per sq ft
	Restaurant (high turnover)	\$17.04 per sq ft
	Restaurant (low turnover)	\$14.84 per sq ft
Industrial/Manufacturing		
	General Light Industry	\$2.64 per sq ft
	Warehouse	\$1.10 per sq ft
	Heavy industrial	\$1.37 per sq ft
R&D	R&D	\$2.83 per sq ft

With \$6.17 M in costs with nexus to local development not yet approved and 3,370,414 square feet in new development expected, the average fee is \$1.83 per square foot. See **Appendix B - Table 3**.

Table 10 shows projected revenue on the following page.

Table10: Projected Revenue by Use

Use	Projected Revenue	% of Revenue
Residential	\$1,126,781	18%
Office	\$530,411	9%
Retail	\$21,986	0%
Industrial/Manufacturing	\$1,203,732	19%
R&D	\$3,292,398	53%
Total	\$6,175,308	100%

Additional detail is found in **Appendix B** Table 3 regarding these revenue assumptions.

Implementation

Applicability

The proposed fee would be applicable to all new development in Berkeley on or west of San Pablo Avenue and on or east of the Eastshore Frontage Road, and would be applied to all new developed manufacturing, commercial and residential uses within the C-W, M, MM, MU-R, and MU-LI zoned lands. The ordinance approving the TSF will provide detail on its implementation, including credits and/or fee reductions which may be provided as discussed below.

Credits

Implementation of the TSF will include providing credits for:

- Improvements provided by development projects
- TDM Measures provided by development projects
- Prior uses

Credit for Project Improvements:

A project's TSF payment may be reduced if an applicant constructs a capital project which is included on the TSF CIP list. Credit is given on a \$1 to \$1 ratio up the amount required by the TSF. An applicant may be required to construct an off-site capital improvement based on the project's environmental review or as a condition of project approval. No credit is given for mitigations made on the site or for improvements not in the TSF CIP. The basis for calculating the fee for which credit will be applied and exemptions from credits will be addressed in the ordinance establishing the TSF.

Credits for Transportation Demand Management (TDM) Programs and Improvements:

The WB TSF is intended to mitigate vehicular traffic impacts through mode shifts, which in turn reduces the number of trips made. The trip generation rate and proposed fee level is based on the existing level of TDM implementation³ among West Berkeley employers and residences and thus a continued requirement for on-site TDM measures in addition to the fee is reasonable. Developers who believe their TDM program would lower trip generation rates beyond that included in the WB Traffic model could seek a reduction to fees. Any reduction allowed to the

³ See Appendix C: Table 1: Trip Generation Adjustments or for more detail see http://www.ci.berkeley.ca.us/uploadedFiles/Planning_and_Development/Level_3_-_Redevelopment_Agency/Appendix%20B%20Trip%20Generation%20Methodology%20Final.pdf

maximum justifiable fee will need to balance site specific investments against network investments to effectively support TDM.

Credit for Existing Uses:

Existing uses that generate traffic may be demolished or converted to a new use as part of larger construction project. In such case, the area demolished or converted will be credited against the gross square feet of construction to determine net gross feet added. Credits for existing square footage or dwelling units removed will be calculated at the rate as for the entitled use. Should the new use be less than the existing use (e.g. a restaurant converting to a retail space) no fee will be charged and no credit paid. "Credits" for reduction in the required TSF payment for current trip generation (existing use) will be made 1 for 1 for trips, accounting for differential trip generation rates by use such that 1,000 sq. ft. of retail converting to 1,000 sq. ft. of office will have the credit applied on a trip basis, not on a square footage basis for reduction.

The ordinance that will be developed to implement the TSF will address possible credit for vacant buildings. Buildings that were vacant as of the date of the last traffic counts used for the TSF calculations would be required to pay the TSF because the proposed project's traffic generation would be new. However, as described in the previous paragraph, changes in use would receive credit for the previous use.

Intensification – Where there is an intensification of use rather than additional floor area, the applicant will pay the difference between the original use(s) and the proposed use(s). The fee would be calculated as follows:

Sum:

- New Residential Component: Units x fee per unit
- New Non-residential Component(s) by Use: sq ft of existing use(s) x price per sq ft for use

minus the sum of:

- Original Residential Component: Units x fee per unit
- Original Non-residential Component(s) by Use: sq ft of original use x price per sq ft for use

Equals net fee. If the resulting value is negative, no fee is due.

Exemptions

Properties that might otherwise be subject to the fee are exempt if:

- A site comprising modification or development of less than 1,000 square feet

- Site changes which trigger neither a use permit nor a building permit

Preferred Uses - Reduction to Fee

Preferred uses as identified by the City Council may be exempt from the WB TSF or be assigned a reduced fee. However, the loss of funding from such a reduction cannot be passed to other uses to which the WB TSF is to be applied, but rather would create additional burden for local funding.

Phasing of Implementation

As current development in West Berkeley may have already sought financing based on existing costs of development, a graduated approach to implementing the fee may be advisable. The Council in enacting this fee may choose to reduce fees in the initial years of application. One example of such an option would be to apply the fees at 25% of the justifiable rate for the first year. For the second year after the fee's enactment, the fee could be charged at 50% the rate and for the third year the fees could be charged at 75% of the fee. Under this example it would not be until three (3) years from the effective date of the fee that 100% of the WB TSF will be charged.

The shortfall resulting from such a graduated implementation, would need to be made up from either the local funding match, TSF revenue from additional development not projected in the Nexus Study, or a more aggressive program of grant solicitations. This alternative has the benefit of allowing the City to move forward while the information to support a fee is current, while acknowledging the current difficult economic conditions. A graduated roll out could create an incentive for land holders to move forward prior to the full fee implementation, which would be economically advantageous to the City.

Requirements for Funds Use

Revenues resulting from the imposition of the WB TSF must be kept and administered in a separate account or fund dedicated to the public improvements being financed and must not be commingled with other revenues and funds of the local agency (Government Code section 66006). In addition, five years after the first deposit into the account or fund, the local agency must make specific findings regarding any unexpended funds, whether those funds are committed to expenditure or not (Government Code section 66001). The same findings must continue to be made once every five years thereafter. If these findings are not made, statute requires the agency to refund the fees to the current owner of the affected property. Refunds may be made by direct payment, temporary suspension of fees, or "other reasonable means," at the discretion of the local agency.

Review

The WB TSF will be reviewed and revised on an as-needed basis to account for material changes in circumstances, including changes in:

- data regarding trip making in West Berkeley (new traffic counts, new census or comprehensive surveying of trip making patterns),
- project improvement costs, and
- development assumptions.

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Appendices

Appendix A: West Berkeley Capital Improvement & TDM Program

Insert Tables 1-6 inclusive of Bike, Transit & TDM Program, Pedestrians, Auto, Rail and Truck Capital Improvements

Appendix B: WB TSF Proportional Fee Calculation

Insert Tables 1-3 WB TSF Fee Calculation

Appendix C: WB TSF Trip Generation Assumptions

Insert Table 1

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Appendix A WB TSF CIP & TDM Program - Table 1: Vehicular Circulation Improvements

<u>Location</u>	<u>Mitigation</u>	<u>Cost per WBCMP Report</u>	<u>Adj for Inflation/New Information</u>
Gilman & RxR	Construct a Grade-Separated Rail Crossing at Gilman Street. The City should construct a grade separation at Gilman Street. This would eliminate concerns if queuing to and from adjacent intersections, improving safety and operations. A conceptual diagram of this mitigation is shown in the Technical Appendix – Traffic Analysis.	\$ 20,000,000	\$ 35,000,000
Gilman & I80	Gilman Street/I-80 Roundabout. The City should continue to work with Caltrans to develop the proposed dual roundabout project at the Gilman Street/I-80 Interchange. As shown in Table 4-54, below, this project would reduce queue lengths well below the available storage and mitigate the impact to a less than significant level. The conceptual design for this improvement is shown in the Technical Appendix – Traffic Analysis.	\$ 15,700,000	\$ 16,061,100
University & I80	University Avenue/West Frontage Road Interchange Redesign. Further investigation of an interchange redesign for the westbound on/off ramp and West Frontage Road at University Avenue would reduce queuing and spillback. A proposed roundabout design has been identified which would eliminate the queuing impact as shown in Table 4-54. The conceptual design for this improvement is shown in the Technical Appendix – Traffic Analysis.	\$ 7,750,000	\$ 7,928,250
5th and University	Install Traffic Signal. The City should install a traffic signal at the intersection of University Avenue and southbound 5 th Street; operate it as a group control with the traffic signal located at the intersection of University Avenue and 6 th Street. The proposed geometric improvements are shown in the Technical Appendix – Traffic Analysis. Restripe Southbound 5th Street. The City should restripe the southbound 5th Street to allow vehicles to make a right turn onto Frontage Road and University Avenue, both.	\$ 1,000,000	\$ 1,023,000
Ashby & 5th	Extend 5th Street. The City should extend 5 th Street to Ashby Avenue; operate the southbound approach at the intersection of Ashby Avenue and 5 th Street as a yield-controlled right-in/right-out movement and other approaches as free movements. This configuration is shown in the Technical Appendix- Traffic Analysis.	\$ 750,000	\$ 767,250
System	SMART Corridors Program. The city should continue to work with the ACCMA and Caltrans on the SMART corridors program and explore innovative signalization systems such as adaptive signalization to optimize capacity on arterial segments in West Berkeley.	\$ 700,000	\$ 716,100
Extended Queues at Hearst Avenue At-Grade Rail Crossing.	Install a Traffic Signal to reduce 4th an Hearst Queuing at 3rd Street Tracks	\$ 240,000	\$ 245,520
I80 & Gilman, Ashby and University	Integrated Corridor Mobility Project. The City should continue coordination with Caltrans and the ACCMA to implement the Integrated Corridor Mobility Project along I-80 and other strategies to improve operational performance and/or reduce demand. Acknowledge that improvements to these segments of the I-80/I-580 corridor would reduce spillover traffic on West Berkeley’s arterial facilities, namely San Pablo Avenue.	\$ 180,000	\$ 184,140
Ashby & 7th	Remove/Replace Traffic Signal. The City should remove the traffic signal located at the intersection of 7 th Street and Potter Street; install stop signs along east/west approaches of Potter Street; convert the Potter Street approaches to right-in/right-out movements. Install Traffic Signal. The City should install a traffic signal at the intersection of 7th Street and Anthony Street; restripe the southbound approach as shared left-through lane and one right-turn lane; construct a left-turn pocket along eastbound approach and convert the existing shared left-through-right lane to a shared through-right lane.	\$ 180,000	\$ 184,140

Appendix A WB TSF CIP & TDM Program - Table 1: Vehicular Circulation Improvements

<u>Location</u>	<u>Mitigation</u>	<u>Cost per WBCMP Report</u>	<u>Adj for Inflation/New Information</u>
University Avenue and 6 th Street	Protect Left Turn Movement on Southbound Approach. The City should convert left-turning movements from permissive to protected movement.	\$ 8,000	\$ 8,184
Dwight Way and San Pablo Avenue.	Replace parking with an Additional Lane on Eastbound Approach. The City should convert parking to an additional lane, and convert the existing left-turning lane to a shared left-through lane.	\$ 5,000	\$ 5,115
Dwight Way and San Pablo Avenue.	Construct Additional Lane on Westbound Approach. The City should construct an additional lane, and convert the existing left-turning lane to a shared left-through lane.	\$ 5,000	\$ 5,115
Cedar Street and San Pablo Avenue	Protect Northbound and Southbound Left-Turn Movements. The City should convert northbound and southbound left-turning movements from permissive to protected movements.	\$ 4,000	\$ 4,092
Dwight Way and 7 th Street/Dwight Crescent	Convert Southbound 7 th Street to a Cul-de-Sac.	\$ 2,500	\$ 2,558
Extended Queues at Hearst Avenue At-Grade Rail Crossing.	Create 100-foot Right Turn Pocket on Eastbound Approach.	\$ 800	\$ 818
Extended Queues at Hearst Avenue At-Grade Rail Crossing.	Create a 50-foot Right Turn Pocket on Northbound Approach.	\$ 800	\$ 818
Ashby & 7th	Convert Turning Movements. The City should convert the northbound and southbound left turning movements at the intersection of Ashby Avenue and 7 th Street from split to protected movements.	NA	NA
Dwight Way and 7 th Street/Dwight Crescent	Optimize Cycle Length of the Traffic Signal.	NA	NA
Subtotal - Vehicular Improvements		\$ 46,526,100	\$ 62,136,200
Highway Interchanges		\$ 43,450,000	\$ 58,989,350
Local Roadways		\$ 3,076,100	\$ 3,146,850
Portion of City Share of Regional Improvements		20%	20%
Portion of City Share of Regional Improvements with Nexus to New Development		8%	8%
Proportional Cost		\$ 695,200	\$ 943,830
Portion of Local Auto with Nexus to New Development		23%	23%
Proportional Cost		\$ 707,503	\$ 723,776
Nexus to WB Development for Local and Regional Auto Improvements		\$ 1,402,703	\$ 1,667,605

Appendix A WB TSF CIP & TDM Program- Table 2: Pedestrian Circulation improvements

<u>Location</u>	<u>Mitigation</u>	<u>Cost</u>	<u>2010 Estimate</u>
Cedar between 4th and 10th	Improve pedestrian crossings along Cedar between 4th and 10th to include pavement striping, sidewalk bulbouts and truncated domes where appropriate and needed	\$ 575,000	\$ 588,225
University between 6th and 10th	Improve pedestrian crossings along University between 6th and 10th Streets by adding sidewalk bulbs, ADA compliant pedestrian refuges, directional curb ramps, truncated domes, signal countdown heads, audible crosswalks and improved crossing times where appropriate and needed	\$ 400,000	\$ 409,200
Dwight between 4th and 10th	Improve pedestrian crossings along Dwight between 4th and 10th to include pavement striping, sidewalk bulbouts and truncated domes where appropriate and needed	\$ 293,000	\$ 299,739
Jones and San Pablo	Install flashing pedestrian crossings at Jones along San Pablo	\$ 120,000	\$ 122,760
Cedar Street on east side of San Pablo	Extend paved median along Cedar Street on east side of San Pablo to reach crosswalk on San Pablo Ave	\$ 37,500	\$ 38,363
Adjacent to James Kenney Park and Misc NB sidewalks	Pave sidewalks (full block) adjacent to James Kenney Park on 7th and 8th, along 9th between Cedar and Page, along west side of 8th between Camelia and Gilman, along east side of 7th between Camelia and Harrison, and along Harrison between 7th and 8th	\$ 36,000	\$ 36,828
San Pablo at Gilman, Cedar, University, Dwight and Ashby	Improve pedestrian crossings along San Pablo at Gilman, Cedar, University, Dwight and Ashby to include directional pedestrian curb ramps	\$ 25,000	\$ 25,575
Gilman between 5th and 10th	Improve pedestrian crossings along Gilman between 5th and 10th to include pavement striping, perpendicular curb ramps and truncated domes where appropriate and needed	\$ 25,000	\$ 25,575
San Pablo at Gilman, Cedar, Delaware, Allston, Dwight, Grayson and Ashby and at 6th and Hearst	Install audible signals along San Pablo at Gilman, Cedar, Delaware, Allston, Dwight, Grayson and Ashby and at 6th and Hearst	\$ 16,000	\$ 16,368
San Pablo and University	Implement a pedestrian scramble phase at San Pablo and University	\$ 5,000	\$ 5,115
University and San Pablo	Remove pedestrian actuation from controller at University and San Pablo and make pedestrian walk phase with audible signal automatic on all legs	\$ 1,000	\$ 1,023

Subtotal - Pedestrian Improvements

\$ 1,533,500 \$ 1,568,771

Portion of Pedestrian Improvements with Nexus to New Development
Proportional Cost

23% 23%
\$ 352,705 \$ 360,817

Nexus to WB Development for Pedestrian Improvements

\$ 352,705 \$ 360,817

Appendix A: WB TSF CIP & TDM Program - Table 3: Bicycle Circulation improvements

<u>Location</u>	<u>Mitigation</u>	<u>Cost</u>	<u>2010 Estimate</u>
System	Add bike/pedestrian scale lighting to Channing, Heinz, Virginia, and 9th St Bicycle Boulevards	\$ 4,500,000	\$ 4,603,500
Ashby & 9th	9th and Ashby intersection improvements: extend bike boulevard south from 9th St. to connect to Emeryville Greenway, create new SB drive lane from West Berkeley Bowl to Ashby, separate SB turns (right turn heading WB on west side of bike path crossing; left turn heading EB on east side of path), extend width of intersection to include new SB drive and bike crossing, stencil 9th St. between Ashby and Anthony as bike boulevard, remove stop control at 9th and Potter in SB direction;	\$ 500,000	\$ 511,500
6th and Channing	Apply appropriate bike intersection treatment to 6th and Channing, either Type 3 (bike refuge median with no left- or U-turns on 6th to Channing) or Type 4 (HAWK signal with a partial signal phase)	\$ 200,000	\$ 204,600
Addison/Allston	Create parallel bike boulevard facility to University Ave. to connect Downtown Berkeley/UC to bike bridge via either Addison or Allston. Implement an appropriate bike boulevard crossing (Type 3 or 4) across San Pablo Ave. including consideration of Addison's offset alignment at San Pablo Ave.	\$ 125,000	\$ 127,875
Channing Virginia, 4th and 5th	Connect Virginia and Channing bike boulevards to bike bridge by designating 5th Street (between Virginia and Hearst), 4th Street (between Hearst and Channing) and Hearst (between 5th and 4th Streets) as bike boulevards	\$ 85,000	\$ 86,955
System	Paint colored bicycle lanes to increase visibility for motorists	\$ 40,000	\$ 40,920
Russell and Heinz bike boulevards at San Pablo Av	Improve connection between Russell and Heinz bike boulevards through connection to Oregon and installation of appropriate bike boulevard crossing treatment (Type 3 or 4) at San Pablo Ave. on Oregon and Heinz, considering the offset intersection	\$ 12,500	\$ 12,788
Virginia and San Pablo	Apply appropriate bike boulevard crossing treatment (Type 3 or 4) at Virginia and San Pablo	\$ 8,000	\$ 8,184
Channing and San Pablo	Apply appropriate bike boulevard crossing treatment (Type 3 or 4) at Channing and San Pablo	\$ 8,000	\$ 8,184
System	Add painted markings where bike lanes cross right turn lanes to indicate conflict area between bikes and autos	\$ 8,000	\$ 8,184
Cedar and 9th St.	Apply bike intersection treatment 1 (signage and striping) to Cedar and 9th St.	\$ 5,000	\$ 5,115
System	Remove or flip stop signs on bicycle boulevards to limit stopping of bikes. Implement traffic calming as necessary to limit auto use of these facilities	\$ 3,500	\$ 3,581
Gilman and 6th and 8th	Add bike boxes at Gilman and 8th and Gilman and 6th intersections	\$ 2,500	\$ 2,558
Heinz and 7th St.	Add bike loop detectors to signal at Heinz and 7th St.	\$ 1,800	\$ 1,841
Dwight and 9th St.	Apply bike intersection treatment 1 (signage and striping) to Dwight and 9th St.	\$ 1,200	\$ 1,228
Heinz and 9th St.	Apply bike intersection treatment 1 (signage and striping) to Heinz and 9th St.	\$ 1,200	\$ 1,228
Subtotal - Bicycle Improvements		\$ 5,501,700	\$ 5,628,239
		80%	80%
Portion of Bicycle Improvements with Nexus to New Development		23%	23%
Proportional Cost		\$ 1,012,313	\$ 1,035,596
Nexus to WB Development for Bicycle Improvements		\$ 1,012,313	\$ 1,035,596

Appendix A WB TSF CIP & TDM Program - Table 4: Transit Circulation Improvements and TDM Program

<u>Location</u>	<u>Mitigation</u>	<u>Cost</u>	<u>2010 Estimate</u>
System	Add real time information displays to all stops in West Berkeley	\$ 1,200,000	\$ 1,227,600
System	TDM Measures. The City should support the development and implementation of a West Berkeley TDM and parking strategies plan. <ul style="list-style-type: none"> • a parking program with specific attention to pricing strategies that make transit cost competitive with single occupancy vehicles • Expansion of WB shuttle operator’s programs to include TDM programs comparable to larger firms like Bayer’s to small West Berkeley businesses • Coordination with shuttle and transit providers for expanded service and marketing • Increase bike parking • Sets mandatory TDM on-site measures for new developments and existing development • Sets incentives for optional TDM measures applicable to new and existing developments • Integrate West Berkeley with Citywide wayfinding program 	\$ 1,000,000	\$ 1,023,000
System	On-Going Coordination with Berkeley Gateway Transportation Management Association. The City of Berkeley should continue coordination with the Berkeley Gateway Transportation Management Association (TMA) and other WBS funding partners (including several large employers in West Berkeley) to assure continued effective operation of the WBS; recruit new West Berkeley employers as funding partners for the WBS and expand or adjust WBS service to meet the demands of new West Berkeley employers.	included above	included above
System	On-Going Coordination with AC Transit. The City of Berkeley should continued coordination with AC Transit to best accommodate the needs of AC Transit riders in West Berkeley with available funding; work to identify new funding sources, grants, and programs that may become available and apply these funds toward maintaining adequate service on the core AC Transit routes serving West Berkeley.	included above	included above
Dwight Way	Add AC Transit Transbay service along Dwight Way that could connect directly to Telegraph and UC Berkeley	\$ 800,000	\$ 818,400
System	Extend Route 19 to Downtown (all day) and improve frequencies to 20 minutes	\$ 800,000	\$ 818,400
Ashby/6th/7th/Cedar	Extend transit or shuttle service to connect North Berkeley BART to Ashby BART along Ashby/6th/7th/Cedar Streets. Service would be a weekday peak hour service on 20-minute headways in both directions	\$ 600,000	\$ 613,800
University Avenue	Upgrade high ridership AC transit stops on University Ave. based on San Pablo Corridor bus stop guidelines (Type A, C, D, and E stops)	\$ 320,500	\$ 327,872
San Pablo Avenue	Apply appropriate transit intersection improvements (bus bulbs and/or queue jumps) at congested locations (Ashby, Dwight, University, Gilman) along San Pablo	\$ 320,000	\$ 327,360
San Pablo and Cedar	Add rapid stop at San Pablo and Cedar	\$ 250,000	\$ 255,750
University Ave at San Pablo	Install queue jump lanes along University Ave at San Pablo in EB and WB directions	\$ 250,000	\$ 255,750
Gilman at San Pablo	Install peak hour queue jump lanes along Gilman at San Pablo in EB and WB directions	\$ 160,000	\$ 163,680
University Ave at 6th	Install queue jump lanes along University Ave at 6th St. in the WB and EB direction	\$ 160,000	\$ 163,680
University Ave. between Curtis and 5th	Create peak hour transit only lane along University Ave. in EB and WB directions between Curtis and 5th Street by restricting parking (tow-away lane enforcement)	\$ 80,000	\$ 81,840

Appendix A WB TSF CIP & TDM Program - Table 4: Transit Circulation Improvements and TDM Program

<u>Location</u>	<u>Mitigation</u>	<u>Cost</u>	<u>2010 Estimate</u>
San Pablo and Gilman	Improve connections and transfers of Route 9 and other transit services at San Pablo and Gilman	\$ 50,000	\$ 51,150
San Pablo at Cedar and Virginia	Improve lighting and shelters at San Pablo bus stops (Cedar and Virginia)	\$ 12,500	\$ 12,788
Hearst and 6th	Move nearside SB AC Transit stop at Hearst and 6th to farside location	\$ 5,000	\$ 5,115
Heinz and 7th	Move nearside SB AC Transit stop at Anthony and 7th to farside location of Heinz and 7th	\$ 3,500	\$ 3,581
6th Street	Improve AC Transit Transbay service to West Berkeley along 6th Street through new service or modified/upgraded existing service	\$ -	\$ -
University Avenue	Provide more direct bus service from Downtown Berkeley to Berkeley Pier/Cesar Chavez Park (existing 51M)	\$ -	\$ -
System	Increase frequency of Route 9 service to 20 minute headways throughout the day	\$ -	\$ -
University Ave	Improve bus connection from Downtown/UC to West Berkeley and Amtrak station	\$ -	\$ -
		\$ 6,011,500	\$ 6,149,765
Subtotal - Transit Improvements and TDM Program		80%	80%
Portion of Transit and TDM Improvements with Nexus to New Development		23%	23%
Proportional Cost		\$ 1,106,116	\$ 1,131,557
Nexus to WB Development for Transit and TDM Improvements		\$ 1,106,116	\$ 1,131,557

Appendix A WB TSF CIP & TDM Program- Table 5: Rail Safety/Vehicular Crossing Improvements

<u>Location</u>	<u>Mitigation</u>	<u>Cost Per WBCMP</u>	
		<u>Report</u>	<u>2010 Estimate</u>
Gilman & RxR	4 quad gate (interim solution until grade separation is designed and constructed)	\$ 1,500,000	\$ 1,534,500
Camelia & RxR	4 quad gate	\$ 1,500,000	\$ 1,534,500
Cedar & RxR	4 quad gate	\$ 1,500,000	\$ 1,534,500
Virginia & RxR	4 quad gate	\$ 1,500,000	\$ 1,534,500
Hearst & RxR	4 quad gate	\$ 1,500,000	\$ 1,534,500
Addison & RxR	4 quad gate	\$ 1,500,000	\$ 1,534,500
Bancroft & RxR	4 quad gate	\$ 1,500,000	\$ 1,534,500
Subtotal - Rail Safety Improvements		\$ 10,500,000	\$ 10,741,500
Internal Funding		\$ 8,400,000	\$ 8,593,200
Portion of Rail Improvements with Nexus to New Development		23%	23%
Proportional Cost		\$ 1,932,000	\$ 1,976,436
Nexus to WB Development for Rail Safety Improvements		\$ 1,932,000	\$ 1,976,436

Appendix B: WB TSF Proportional Fee Calculation - Table 1: Cost of Capital Improvement Program and Nexus to Proposed West Berkeley TSF

West Berkeley Project Costs (in millions)

<u>Description</u>	<u>Cost per</u>	<u>% Assumed</u>			<u>New West</u>	<u>City (\$M)</u>	<u>WB Nexus (\$M)</u>	
	<u>WBCMPR</u>	<u>Cost per OOT</u>	<u>External</u>	<u>Externally</u>				<u>Berkeley</u>
	<u>(2008 \$M)</u>	<u>(2010 \$M)</u>	<u>Funding</u>	<u>Funded</u>	<u>Amount</u>	<u>Berkeley</u>	<u>(4)</u>	
	(1)	(1)	(2)			(3)		
			Gross Sq Ft			Net Sq Ft		
Regional improvements								
Gilman/I-80 Roundabouts (4)	15.7	16.1	12.9	80%	3.2	8%	3.0	0.26
Gilman RR Grade Separation	20.0	35.0	28.0	80%	7.0	8%	6.4	0.56
University/I-80 interchange	7.8	7.9	6.3	80%	1.6	8%	1.5	0.13
Local Improvements								
Railway Crossing Safety improvements	10.5	10.7	2.1	20%	8.6	23.0%	6.6	1.98
Roadway Improvements	3.1	3.1	0.0	0%	3.1	23.0%	2.4	0.72
Bicycle Improvements	5.5	5.6	1.1	20%	4.5	23.0%	3.5	1.04
Pedestrian Improvements	1.5	1.6	0.0	0%	1.6	23.0%	1.2	0.36
Transit Improvements	5.0	5.1	1.0	20%	4.1	23.0%	3.2	0.94
TDM Program	<u>1.0</u>	<u>1.0</u>	<u>0.2</u>	<u>20%</u>	<u>0.8</u>	<u>23.0%</u>	<u>0.6</u>	<u>0.19</u>
Total	\$70.1	\$86.2	\$51.7	60%	34.5		\$28.4	\$6.17
Sum					\$86.2			\$34.5

32%

(1) Costs based on WBCMPR (January 2008) adjusted for inflation of 2.31% from January 2008 to December 2009 with Gilman RR Grade Separation updated by Public Works Transportation Division (PW-TD) based on PW-TD design updates in 2009.

(2) Costs based on PW-TD estimate of likelihood and amount of external funding from regional, State and federal sources, which can provide 50% to 88.5% of required funding depending on the project. Interchange projects are assumed to be Federally supported with 88.5% maximum Federal grant funding yet average support reduced by significant upfront expenses covered locally at lower match rates, as found with the Gilman Roundabouts. Thus only 80% of total project costs are assumed externally funded while 0% of local Road and Pedestrian projects are assumed externally funded. Assume given prior grant success rates that 20% of Bike and Transit projects are externally funded.

(3) This is the share of the City of Berkeley funding contributions that would be paid for by development in West Berkeley. The percentage for all Vehicular Improvements is based on an analysis of the West Berkeley Transportation Model's Traffix program. Specifically, 11 intersections were analyzed to determine the proportion of future year 2030 traffic attributed to existing, West Berkeley development, and regional traffic. The non-vehicular improvements share is based on new square footage taken as a percent of total developed square footage in West Berkeley. The remaining percentage is the share of funding the non-West Berkeley developments (General Fund, mitigations funds etc) should contribute to the listed improvement projects, results from subtracting WB development share.

(4) University Village Draft EIR indicates 55,000 sq ft grocery, 30,000 retail and 175 senior housing could impact Gilman's intersections as well as San Pablo Avenue, COB assumes mitigation will be negotiated as a source of funding to meet the City's portion of local match, leaving the cost share carried by local West Berkeley development unaffected by this and other development's outside City limits.

West Berkeley Developments - Trip Generation

<u>Type</u>		<u>DU</u>	<u>Gross Sq Ft</u>	<u>Net DU</u>	<u>Net Sq Ft</u>	<u>PM Peak Vehicle Trips</u>	<u>Net PM Peak Vehicle Trips</u>
Residential	Residential Corridor	1,722	1,655,703	1,552	1,492,248	407	369
	Residential Non- Corridor	99	95,189	99	95,189	41	41
Office			148,566		135,719	210	193
Retail			16,082		825	57	7
Research & Development			1,187,874		1,187,874	1,198	1,198
Industrial			737,104		458,559	577	438
TOTAL			3,840,518		3,370,414	2,490	2,246

West Berkeley Transportation Impact Fee - Applied to Primary Use Categories

Cost Per Peak Hour Vehicle Trip

Costs with Nexus to WB Development
 PM Peak Vehicle Trips (A)
 Cost per New PM peak hour vehicle trip

Cost per OOT (2010 \$M)
\$6,172,560
<u>2,246</u>
\$2,748

Source: WB Project EIR Appendix H - Trip Generation. ITE Trip rates were adjusted to City-specific rates per Census and BATS and pass-by %. Rate is for vehicles per PM peak hour. Residential rate per du (dwelling unit), average du assumed 961.5 sq ft and Non residential basis is per 1,000 sq ft. Existing TDM measures and available transit service is assumed in trip generation rates.

Note: A. 244 trips are assumed to be generated by projects which will not be subject to the fee due to prior development agreements, mitigations, and/or no further permits to be issued

Appendix B: WB TSF Proportional Fee Calculation - Table 3: Proposed WB TSF per Sq Ft & Dwelling Unit and Share of Revenue

	<u>ITE Land Use [A]</u>	<u>PM Peak trips [B]</u>	<u>PM Rate [C]</u>	<u>Proposed Fee</u>	<u>Projected Revenue (D)</u>	<u>Ave.</u>
Residential						
	Residential - Corridor	223	369	0.23 \$ 632 per du	\$1,014,103	\$ 695
	Residential - Non-Corridor	221	41	0.44 \$ 1,209 per du	\$112,678	
Office	General Office	710	193	1.42 \$3.90 per sq ft	\$530,411	\$3.91
Retail						
	Specialty Retail	814	-	1.86 \$5.11 per sq ft	\$0	\$10.76
	Retail (New Car Sales)	841	-	2.2 \$6.05 per sq ft	\$0	
	Restaurant (High turnover)	932	8	6.2 \$17.04 per sq ft	\$21,986	
	Restaurant (Low turnover)	931	-	5.4 \$14.84 per sq ft	\$0	
Industrial/Manufacturing						
	General Light Industry	110	427	0.96 \$2.64 per sq ft	\$1,173,501	\$1.70
	Warehouse	150	4	0.4 \$1.10 per sq ft	\$10,993	
	Heavy industrial	120	7	0.5 \$1.37 per sq ft	\$19,238	
R & D	R&D	760	1,198	1.03 \$2.83 per sq ft	\$3,292,398	\$2.77
Total			2,247	0.67	\$1.83 per sq ft	\$6,175,308

Notes:

(A) Source: WB Project EIR Appendix H - Trip Generation. ITE Trip rates were adjusted to City-specific rates per Census and BATS and pass-by %. Rate is for vehicles per PM peak hour. Residential rate per du, average du assumed 961.5 sq ft and Non residential is per 1,000 sq ft. No new TDM measures assumed applied but credit for mode split among existing population applied.

(B) Trip generation assumptions as included in the WB Project Draft EIR March, 2010 Technical Appendix H

(C) Trip generation rates as included in the WB Project Draft EIR March, 2010 Technical Appendix H

(D) 244 trips projected in the WB Project EIR will result from projects that already have building permits or are subject to a development agreement which included specific mitigation measures for traffic impacts and may not have the proposed fee applied. Thus expected revenue based on the trips in the WB Project EIR could be approximately 10% less than projected here. However project mitigations (to extent included in WB TSF CIP) could provide a separate funding source for projects on the CIP for WB TSF.

Appendix C: West Berkeley Trip Generation Adjustments

Land Use Category	Weekday						Weekend	
	Resident Commutes		Resident Errands		Commuters & Shoppers to W. Berkeley		All Trips	
	Corridor	Non-Corridor	Corridor	Non-Corridor	Corridor	Non-Corridor	Corridor	Non-Corridor
Residential	52%	65%	78%	91%			77%	87%
Office/R& D / Manufacturing/ Industrial	NA	NA	NA	NA	82%	95%	82%	95%
Commercial/ Retail	NA	NA	NA	NA	86%	99%	86%	99%

Source:

WBCMP Transportation Demand Management (TDM) Report

[http://www.ci.berkeley.ca.us/uploadedFiles/Planning_\(new_site_map_walk-through\)/Level_3_-_General/TDM%20Report%20Draft%20030309.pdf](http://www.ci.berkeley.ca.us/uploadedFiles/Planning_(new_site_map_walk-through)/Level_3_-_General/TDM%20Report%20Draft%20030309.pdf)