

## Draft White Paper

*The Economics of Land Use*



# Funding for Palo Alto Grade Separation and Crossing Improvements

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# 1. INTRODUCTION AND SUMMARY OF FINDINGS

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This White Paper presents an overview of potential funding resources and financing mechanisms applicable to grade separation and crossing improvements along the Caltrain corridor in the City of Palo Alto. Economic & Planning Systems (EPS) has prepared this White Paper as part of a multi-disciplinary team headed by Mott MacDonald and retained by the City of Palo Alto (City) to develop the Palo Alto Rail Corridor Plan. This review of the potential amount and applicability of various funding sources is critical to planning and designing the vital traffic and infrastructure improvements surrounding Caltrain and the California High-speed Rail Authority (HSR) alignment running through the City.

## Study Context and Approach

The City is bisected by the Caltrain rail corridor and enjoys the benefits of rail service, but also endures the impacts associated with train noise, traffic congestion around grade crossings, and community safety concerns. In addition, the City is preparing for increases in passenger rail service as a result of the Peninsula Corridor Electrification Project and potentially the California HSR project. Consequently, the City is assessing the feasibility of constructing various grade separation improvement alternatives along the existing Caltrain rail corridor from a design, engineering, cost, and funding perspective.

Currently there are four (4) multipurpose (vehicular, pedestrian and bicycle) at-grade crossings, three (3) grade separated multipurpose crossings, and two pedestrian/bicycle crossings of the Caltrain Corridor within the City of Palo Alto. The City has undertaken multiple studies over the years to assess mobility and the impact of the Caltrain Corridor and Caltrain operations on that mobility. More recently, focus has been on considering ways to improve mobility across the corridor through grade separating one or more of the at-grade crossings and/or adding additional pedestrian/bicycle crossings.

The final layout of the Caltrain line crossing facilities in the City could vary with any combination of alternative measures ranging from individual grade separations or a continuous grade separation using either a tunnel; complete entrenchment or complete elevation of the rail line.

**Table 1** provides a summary of the range of solutions being considered and the preliminary cost range associated with each.

**Table 1 Range of Grade Separation Alternatives and Planning Level Cost Estimates**

Option	Total Estimated Cost Range (\$2017)	
	Low	High
<b>1a: Open Trench, City Limit to City Limit</b>	<b>\$2,400,000,000</b>	<b>\$2,900,000,000</b>
<b>1b: Cut &amp; Cover Tunnel, City Limit to City Limit</b>	<b>\$3,300,000,000</b>	<b>\$4,000,000,000</b>
<b>1c: Twin Deep Bored Tunnels</b>	<b>\$2,800,000,000</b>	<b>\$3,400,000,000</b>
<b>2a: Open Trench, Under Meadow and Charleston (2% Grade)</b>	<b>\$750,000,000</b>	<b>\$1,000,000,000</b>
<b>2b: Open Trench, Under Charleston Only (2% Grade)</b>	<b>\$500,000,000</b>	<b>\$700,000,000</b>
<b>Individual Grade Separations<sup>1</sup></b>		
Churchill lowered under Caltrain and Alma	\$98,000,000	\$200,000,000
Meadow lowered under Caltrain and Alma	\$93,000,000	\$156,000,000
Charleston lowered under Caltrain and Alma	\$111,000,000	\$167,000,000
<b>Subtotal</b>	<b>\$302,000,000</b>	<b>\$523,000,000</b>

[1] The lower cost option is to put the local road under both the Railroad and Alma Avenue. The more expensive option for each includes lowering Alma to meet the local road in a depressed configuration.

Source: Mott Macdonald; EPS

Since any set of grade separation and related improvements pursued by the City will require significant capital investment, the availability of funding sources is likely to be a key determinant in project feasibility. Accordingly, this White Paper provides a high-level summary of potential funding and financing opportunities, including those that might be derived locally (e.g., from City), regionally (e.g., 2016 Measure B), at the state level (particularly the California High-speed Rail Authority), and federal government. For each source and financing mechanisms considered, EPS addresses the following interrelated items:

- **Definition and Implementation Requirements:** Where does the funding come from and how is it approved and implemented. For example, does the tool require voter approval, a new City ordinance, or other approach to implementation? Is the tool a new source of funding, a financing mechanism, or both?
- **Scale of Potential Funding:** What is the likely amount or range of funding that could potentially be available to the City from each source or mechanism? Would the tool be appropriate for a citywide program, area program, or project-specific infrastructure?
- **Applicability and Feasibility:** How realistic is the source? For example, what is the level of competition or level of difficulty in garnering necessary support. Also, what is the likely schedule of funding availability and / or other constraints on the use of funds?

## Qualifications and Limitations

The financial calculations and projections provided herein are based on readily available information and standard assumptions. They are designed to inform the planning process and should not be used for budgeting or financial planning purposes. This initial analysis is designed to case a relatively wide net in terms of the potential funding and financing sources that might be available. Some of the sources may be politically infeasible and / or mutually exclusive. It is expected that more detailed analysis and due diligence will be conducted on a short list deemed most appropriate for the Preferred Alternative that emerges from the Connecting Palo Alto Context Sensitive Solutions Alternatives Analysis process.

It is also important to note that the information presented herein does not represent an exhaustive list of all potential funding sources that might be applicable to Palo Alto grade separation improvements. A number of sources were considered but ultimately excluded due to lack of applicability (e.g., low likelihood of success, negligible funding potential, already over-subscribed or committed). Others may be missing because they are relatively obscure and/or unconventional.

Finally, the future funding landscape is by definition highly uncertain and subject to change based on economic, political, legal, and other factors. By way of example, federal tax reform proposals currently under consideration in Congress may have implications on deductibility of local taxes, tax exempt funding measures, and other factors relevant to the various tools discussed herein. A detailed evaluation of these factors is beyond the scope of this current analysis.

## Summary and Key Findings

A summary of the primary local and regional funding programs, resources, and tools evaluated in this analysis is provided in **Table 2**. The key findings are provided below:

- 1. Since available and committed funding sources, such as 2016 Measure B, are well below the amount needed to cover the full cost of the grade separation scenarios currently being considered, the City will need to identify and establish additional funding resource and financing tools, particularly for higher-cost alternatives.***
- 2. At a local level, a general obligation bond funded by a property tax increase is by far the most substantial funding opportunity, but would require two-thirds voter approval. Other local tax increases, such as sales, transient occupancy, or business license taxes may also be appropriate, and would also require two-thirds voter approval if dedicated to grade separation and related improvements. However, these sources generate less income, are generally more volatile, and are less suitable for securing municipal debt.***
- 3. Project based funding and associated "value capture" tools could provide significant funding assuming major development opportunities can be enabled and linked to the grade separation and related improvements. However, value capture tools face significant challenges related to the predictability and timing of funding.***
- 4. While a variety of state and federal funding sources are applicable to grade separation and related improvements, and should be pursued, their competitive***

***nature makes the amount and timing of such funds difficult to predict. Nevertheless, it is expected that 2016 Measure B and the California High-speed Rail Authority will play an important role in covering project costs. Some state or federal loan programs may provide bridge financing until local sources materialize.***

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**Table 2 Summary of Local and Regional Funding Sources and Financing Mechanisms**

Funding Source / Mechanism	Description	Approval Process / Authority <sup>1</sup>	Funding Potential <sup>2</sup>		Key Assumptions		Timing / Phasing
			Low	High	Low	High	
<b>Local Sources Requiring City-Wide Voter Approval</b>							
<b>Property Tax Secured Bond Measure</b>	Voters may approve a special or general property tax increase revenue in the general fund or for specific purposes. Revenues may then be used to secure a GO bond.	<ul style="list-style-type: none"> <li>• Simple Majority if General Tax (revenues used for unrestricted purposes).</li> <li>• Supermajority if Special Tax and GO Bond (revenues used for specific purposes)</li> </ul>	\$143,000,000	\$713,000,000	Property Tax Increase of 0.05%	Property Tax Increase of 0.25%	Available upon issuance of Bond.
<b>Parcel Tax</b>	Excise tax on real property based on either a flat per-parcel rate or one that varies depending on use, size, and/or number of units on each parcel. Proposition 218 requires that parcel taxes be enacted as a special tax. The generated money may then be used to secure a GO bond.	<ul style="list-style-type: none"> <li>• Simple Majority if General Tax (revenues used for unrestricted purposes).</li> <li>• Supermajority if Special Tax (revenues used for specific purposes)</li> </ul>	\$22,480,000	\$44,950,000	Parcel Tax of \$50	Parcel Tax of \$100	10-Year Cumulative Total
<b>Add-on Sales Taxes (Transaction and Use Taxes)</b>	Generally applies to retail or other end user sales delivered in the jurisdiction imposing the tax. The tax increase must be a multiple of 0.25% and the maximum combined rate of transactions and use taxes in any location may not exceed 2%.	<ul style="list-style-type: none"> <li>• Simple Majority if General Tax (revenues used for unrestricted purposes).</li> <li>• Supermajority if Special Tax (revenues used for specific purposes)</li> </ul>	\$23,730,000	\$59,330,000	Sales Tax Increase of 0.10% (portion allocated to grade separation)	Sales Tax Increase of 0.25% (100% allocated to grade separation)	10-Year Cumulative Total
<b>Transient Occupancy Tax (TOT or Hotel Bed Tax)</b>	Tax on hotels, motels, and other short term accommodations. Cities may set their own TOT rates. Lodging provider collects tax and remits funds to City.	<ul style="list-style-type: none"> <li>• Simple Majority if General Tax (revenues used for unrestricted purposes).</li> <li>• Supermajority if Special Tax (revenues used for specific purposes)</li> </ul>	\$15,975,714	\$47,927,143	TOT Tax Increase of 1.00%	TOT Tax Increase of 3.00%	10-Year Cumulative Total



**Table 2 Summary of Local and Regional Funding Sources and Financing Mechanisms (continued)**

Funding Source / Mechanism	Description	Approval Process / Authority <sup>1</sup>	Funding Potential <sup>2</sup>		Key Assumptions		Timing / Phasing
			Low	High	Low	High	
<b>Documentary Transfer Tax / Property Transfer Tax</b>	Tax imposed on the transfer of interests in real estate. Charter Cities may set their rate.	<ul style="list-style-type: none"> <li>• Simple Majority if General Tax (revenues used for unrestricted purposes).</li> <li>• Supermajority if Special Tax (revenues used for specific purposes)</li> </ul>	\$10,836,061	\$32,508,182	Property Transfer Tax Increase of 0.05%	Property Transfer Tax Increase of 0.15%	10-Year Cumulative Total
<b>Utility Users Tax</b>	Tax on the users of utility services such as gas, electric, water, cable TV and/or telecommunications services. City may set their own UUT rate. UUT collected by utility companies as part of regular billing procedures and remitted to the City.	<ul style="list-style-type: none"> <li>• Simple Majority if General Tax (revenues used for unrestricted purposes).</li> <li>• Supermajority if Special Tax (revenues used for specific purposes)</li> </ul>	\$24,938,000	\$74,814,000	Utility Users Tax Increase of 1.00%	Utility Users Tax Increase of 3.00%	10-Year Cumulative Total
<b>Business License Tax</b>	A tax on businesses in the City, based on gross receipts, number of employees, square footage of space occupied, or other factors.	<ul style="list-style-type: none"> <li>• Simple Majority if General Tax (revenues used for unrestricted purposes).</li> <li>• Supermajority if Special Tax (revenues used for specific purposes)</li> </ul>	\$8,513,040	\$34,052,160	Business License Tax of \$10 / private sector job	Business License Tax of \$40 / private sector job	10-Year Cumulative Total
<b>Development Impact Fees<sup>3</sup></b>	One time charge on new development to cover cost of required infrastructure. Nexus findings required	Requires nexus findings and approval by City Council.	\$14,300,000	\$20,000,000	15 year cumulative growth	20 year cumulative growth	15 - 20 Year Cumulative Total
<b>Caltrain Fare Surcharge</b>	A surcharge on Caltrain (or HSR) fares that originate or terminate in Palo Alto.	Will require coordination with Caltrain but not necessarily voter approval.	\$2,456,623	\$9,826,490	Caltrain Surcharge Fee of \$0.25 / departing trip	Caltrain Surcharge Fee of \$1.00 / departing trip	10-Year Cumulative Total

**Table 2 Summary of Local and Regional Funding Sources and Financing Mechanisms (continued)**

Funding Source / Mechanism	Description	Approval Process / Authority <sup>1</sup>	Funding Potential <sup>2</sup>		Key Assumptions		Timing / Phasing
			Low	High	Low	High	
<b>Value Capture Sources</b>							
<b>Development Agreements, incentive zoning, and/or Public Private Partnerships (P3)</b>	A Development Agreements (DA) is a voluntary and legally binding agreement between a local government and developer authorized by State statute. DAs are discretionary and must be individually adopted by local ordinance. A P3 is similar to a DA but often includes more specificity, collaboration, and risk sharing among public and private participants.	Requires City Council approval.	\$50,000,000	\$235,000,000	500 residential units + 100,000 commercial sq. ft.	2,000 residential units + 750,000 commercial sq. ft. <i>(Value Capture = 10% of Finished Market Value)</i>	Generally available at the time a specific development project is completed or initiated.
<b>Enhanced Infrastructure Financing District (EIFD)</b>	A defined district formed by City that can issue bonds to by diverting property tax increment revenues.	Requires City Council approval. Bond issuance requires supermajority voter approval.	\$13,232,510	\$24,197,319	@ 3% Avg. annual increase in AV	@ 5% Avg. annual increase in AV	Bond proceeds in year 10
<b>Mello-Roos Community Facilities District (CFD)</b>	A special tax levied on properties within a defined district to pay debt service on bonds sold to fund construction and/or acquisition of public capital facilities.	Supermajority of voters in proposed district (or landowner approval when there are fewer than 12 registered voters).	\$11,518,457	\$34,555,372	CFD Tax Rate (per unit or 1K Sqft.) of \$200	CFD Tax Rate (per unit or 1K Sqft.) of \$600	Available upon issuance of Bond.

**Table 2 Summary of Local and Regional Funding Sources and Financing Mechanisms (continued)**

Funding Source / Mechanism	Description	Approval Process / Authority <sup>1</sup>	Funding Potential <sup>2</sup>		Key Assumptions		Timing / Phasing
			Low	High	Low	High	
<b><u>Selected Regional, State, or Federal Sources</u></b>							
<b>Measure B</b>	A sales tax passed by Santa Clara County in 2016 to fund transportation related projects and specifically sets aside a portion of revenues for grade separation (\$700 million between three cities).	Approved by 2/3 Supermajority.	\$350,000,000	\$395,500,000	Not Applicable		30-Year Cumulative Total
<b>Section 190</b>	Section 190 provides State funds to local agencies for grade separation projects or to improve at-grade crossings. The program typically provides \$15 million annually. The HSRA receives its funding from a variety of sources and has already contributed to grade separation funding at local levels. It is uncertain how much the HSRA will provide at this time and when funding would be available.	Based on the CPUC priority list.	\$2,000,000	\$5,000,000	Not Applicable		One-Time Funding
<b>HSR Authority<sup>4</sup></b>	The HSRA receives its funding from a variety of sources and has already contributed to grade separation funding at local levels. It is uncertain how much the HSRA will provide at this time and when funding would be available.	Based on HSRA criteria, Prop. 1A, and related statutes.	\$155,000,000	\$179,000,000	Not Applicable		15-Year Total
<b>SB 1 Congested Corridors Program</b>	Road Repair and Accountability Act of 2017 included \$250 million / year to improve highly congested corridors. Eligible projects include local streets and roads, public transit facilities (including rail), and bicycle/pedestrian facilities.		Unknown		Not Applicable		One-Time Funding

[1] Simple majority defined as 50% plus one, supermajority defined as 2/3<sup>rds</sup> plus one.

[2] Based on preliminary assumptions and projections, as documented in this White Paper. Estimates are not additive.

[3] Based on review of preliminary transportation impact fee study.

[4] Based on relative fair share allocation of projected funding for San Jose to San Francisco corridor.

Source: Economic & Planning Systems, Inc.

## 2. LOCAL FUNDING TOOLS AND RESOURCES

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This chapter evaluates the potential for various local funding tools and programs that could be pursued to help pay for Palo Alto grade separation improvements. Local funding sources are defined as those that would be enabled and approved by the City of Palo Alto and its residents. The City also has some discretion over the use of various federal, State, and regional program funds that continue to be available, as discussed further in **Chapter 3**.

California cities, and other local jurisdictions or special districts (e.g., counties, transportation authorities, park districts), have a variety of tools and resources at their disposal to fund infrastructure and public facility improvements. This chapter distinguishes between (1) City-wide measures requiring voter approval, (2) "value capture" tools or measures that generally apply to property and development within a defined project area (e.g., on and surrounding the rail alignment), and (3) other sources that would likely need to be authorized or appropriated by local officials but do not require voter approval.

It is important to note that the estimated funding potentials for some of the sources evaluated herein are likely to be mutually exclusive and thus not additive. For example, it may be difficult to obtain the required two-thirds voter approval for three two for special tax measures dedicated to grade separation improvements. Likewise, the value capture techniques evaluated below may overlap with some of the other funding sources such as impact fees or special tax bond proceeds. Indeed, in many cases one source might be used to fully or partially repay another.

### **Funding Sources Requiring City-Wide Voter Approval**

Subject to a vote, cities and counties can impose a variety of taxes to fund infrastructure. For example, local sales and property taxes, transient occupancy taxes, utility user taxes, and real estate transfer taxes all can be created or increased for this purpose. The resulting revenues can be used on a "pay-as-you-go" basis, as a source of reimbursement, or in some cases to support a municipal bond issue. However, initiatives that increase local taxes are limited by State constitutional requirements and statutes that require voter approval of 50 percent plus one (1) (hereafter "simple majority") for "general taxes" and two-thirds plus one (1) (hereafter "super-majority") approval for "special taxes" (i.e., revenues are earmarked for a particular purpose). Specifically, local ballot measures or initiatives that raise local taxes must follow one of two approaches:

- 1. General Tax:** The revenues from a General Tax are expended at the discretion of the local government's governing body on any programs or services. Approval requires a simple majority.
- 2. Special Tax:** The revenue from special tax are dedicated to a specific purpose as defined in the ballot initiative. Approval requires super-majority voter approval.

Because the designation of revenues for specific purposes does tend to result in more "yes" votes (though often insufficient to garner a supermajority), some jurisdictions have attempted to improve the success rate of general purpose measures by adopting a so-called "A/B Strategy."

Under this approach, general purpose tax measures are accompanied by an advisory measure indicating the recommended use for the funds. This allows the measure to avoid the two-thirds supermajority threshold.<sup>1</sup> Another important consideration relates to the amount of revenue generated from each source and how it will be used to fund the desired projects. For example, while property tax increases may be sufficient to underwrite debt, sources with a lesser or volatile revenue potential may be not.

The following sections discuss the pros and cons of various local tax increases as a source of funding for grade separation improvements, including issues related to implementation, revenue potential, and incidence (i.e., what activity or population[s] would be subject to the tax burden).

### **Property Tax and General Obligation Bond**

The voters of Palo Alto could approve a bond measure secured by a special or general property tax increase to fund grade separation improvements. Assuming such a measure was restricted to a specified set of improvements and/or was part of a general obligation bond issue, it would need to secure two-thirds voter approval, as noted above.

The incidence of burden of a restricted or general obligation bond secured by a property tax increase rests on all property owners in the issuing jurisdiction in proportion to the assessed value of their property (i.e., it is an "ad valorem" percent tax). This very broad base of funding provides excellent security for special purpose or general obligation bonds, thus typically garnering the lowest interest rate of any municipal debt instrument. Credit rating agencies often consider a general obligation pledge to have very strong credit quality and frequently assign them investment grade ratings.

One factor that may play a role in the feasibility and scale of a bond measure funded property tax revenue is the City's existing tax rate. It is often more difficult - for both political and financial reasons - for municipalities to secure additional property tax secured debt if the property tax rate is already well above the baseline 1 percent of assessed value.<sup>2</sup> **Table 2** compares Palo Alto's current City-wide property tax to nearby jurisdictions. As shown, the City-wide average property tax rate in Palo Alto is not inordinately high relative to nearby jurisdictions. By way of example, an increase in the existing property tax rate of 1.15 percent to 1.40 percent of assessed value would bring Palo Alto on par with Cupertino.

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<sup>1</sup> A review of local revenue measures since 2001, conducted by California City Finance, suggests this approach has had limited success. Implementation of the A/B Strategy did improve the success rate of utility user tax measures but did not have a significant impact on the success rate of add-on sales tax measures (see, California City Finance, An Overview of Local Revenue Measures Since 2001, May 1, 2013).

<sup>2</sup> For the purpose of estimating increases in property special assessments or taxes, a feasibility test of two percent (2%) of sales price is generally assumed as the maximum allowable tax rate.

**Table 3 Comparison of Total Property Tax Rates by Jurisdiction**

City	Existing "ad valorem" Property Tax Rates (all recipients)
<b>Palo Alto</b>	1.15%
<b>Mountain View</b>	1.15%
<b>Cupertino</b>	1.40%
<b>San Francisco</b>	1.18%

\*2015/16 CAFR Reports

**Table 3** provides an estimate of the tax revenue and bond capacity under various assumptions related to a voter approved property tax increase (note, most GO bond measures specify the bond issuance amount rather than property tax rate). For example, an increase in the existing property tax rate of 1.15 percent to 1.40 percent of assessed value would generate about \$713 million in net bond proceeds. By way of example, in 2008 Palo Alto residents approved a \$76 million bond measure which increased the property tax rate by about .03 percent. It is important to note that this calculation is based on Palo Alto's Fiscal Year 2015 assessed value, and while this amount will increase over time, so will the project cost of various grade separation improvements.

A voter approved bond measure would result in an increase in local property taxes that would be incurred by property owners, including local residents. While the actual increase would vary based on assessed value, by way of example a typical home owner would see an increase in their property tax bill in the range of \$1,750 to \$6,500 under the scenario where property tax rate is increased to 1.4 percent.<sup>3</sup> The lower estimate is based on the average residential assessed value in the City of \$700,000. The higher end is based on average market value in the City of about \$2.6 million.<sup>4</sup>

<sup>3</sup> Based on total residential assessed value divided by the number of non-tax-exempt units.

<sup>4</sup> Based on Zillow.

**Table 4 Estimated Revenue and GO Bond Proceeds from Property Tax Increase**

Item	Existing	Potential Property Tax Rate	Potential New Tax Revenue / Year	Estimated Net GO Bond Proceeds <sup>2</sup>
<b>Palo Alto Total Assessed Value (FY 2016)<sup>1</sup></b>	\$29,415,754,000			
<b>Existing Property Tax Rate</b>	1.15%			
<b>Property Tax Rate Increase Scenario</b>				
Scenario 1		1.20%	\$14,707,877	\$143,000,000
Scenario 2		1.25%	\$29,415,754	\$285,000,000
Scenario 3		1.40%	\$73,539,385	\$713,000,000

[1] The total assessed value of Palo Alto was provided in the 2016/17 CAFR Report.

[2] Bond proceeds estimate based on additional property tax revenue generated from an increase in the tax rate shown under each scenario. The calculation assumes a 6% interest rate, 30 year term, 1.25 debt coverage factor, and issuance cost equal to 12% of gross bond proceeds.

### Parcel Tax

A parcel tax is a flat annual charge applied to properties within a jurisdiction, sometimes with use-related variation and exemptions. The key distinction with property tax is that a parcel tax cannot be levied on an “ad valorem” basis (i.e., not based on the assessed value of property). Parcel taxes, if used for general purposes including infrastructure investments, can be imposed with a simple majority voter approval. If dedicated to special purposes, parcel taxes will require two-thirds voter approval. They may be used for funding ongoing services or pledged to debt service.

Parcel taxes can be structured to vary based on key property characteristics, such as number of separate dwelling units on a parcel (i.e. so that an apartment complex doesn’t pay the same rate as a single-family unit) or total commercial square feet. But typically, parcel taxes include relatively strict allocation rules to ensure simplicity and parity among property owners. They also are commonly subject to a “sunset” date, and must be re-authorized periodically to maintain funding.

In practice, parcel taxes are typically used to provide a broad-based source of funding for specified and highly-desirable city-wide public services and improvements (i.e. not general purpose) and are based on relatively modest levies. They also tend to generate a relative constant amount of revenue over time, which doesn’t fluctuate based on market appreciation or property enhancements. Consequently, the revenue generating potential of a parcel tax, though stable, is generally much lower than for property tax.

**Table 4** provides an illustrative estimate of the annual tax revenue under typical parcel tax rates for residential and commercial uses. For example, an annual parcel tax of \$75 per dwelling unit or per 1,000 square feet of commercial space would generate about \$33.7 million over ten years. As noted, the bond proceeds are well below those estimated from a property tax rate increase above, which is typical for a parcel tax.

**Table 5 Estimated Annual Revenues from Parcel Tax Scenarios**

Item	Current	Potential Parcel Tax Rate (per unit or 1K Sqft.)	Potential Funding Amount
<b>Palo Alto Housing Units<sup>1</sup></b>	29,124		
<b>Non-Residential Square Feet<sup>2</sup></b>	15,828,846		
<b>Parcel Tax Scenario (Annual)</b>			
Scenario 1		\$50	\$2,247,642
Scenario 2		\$75	\$3,371,463
Scenario 3		\$100	\$4,495,285
<b>10 Year Total</b>			
Scenario 1			<b>\$22,476,423</b>
Scenario 2			<b>\$33,714,635</b>
Scenario 3			<b>\$44,952,846</b>

[1] DOF 2017 estimates.

[2] Based on CosStar

### Sales Tax

Similar to property tax, Palo Alto residents could approve a measure to increase the sales tax rate to fund grade separation improvements. While such a measure would also require two-thirds voter approval if dedicated to a specific purpose, one potential advantage of a sales tax measure is that the incidence or burden is more broadly based rather than restricted to property owners per se. However, this revenue source tends to be less stable and subject to fluctuations in business cycle, competition, and other factors affecting the local retail sector (e.g., impact of internet sales).

Both Santa Clara and San Mateo counties have recently approved half cent sales tax measures to fund transportation infrastructure, including grade separation improvements. These funds are collected by the County and refunded to cities as reimbursement. San Mateo County approved its sales tax, 2012 Measure A for a period of ten years. 2012 Measure A has generated about \$80 million in revenue annually, which funds critical local services and infrastructure. About \$74 million of 2012 Measure A funds have already been allocated to the City of San Mateo's 25th Avenue Grade Separation Project, and San Bruno received \$92.4 million.

**Chapter 3** provides further discussion of the likely funding from Santa Clara County 2016 Measure B potentially available for Palo Alto grade separation improvements as well as a Caltrans sales tax initiative. However, the recent approval of this measure might affect the appetite of Palo Alto residents to support a similar measure in the near future.

The total sales tax rate of a jurisdiction relative to its neighbors may have both political and financial implications on the feasibility of additional increases. As shown in **Table 5**, Palo Alto's existing sales tax rate is comparable to neighboring jurisdictions. A small increase is unlikely to



affect the City's competitive position or result in a rate that is inordinately high (currently about 300 cities in the State have sales tax rates above 9 percent and about 20 have rate higher than 10 percent. The maximum allowable is 10.25 percent.

**Table 6 Comparison of Total Sales Tax Rates by Jurisdiction**

City	Current Overall Sales Tax Rate
Palo Alto	9.00%
Mountain View	9.00%
Cupertino	9.00%
San Francisco	8.50%
<b>Santa Clara County Average</b>	<b>9.02%</b>

\*Board of Equalization 2017

**Table 6** provides an estimate of the tax revenue under various assumptions related to a voter approved sales tax increase. For example, an increase in the existing local sales tax rate of 1.0 percent to 1.25 percent (1/4<sup>th</sup> of a cent) would generate about \$59.3 million over ten years. While sales tax measures are generally approved in increments of 1/4<sup>th</sup> of a cent, the lower end scenarios (e.g. 1/10<sup>th</sup> of a cent) represent a scenario in which a 1/4<sup>th</sup> cent increase was bundled with a variety of city-wide infrastructure improvements. While the calculations are based on Palo Alto's 2015-16 sales tax revenue which will increase over time, so will project costs.

**Table 7 Estimated Revenue from Sales Tax Increase**

Item	Current	Potential Sales Tax Rate	Potential New Sales Tax Revenue	
			Annual Avg.	10-Year Total
<b>Palo Alto Total Sales Tax Revenue in 2015/16 (a)<sup>1</sup></b>	\$24,491,000			
<b>Local Sales Tax Rate (b)</b>	1.00%			
<b>Total Taxable Sales (a / b)</b>	\$2,449,100,000			
<b>Sales Tax Rate Increase Scenario</b>				
Scenario 1		1.10%	\$2,449,100	\$23,732,859
Scenario 2		1.15%	\$3,673,650	\$35,599,289
Scenario 3		1.25%	\$6,122,750	\$59,332,148

[1] City of Palo Alto, 2016 actuals.

Sources: City of Palo Alto; Economic & Planning Systems, Inc.

## Other Potential Voter Approved Tax Measures

While property and sales tax increases represent the most common form of locally approved tax increases dedicated to special purposes and to secure municipal debt, this analysis also considers a number of other City taxes that are appropriate for grade separation and related improvements. While these revenue sources currently accrue to the General Fund and could be increased with a simple majority voter approval, specific dedication to grade separation improvements would trigger a two-thirds super-majority voter threshold. In addition, the smaller and less stable revenue stream associated with the taxes described below make them less appropriate for debt financing.

### ***Dedicated Transient Occupancy Tax***

Some cities have approved measures that allocate all or a portion of their transient occupancy or “hotel tax” (TOT) revenues to specific public services or infrastructure. As mentioned earlier, in 2002 the City of Reno secured about \$112 million in bond proceeds backed by both hotel room and sales taxes to finance a grade separation project in their downtown.<sup>5</sup> While a number of California cities have also dedicated TOT revenues to specific purposes, such action requires two-thirds voter approval.

Palo Alto currently has a TOT rate equal to 14 percent of hotel room revenue which accrues to the General Fund.<sup>6</sup> As shown in **Table 7**, this rate is comparable to San Francisco but slightly higher than neighboring jurisdictions. Because the current rate is on the high side, the opportunity for substantial increases going forward may be limited.

**Table 8 Comparison of TOT rates for Nearby Jurisdictions**

City	Current TOT Rate
Palo Alto	14%
Mountain View	10%
Sunnyvale	10.5%
Cupertino	12%
San Francisco	14%

<sup>5</sup> See, [https://www.fhwa.dot.gov/ipd/project\\_profiles/nv\\_retrac.aspx](https://www.fhwa.dot.gov/ipd/project_profiles/nv_retrac.aspx)

<sup>6</sup> The Palo Alto City Council has been using a portion of the TOT to fund local infrastructure needs. This is implemented annually through the budget process

**Table 8** provides an estimate of the funding potential under various assumptions related to a voter approved TOT tax increase. For example, an increase in the existing TOT tax rate of 14 percent to 16 percent would generate about \$3.2 million per year (or \$32 million over ten years).

**Table 9 Funding Potential from Increase in City TOT Rate**

	Current	Potential TOT Rate	Potential Revenue	
			Avg. Annual	10-Year Total
City TOT Revenues in 2016 <sup>1</sup> (a)	\$22,366,000			
Existing City TOT Rate (b)	14%			
<b>Taxable Room Revenue (a / b)</b>	<b>\$159,757,143</b>			
<b>TOT Rate Increase Scenario</b>				
Scenario 1		15%	\$1,597,571	\$15,975,714
Scenario 2		16%	\$3,195,143	\$31,951,429
Scenario 3		17%	\$4,792,714	\$47,927,143

[1] The 2015/16 CAFR Report contains FY 2016 actuals for TOT revenues. Approximately \$7.2 million is already dedicated to City Infrastructure Plan in the City consistent with the last increase.

**Property Transfer Tax**

Most California cities, including Palo Alto, impose a one-time tax when a property changes ownership. In Palo Alto this rate is currently set at .33% of sales price (e.g., a \$1 million real estate transaction would pay \$3,300) which accrues to the General Fund.<sup>7</sup> As shown in **Table 9**, this rate is on the low side suggesting the future increases might be feasible.

<sup>7</sup> SB-2 signed into law in the Fall of 2017 imposes a State “document fee” on real estate transactions. This funding, in aggregate estimated to be \$250 million annually, is dedicated entirely to housing-related investments, grants, and subsidies which is unlikely to apply to grade separation improvements in Palo Alto.

**Table 10 Comparison of Property Transfer Tax Rates**

City	Current Property Transfer Tax Rate (% of sales price)
Palo Alto	0.33%
Mountain View	0.33%
Cupertino	0.55%
San Francisco	.50% - 3.00%

**Table 10** provides an estimate of grades separation funding potential under various assumptions related to a voter approved property transfer tax increase. For example, an increase in the existing TOT tax rate of .33 percent to .48 percent would generate about \$3.3 million per year (or \$33 million over ten years).

**Table 11 Funding Potential from Increase in City Property Transfer Tax Rate**

Item	Current	Potential Property Tax Rate	Potential Revenue	
			Avg. Annual	10-Year Total
Property Transfer Tax (5-Year Average) <sup>1</sup>	\$7,151,800			
Existing Property Transfer Tax Rate	0.33%			
5-Year Average Market Value of Property Transfers	\$2,167,212,121			
<b>Property Transfer Tax Rate Increase Scenario</b>				
Scenario 1		0.38%	\$1,083,606	\$10,836,061
Scenario 2		0.43%	\$2,167,212	\$21,672,121
Scenario 3		0.48%	\$3,250,818	\$32,508,182

[1] Based on CAFR 2012-2016.

**Utility Users Tax**

Most California cities, including Palo Alto, impose a tax on utility bills (e.g., PG&E, water, cable, etc.). In Palo Alto the current water, gas, and electricity rate is 5 percent of the charges to a service user by a service supplier, while telecommunications is taxed at a rate of 4.75%, which accrues to the General Fund. As shown in **Table 11**, this rate higher than San Francisco and neighboring jurisdictions. In other words, it may be difficult to justify additional increases going forward.

**Table 12 Comparison of Utility User Tax rates for Nearby Jurisdictions**

City	Utility Users Tax Rates
Palo Alto <sup>1</sup>	4.75% - 5.00%
Mountain View	3.00%
Cupertino	2.40%
San Francisco	1.18%

[1] In Palo Alto the current water, gas, and electricity rate is 5 percent while telecommunications is taxed at a rate of 4.75 percent.

**Table 12** provides an estimate of the funding potential under various assumptions related to a voter approved increase in the utility user tax. For example, an increase in the existing utility users tax rate of 5 percent to 7 percent would generate about \$5.0 million per year (or \$50 million over ten years).

**Table 13 Funding Potential from Increase in City Utility Users Tax rate**

Item	Current	Potential Utility Users Tax Rate	Potential Revenue	
			Avg. Annual	10-Year Total
<b>Palo Alto Total Utility Users Tax Revenue in 2016 (a)<sup>1</sup></b>	\$12,469,000			
<b>Local Utility Users Tax Rate (b)<sup>2</sup></b>	5.00%			
<b>Total Taxable Utilities (a / b)</b>	\$249,380,000			
<b>Utility Tax Rate Increase Scenario</b>				
Scenario 1		6.0%	\$2,493,800	\$24,938,000
Scenario 2		7.0%	\$4,987,600	\$49,876,000
Scenario 3		8.0%	\$7,481,400	\$74,814,000

[1] CAFR Report 2015/16.

[2] Assumes initial rate of water, gas, and electric (rather than 4.75% telecommunications rate).

### **Business License Tax**

While Palo Alto charges a flat and relatively small business registration fee - unlike many Bay Area cities - it does not currently have a business license tax. The manner in which this fee is levied varies significantly by jurisdiction, with some basing it on number of employees and others on gross receipts. **Table 13** provides a summary of the various methods and per employee revenue for neighboring jurisdictions.

**Table 14 Comparison of Business License Tax rates for Nearby Jurisdictions**

City	Type of Tax in Place	Calculated Business License Revenue per Employee
<b>Palo Alto</b>	Business Registration Fee	N/A
<b>Mountain View</b>	Per Employee	\$4
<b>Sunnyvale</b>	Per Employee	\$22
<b>Cupertino</b>	By business type	\$21
<b>San Francisco</b>	Payroll (and Business Registration Fee) <sup>1</sup>	\$1,029

[1] Varies by increment of gross receipts. Businesses qualifying as Administrative Offices have a fee based on Payroll Expense.

Sources: City Documents and Websites; Economic & Planning Systems, Inc.

**Table 14** provides an estimate of the funding potential under various assumptions related to a voter approved business license tax in Palo Alto. For example, an imposition of a business license fee that is equivalent to about \$40 per employee would generate about \$4.3 million per year (or \$43 million over ten years).

**Table 15 Funding Potential from Imposition of a New Business License Tax**

Item	Current	Potential Tax Rate (per Employee)	Potential Revenue	
			Avg. Annual	10-Year Total
<b>Business License Tax</b>	N/A			
<b>Palo Alto Total Jobs<sup>1</sup></b>	106,413			
Adjusted Jobs Subject to Tax <sup>2</sup>	85,130			
<b>Business License Tax Rate Scenario (Annual)</b>				
Scenario 1		\$10	\$851,304	\$8,513,040
Scenario 2		\$20	\$1,702,608	\$17,026,080
Scenario 3		\$40	\$3,405,216	\$34,052,160

[1] Based on data from LEHD On-The-Map

[2] Reduces total employment by 20% to account for government employees, non-profits, or sole proprietors.

Sources: Palo Alto Comprehensive Annual Financial Report (2016); California State Board of Equalization (2015); Economic & Planning Systems, Inc.

## Value Capture Funding Tools

The term “value capture” refers to a variety of funding tools and techniques that jurisdictions may employ to participate in the financial benefits conveyed by publicly supported infrastructure

investments. Typically, when the public sector creates value through infrastructure investment or other means, landowners enjoy a financial gain. Value capture occurs when the public sector reclaims some of the value created by its activities. The term is particularly applicable to transportation improvements that provide improved market access, new development opportunities, and other economic value enhancements beyond what would exist under normal or baseline conditions.

The range of economic benefits that may result from Palo Alto grade separation improvements include, without limitation:

- **Improved Access:** Depending on design and location, grade separation and related improvements will likely provide improved accessibility and circulation for vehicles, pedestrians, bicyclists, and transit riders, with particular benefits to nearby property owners.
- **New Development Opportunities:** To the extent the portions of the existing Caltrain rail can be accommodated underground, grade separation and related improvements may free up land and create new development opportunities.
- **Reduced Sound and Visual Impacts:** Again, to the extent the portions of the existing Caltrain rail is moved underground, existing sound and visual impacts may be improved.

A review of potentially applicable value capture techniques that the City might pursue to help fund grade separation improvements are provided below.

### **Project Specific Development Agreements, Incentive Zoning, and P3s**

With local authority over land use, California cities have a variety of tools at their disposal to exact financial contributions from property owners and developers in exchange for project or site-specific entitlements. In the case of the grade separation and related improvements, the City may seek to leverage the economic benefits outlined above by supporting increased development opportunities at particular locations that exceed what is allowed under baseline zoning. Such development could be enabled through “air rights” over existing Caltrain right-of-way (in cases where the existing at grade tracks are re-located underground), or on strategically located properties owned by the City, Caltrain, or privately.

Regardless of ownership, the City would play a critical role in enabling development and could require a portion of any surplus value created to be used for grade separation improvements. The City could use one or a combination of the following inter-related tools to accomplish this:

- **Development Agreements:** A Development Agreements (DA) is a voluntary and legally binding agreement between a local government and developer authorized by State statute (Government Code Section 65864 et seq.). Palo Alto has previously formalized the specific terms and conditions for particular land use projects through DAs. These contractual agreements allow developers to secure entitlements for a particular project that would not be obtainable through the normal conditions or zoning, in exchange for special contributions, generally including infrastructure improvements, amenities, or other community benefits. DAs are entirely discretionary on the part of the applicant and local government (there is no nexus requirement) and must be individually adopted by local ordinance.

- **Community Benefit Incentive Zoning (CBIZ):** Community Benefit Incentive Zoning (CBIZ) programs can provide a more systematic and policy based approach to “value capture”. Specifically, under these programs cities configure their land use regulations in a manner that can provide incentives for additional private investments in local infrastructure and community benefits in exchange for entitlements beyond what would otherwise be obtainable.
- **Public-Private Partnerships (P3):** A P3 is similar to a DA but often includes more specificity, collaboration, and risk sharing among public and private participants. In the case of Palo Alto grade separation improvements, a P3 may be a particularly effective way to incorporate and formalize the role of Caltrain, a key player given their ultimate responsibility for overseeing much of the infrastructure investment and ownership of the rail ROW.

The specific amount of “value capture” funding achieved using any of the mechanisms described above is difficult to quantify given the wide range of variables involved, including the level of development enabled and the role and financial participation of various parties. For illustrative purposes **Table 15** solves for the surplus land value that might be achieved under various scenarios related to the amount of additional development that might occur on or near the grade separation improvements. The calculations assume that surplus land value (i.e. the amount potentially available to support grade separation improvements) will represent about 10 percent of finished market value (i.e. the price completed project would receive in the market).



**Table 16 Value Capture Funding Potential from New Development**

Scenario	Development Program	Finished Market Value <sup>1</sup>		Value Capture as a % of Finished Market Value <sup>2</sup>	Total Value Capture Funding Potential <sup>3</sup>
		Per Unit or Sqft.	Total		
<b>New Development Scenario 1</b>					
Residential (units)	500	\$800,000	\$400,000,000		
Commercial (Sqft.)	100,000	\$1,000	<u>\$100,000,000</u>		
<b>Total</b>			\$500,000,000	10%	<b>\$50,000,000</b>
<b>New Development Scenario 2</b>					
Residential (units)	1,500	\$800,000	\$1,200,000,000		
Commercial (Sqft.)	500,000	\$1,000	<u>\$500,000,000</u>		
<b>Total</b>			\$1,700,000,000	10%	<b>\$170,000,000</b>
<b>New Development Scenario 3</b>					
Residential (units)	2,000	\$800,000	\$1,600,000,000		
Commercial (Sqft.)	750,000	\$1,000	<u>\$750,000,000</u>		
<b>Total</b>			\$2,350,000,000	10%	<b>\$235,000,000</b>

[1] Based on data from market transaction over past three years.

[2] Represents the proportion of total project value that may be available after accounting for total development cost and return, but excluding land. Industry standard suggest that this amount typically ranges from 10% - 20% of market value. The low end of this range is used given the high level of uncertainty in this case.

[3] Represents the total surplus value of new development that may be available to support grade separation and related improvements.

Source: CoStar, EPS

As shown, the value capture funding potential increases with the amount of new development that is assumed to be directly attributable to grade separation and related improvements. For example, assuming 1,000 new residential units and 500,000 square feet of new commercial space (e.g., office and retail) is developed, approximately \$130 million might be available for infrastructure. Under a more aggressive scenario, 3,000 new residential units and 1 million in new commercial square feet might generate about \$340 million of value capture funding.

While the potential funding levels illustrated above are relatively significant, the timing and predictability of future revenue streams is often a critical challenge to effective use of most value capture tools. The level of development illustrated in all of the scenarios would likely take many years to materialize and be subject to market fluctuations, challenging entitlement and land assembly issues, and other uncertainties. Indeed, a substantial portion of the development is premised on prior completion of the grade separation improvements, presenting a phasing and financing dilemma.

In addition to critical phasing financing challenges, the net value capture amount available for grade separation improvements would ultimately need to deduct or account for a number of factors, including without limitation, the following:

- Any additional development cost associated with building on top of a Caltrain tunnel,
- The specific terms of a development agreement and/or P3 arrangement involving the City, Caltrain, private developers, and others,
- Current zoning and/or allowable uses for affected properties (e.g., those on or adjacent to the Caltrain corridor). To the extent that a portion of the new development would be allowed “by right” under existing zoning, the amount of “value capture” funding might be reduced,
- The ownership and motivation of affected properties. To the extent that strategically located properties are owned by entities interested in grade separation improvements (such as the City or Caltrain or private parties seeking noise, visual, or access improvements), value capture efforts will be more successful.

### Enhanced Infrastructure Financing District

Enhanced Infrastructure Financing Districts (EIFDs) is a form of Tax Increment Financing (TIF) currently available to local public entities in California. Cities and other local agencies may establish an EIFD for a given project or geographic area in order to capture incremental increases in property tax revenue from future development and assessed value appreciation. In the absence of the EIFD, this revenue would accrue to the city’s General Fund (or other property-taxing entity revenue fund). Unlike prior TIF/Redevelopment law in California, EIFDs do not provide access to property tax revenue beyond the share agreed to by participating jurisdictions (e.g., City and County).<sup>8</sup>

The establishment of an EIFD requires approval by every local taxing entity that will contribute its property tax increment. EIFDs only require a vote when debt issuance is sought. In addition, EIFDs can be formed and gain access to unlevered (debt free) revenue without a vote. The incidence or financial burden of an EIFD rests on the local taxing jurisdiction(s) that forego property tax revenue and dedicate these funds to infrastructure or other eligible investments. In other words, dedicating these tax revenues to infrastructure limits funding for new public services costs associated with development.

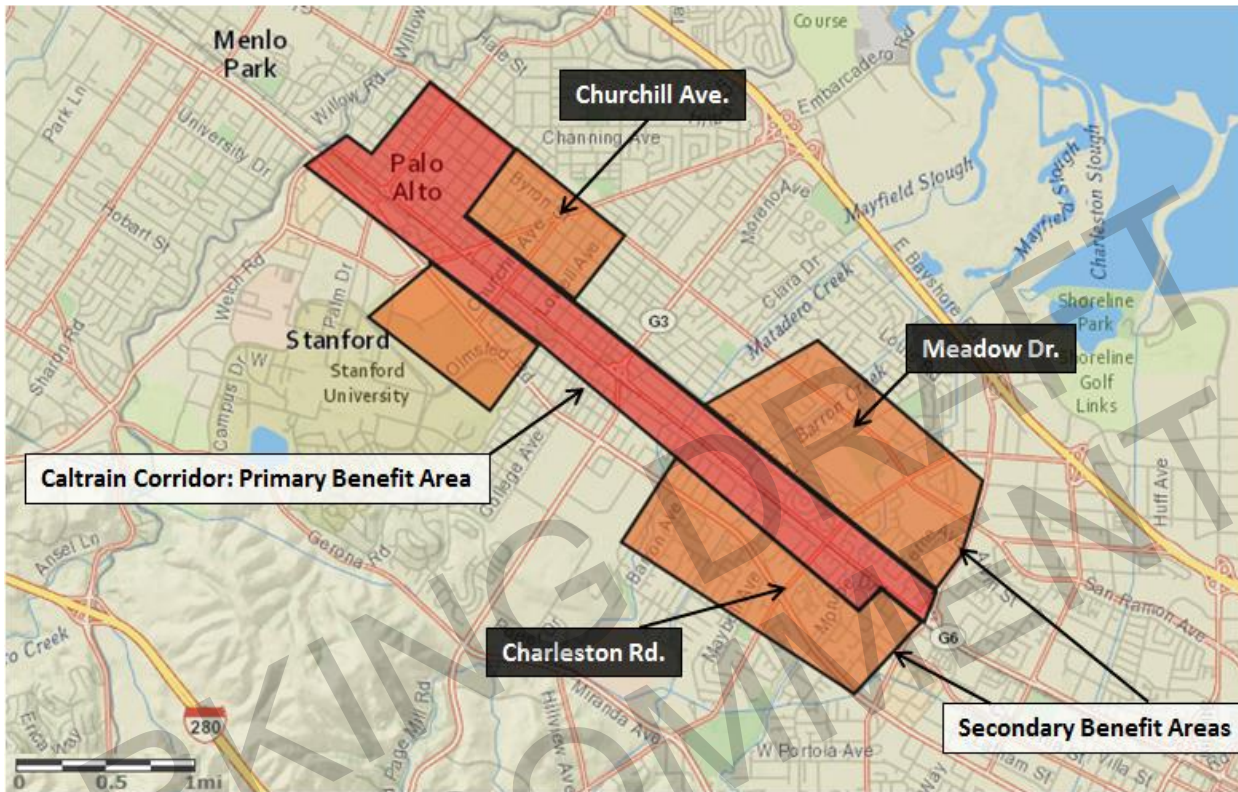
For illustrative purposes, **Table 16** calculates the EIFD tax revenue and net bond proceeds that might be achievable assuming district boundaries are formed to cover two blocks on either side of the Caltrain corridor and Downtown Palo Alto, labeled as the Primary Benefit Area (see **Figure 1**). The Secondary Benefit Areas in **Figure 1**, located where the potential grade separations will take place, also may benefit from these road improvements and thus the City may want to consider including these areas in the EIFD (**Table 16** only accounts for the Primary Benefit Area). As shown, within about ten years after formation, an EIFD could potentially generate enough tax increment to secure \$13 to \$24 million in net bond proceeds. The actual amount

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<sup>8</sup> EIFDs is a relatively new tool with little track record of success, with a few exceptions. For example, in October of 2017 the City of LaVerne approved an EIFD in connection with the future Metro Gold Line light rail station and surrounding transit oriented development allowed by the Old Town La Verne Specific Plan previously adopted by City Council. About 15 specific infrastructure projects were included in the EIFD with estimated cost of \$33 million, including enhancement of connectivity (parking, peds, bikes, rideshare), beautification, and expansion of utilities.

would depend on annual increase in assessed value as well as the precise project area boundaries. These benefit areas are solely an estimate and further analysis would be required to depict greater accuracy in road usage and traffic levels surrounding the grade separations.

**Figure 1 Assumed EIFD Boundaries**



**Table 17 Estimated EIFD Tax Increment Revenues and Net Bond Proceeds**

Area	Residential	Non-Residential		Total
		Non-Residential (sqft.)	Jobs (LEHD 2015)	
<b>Potential EIFD Project Area</b>				
<b>Population (See Figure 1)<sup>1</sup></b>	6,155	4,258,654	26,060	
<b>City-wide Population (2015 DOF)</b>	106,413	15,828,846	106,413	
<b>EIFD Area as % of Citywide</b>	<b>6%</b>	<b>27%</b>	<b>24%</b>	
<b>Estimated Assessed (FY 2015-16)</b>				
Citywide (actual)	\$20,432,849,511	\$6,965,079,525	\$6,965,079,525	\$27,397,929,036
Estimated for Potential EIFD Project Area	\$1,181,849,856	\$1,873,911,957	\$1,705,712,389	<b>\$2,971,662,029</b>
<b>10 Year EIFD Tax Increment Projection (City Share Only)</b>				
@ 3% Avg. annual increase				<b>\$1,365,522</b>
@ 4% Avg. annual increase				<b>\$1,906,813</b>
@ 5% Avg. annual increase				<b>\$2,497,030</b>
<b>Estimated TI Bond Proceeds<sup>2</sup></b>				
@ 3% Avg. annual increase				<b>\$13,232,510</b>
@ 4% Avg. annual increase				<b>\$18,477,856</b>
@ 5% Avg. annual increase				<b>\$24,197,319</b>

[1] Based on data from LEHD On-The-Map

[2] Bond proceeds estimate based on additional sales tax revenue generated from an increase in the tax rate shown under each scenario. The calculation assumes a 6% interest rate, 30 year term, 1.25 debt coverage factor, and issuance cost equal to 12% of gross bond proceeds.

### **Mello-Roos Community Facilities District**

The Mello-Roos Community Facilities Act of 1982 (*authorized by Section 53311 et. seq. of the Government Code*) enables the formation of a CFD by local agencies, with two-thirds voter approval (or landowner approval when there are fewer than 12 registered voters in the proposed district), for the purpose of imposing special taxes on property owners. The resulting special tax revenue can be used to fund capital costs or operations and maintenance expenses directly, or they may be used to secure a bond issuance, the proceeds of which are used to fund capital costs. Because the levy is a tax rather than an assessment, the standard for demonstrating the benefit received is lower, thus creating more flexibility. In addition, the boundaries of a Mello Roos CFD need not be contiguous, which allows for flexibility in tailoring a project area likely to receive sufficient votes.

Since their establishment in the early 1980s, CFDs have become the most common form of land-secured financing in California. A Mello Roos CFD in particular provides a well-established method of securing relatively low-cost tax exempt, long-term, fixed rate, fully-assumable debt financing. The owners or users of real estate pay assessments or special taxes that are recorded on the property. By adding to the cost of ownership, the assessment or tax may affect the price a buyer is willing to pay for a home or commercial property, in which case the cost incidence is shared

with the builder, land developer, or landowner. However, experience suggests that less than 100 percent of the financing burden is recognized by buyers.

However, there can be challenges associated with establishing measurable and specific benefits to particular properties. In addition, land-secured financing adds financing costs (e.g., cost of issuance and program administration). Further, while land-secured financing has been widely used in greenfield development where landowner approval is the norm, achieving a two-thirds voter approval in infill areas with numerous property owners is typically a barrier to use of the tool.

With the above caveats in mind, **Table 17** provides an illustrative calculation of potential net bond proceeds from the formation of a Mello-Roos CFD applicable to the Project Area defined in **Figure 1**. As shown, the net bond proceeds vary based on the tax rate, ranging from \$11.5 million for annual rate of \$200 per residential unit or 1,000 square feet of commercial to \$34.6 million when the rate is assumed at \$600. Thus, if such a mechanism could be implemented, the bond proceeds would be roughly equal to those from an EIFD but realized more immediately, primarily because the tax would apply to both existing and new development. Of course, garnering two-thirds voter approval for a new CFD among registered voters in the Project Area would likely be challenging.

**Table 18 Estimated Net Bond Proceeds from Project Area CFD**

Item	Current	Potential CFD Tax Rate (per unit or 1K Sqft.)	Potential New Tax Revenue
<b>Project Area Housing Units<sup>1</sup></b>	1,685		
<b>Project Area Non-Residential Square Feet<sup>2</sup></b>	4,258,654		
<b>CFD Tax Scenario (Annual)</b>			
Scenario 1		\$200	\$1,188,641
Scenario 2		\$400	\$2,377,282
Scenario 3		\$600	\$3,565,924
<b>Estimated Net Bond Proceeds<sup>3</sup></b>			
Scenario 1			<b>\$11,518,457</b>
Scenario 2			<b>\$23,036,915</b>
Scenario 3			<b>\$34,555,372</b>

[1] Estimate assumes number of housing units in Project Area is proportional to population.

[2] Based on CosStar

[3] Bond proceeds estimate based on additional sales tax revenue generated from an increase in the tax rate shown under each scenario. The calculation assumes a 6% interest rate, 30 year term, 1.25 debt coverage factor, and issuance cost equal to 12% of gross bond proceeds.

## Other Local Funding Initiatives and Resources

This section considers the applicability and funding potential of various City resources and programs that could be authorized or appropriated by local officials without direct voter approval.

### Development Impact Fees

A development impact fee is an ordinance-based, one-time charge on new development designed to cover a “proportional-share” of the total capital cost of necessary public infrastructure and facilities. The creation and collection of impact fees are allowed under AB-1600 as codified in California Government Code Section 66000, known as the Mitigation Fee Act. This law stipulates that only the portion of costs attributable to new development can be included in the fee. Consequently, impact fees commonly are only one of many sources used to finance a city’s needed infrastructure improvements. Fees can be charged on a jurisdiction-wide basis or for a particular sub-area of the jurisdiction (such as a specific plan area).

The key limitation of development impact fees is the timing of funding. Infrastructure often is needed “up-front” while fees are paid over time as development occurs. This means that other funding or financing methods are needed to close the timing gap. Fees also are irregular, as they depend on development activity that varies with economic conditions. Finally, significant funding from development impact fees requires significant growth which may be limited by the City’s Comprehensive Plan Update and related land use controls.

While the City of Palo Alto’s current transportation impact fee program does not specifically identify grade separation improvements as an eligible funding item, it is being incorporated as part of an update that is currently underway. Preliminary estimates suggest that future impact fee revenue available for grade separation improvements could be in the range of \$14 to \$20 million. The City is also interested in securing payment from development at Stanford as well.

### Caltrain Fare Surcharge

One grade separation funding option that may warrant further consideration is a surcharge on Caltrain (or HSR) fares that originate or terminate in Palo Alto. While such a fee surcharge would likely require coordination with and approval by transit service providers (i.e. Caltrain) and potentially other funders (e.g. at the State and federal level), it may not require direct voter approval. This is because it might be considered a user fee with corresponding revenues allocated back to the service-related infrastructure.

**Table 19** provides an estimate of the funding potential under various assumptions related to fare surcharge on passengers departing from the Palo Alto Caltrain station. The calculations are based on estimated departures only since it would likely be difficult to impose such a surcharge on passenger arrivals. As shown, of \$1 per departing passenger would generate about \$983,000 per year (or \$9.8 million over ten years).

**Table 19 Estimated Revenues from a Caltrain Fare Surcharge**

Item	Current	Fare Surcharge		Potential Revenue	
		Per Trip	Avg. Annual	10-Year Total	
<b>Annual Ridership (Includes Origin and Destination)</b>					
Annual Weekday Trips	1,937,664				
Annual Weekend Trips	27,634				
<b>Total Annual Trips</b>	<b>1,965,298</b>				
<b>One Way Trips Ony<sup>1</sup></b>	<b>982,649</b>				
<b>Potential Commuter Fee Scenario</b>					
Scenario 1		\$0.25	\$245,662		\$2,456,623
Scenario 2		\$0.50	\$491,325		\$4,913,245
Scenario 3		\$1.00	\$982,649		\$9,826,490

[1] Divides by 2 since it might be difficult to charge the fee on both Palo Alto origin and destination passengers.

### Parking Fees

Palo Alto's Downtown Parking Management Study provides recommendations for paid parking meters and permit fee levels, a portion of which could be allocated to grade separation improvements. According to the Study, the City may consider charging \$1.50 to \$2.00 per hour for on-street parking, and \$1.00 to \$1.25 for off-street parking, depending on the tier and length of stay. The on-street parking would have a 2-hour time limit, while the off-street parking would have a \$24 daily maximum. Lastly, the City may install access control systems in its off-street infrastructure locations. Due to the limited information on inventory of parking spaces in Palo Alto, potential for parking fee revenues is unknown.

### Transportation Network Company (TNC) registration fee

The City of Palo Alto also has the option to implement a Transportation Network Company (TNC) registration fee. TNCs may include company shuttles, Lyft, Uber, etc. San Francisco currently has TNCs register their businesses and pay a fee ranging from \$75 to \$35,000, depending on the annual gross receipts. For example, a Lyft driver making less than \$100,000 per year will have to pay a fee of \$90.

### 3. REGIONAL, STATE, AND FEDERAL FUNDING

This chapter provides an overview of regional, State, and federal funding sources that might be available and appropriate to fund Palo Alto grade separation and related improvements. As a regional serving transit service both Caltrain and HSR are will likely receive funding from a variety of sources in the years to come. The City of Palo Alto will likely partner with Caltrain, the VTA, and other public agencies to pursue these funding opportunities. However, given that ultimate funding levels our largely outside the control of the City and subject to broader political, budgetary, and related factors, projections related to the amount and timing of revenue that might be available for grade separation improvements are difficult.

#### Regional Funding

##### Santa Clara County 2016 Measure B Funding

Santa Clara County residents approved Measure B in 2016, which is expected to generate almost \$6 billion in revenues over a 30-year period for various transportation improvements and programs in the County. As shown in **Table 21**, Caltrain grade separation projects are estimated to receive \$700 million in funding, or almost 12 percent of the total revenues from Measure B, split between Sunnyvale, Mountain View, and Palo Alto. The City of Palo Alto expects to receive about \$350 million from this source for grade separation and related improvements. However, given that the full amount will be generated gradually over a 30-year time frame, this source would be used as a reimbursement mechanism rather than for up-front financing.

**Table 20 Measure B 30-Year Projection by Improvement Category**

Program Category	30-Year Projection (in 2017 \$s)		Potential Allocation to Palo Alto Grade Separation <sup>2</sup>
	\$	% of Total	
BART Phase II	\$1,500,000,000	25%	\$0
Bicycle / Pedestrian <sup>1</sup>	\$250,000,000	4%	\$7,500,000
Caltrain Corridor Capacity Improvements	\$314,000,000	5%	\$0
Caltrain Grade Separation	\$700,000,000	12%	\$350,000,000
County Expressways	\$750,000,000	13%	\$0
Local Streets and Roads <sup>2</sup>	\$750,000,000	13%	\$38,000,000
SR 85 Corridor	\$1,200,000,000	20%	\$0
Transit Operations	\$500,000,000	8%	\$0
			\$0
<b>30-Year Total</b>	<b>\$5,964,000,000</b>	<b>100%</b>	<b>\$395,500,000</b>

[1] The South Palo Alto Caltrain Bike/Ped Crossing is on the list of capital projects eligible for 2016 Measure B Bicycle/Pedestrian Program funding. This is a new bicycle and pedestrian crossing of Caltrain in the vicinity of Loma Verde Avenue. About 6 percent of the \$8 million cost estimate would be covered by local impact fees.

[2] Based on estimate by City of Palo Alto staff (Nov. 16th, 2017 e-mail from Joshua Mello).

Source: Santa Clara Valley Transportation Authority



## Caltrain Sales Tax Initiative

As of September 2017, a Caltrain sales tax initiative has passed through the California State Assembly, but still needs to go through the Senate for approval. This tax is part of Senate Bill 797, drafted by Jerry Hill, and would place a 1/8 cent sales tax for Caltrain in the counties of Santa Clara, San Mateo, and San Francisco. The bill is expected to raise \$100 million annually for Caltrain, which is expected to exceed operating and maintenance costs. Therefore, some of this revenue may be used to help with additional capital funding, such as grade separation projects. If the Governor does sign the bill, the Peninsula Corridor Joint Powers Board, which governs Caltrain, will also have to approve the bill with a 2/3 vote.

## State Funding

### California High-speed Rail Authority Funding

In 2008, Californian voters approved Proposition 1A, the "Safe, Reliable High-Speed Passenger Train Bond Act for the 21<sup>st</sup> Century," to fund the 800-mile High Speed Rail (HSR) project, connecting the State's largest cities. While total project cost is estimated at about \$65 billion, the project will be built in a number of phases. Phase I, from the San Francisco Transbay Terminal to Orange County, is expected to be complete by 2029, though the first leg from the Central Valley to San Jose is expected to be complete in 2025.

The HSR leg from San Francisco to San Jose is approximately 51 miles long and has proposed stations in San Francisco (4<sup>th</sup> and King Street), SFO (Millbrae), and San Jose (Diridon Station). Caltrain will be electrified and share tracks with the High Speed Rail. The main components of the segment, the electrification infrastructure and the purchase of electric multiple units, are estimated to cost \$1.3 billion and \$664 million respectively, for a total of \$1.98 billion. This equals about \$38.8 million in costs per mile throughout the corridor. The segment of Caltrain that runs through Palo Alto is about four (4) miles long; therefore if costs were hypothetically distributed evenly per mile, the Palo Alto portion of the HSR would cost \$155.2 million.

According to the San Francisco to San Jose Peninsula Corridor Funding Plan that was released in January 2017, the Peninsula Corridor Electrification Project (PCEP) has secured funding for the \$1.98 billion in estimated costs. As shown in **Table 21**, Federal sources make up almost half of the funding, while the remaining contributions represent State and local sources, including Proposition 1A, bridge tolls, private investors, and more. Bond proceeds from Proposition 1A represent the largest funding source that totals at \$600 million (appropriated by SB 1029 and reaffirmed in SB 557). The \$600 million in funds may only be used for the electrification of the tracks. It remains unclear if Proposition 1A funds may be used for the blended system where Caltrain and the HSR share tracks.

Construction of the HSR first began in 2015 in Fresno. The 119-mile Central Valley segment is receiving \$2.6 billion from Proposition 1A, \$3 billion from the federal government, and \$2.2 billion from the Cap-and-Trade program. Grade separation in Madera County and Fresno is already taking place, though these counties are in earlier phases of HSR development. Overall, the Central Valley will have over 50 grade separations to construct. Madera County's Avenue 12, for example, is on a high priority list of grade separation projects designated by the California Public Utilities Company (CPUC).

**Table 21 Peninsula Corridor Electrification Project Funding**

Source	Amount (\$ millions)	% of Total
<b>Electrification</b>		
FTA	15.7	0.8%
Prop 1A	600.0	30.3%
Prop 1B	8.0	0.4%
Carl Moyer	20.0	1.0%
JPB Prior	9.0	0.5%
JPB Members	104.7	5.3%
Bridge Tolls	11.0	0.6%
HSR/State Non 1A funding	113.0	5.7%
Bridge Tolls - RM1	8.4	0.4%
FTA Core Capacity	426.3	21.5%
<b>EMU</b>		
FTA	315.0	15.9%
JPB	19.4	1.0%
7-Party Member	69.0	3.5%
TIRCP	20.0	1.0%
Bridge Tolls - RM2	20.0	1.0%
FTA Core Capacity	220.7	11.1%
<b>Total PCEP Funding</b>	<b>1,980.2</b>	<b>100.0%</b>

Source: San Francisco to San Jose Peninsula Corridor Funding Plan (2017)

A railroad crossing in Los Angeles (at Rosecrans and Marquardt), while not part of current HSR construction, has been allocated funding through Prop 1A. This is largely attributable to the fact that it has been identified by the CPUC as one of the most hazardous crossings in the State. This designation supported the HSRA decision to fund 50 percent of the \$137 million grade separation costs to improve safety and traffic conditions. This railroad crossing also received \$26.5 million from Measure R (a Los Angeles County sales tax that pays for transportation projects), \$15 million from TIGER grants, \$15 million from Section 190, and the remainder from a variety of other sources, including BNSF, ITIP, and NHFP/CFIP.

## **Section 190 of the State Streets and Highways Code**

### **Grade Separation Program**

Jointly administered by the California Public Utilities Company (CPUC) and Caltrans, the Grade Separation Program (Section 190) provides State funds to local agencies to grade-separate or improve at-grade crossings. The program provides about \$15 million annually, typically distributed among three to four projects, to not exceed \$5 million per project. The CPUC creates a priority list of projects and Caltrans enters into funding agreements with local agencies, with the goal of using the funding to relieve traffic congestion and reduce fatalities/injuries. The cities

along the Caltrans alignment currently on the list as of 2017-18 include Burlingame, San Bruno/South San Francisco, San Mateo, Mountain View, but not Palo Alto.<sup>9</sup>

To choose a priority list, the administrators weigh vehicular and train volumes at crossings, as well as project costs, number of accidents, the angle of tracks, traffic counts, etc. An allocation of 80 percent of the estimated cost of the project is made for projects that eliminate or reconstruct an existing grade separation.

### **Bond Funds**

The Highway Railroad Crossing Safety Account (HRCSA) was created as a result of the passage of Proposition 1B in 2006. The California Transportation Commission (CTC) provides \$150 million in funds to the HRCSA to improve highway and major arterial rail crossings by constructing grade separations. An additional \$100 million was allocated by the CTC in consultation with the Commission and High Speed Rail Authority, not utilizing the priority list created in this process. When funds become available from bond sales, qualifying projects on the list will receive their allocations. A dollar for dollar match from other sources is required to qualify.

### **State Infrastructure Bank (IBank)**

The IBank was created in 1994 to finance public infrastructure that promotes a healthy climate for jobs, contribute to a strong economy, and improve the quality of life in California communities. The IBank has broad authority to issue tax-exempt and taxable revenue bonds, provide financing to public agencies, provide credit enhancements, acquire or lease facilities, and leverage State and federal funds. Since its inception, the IBank has financed more than \$32 billion in infrastructure and economic development projects around the State.

One of the IBank's current programs include the Infrastructure State Revolving Fund (ISRF) Program, which provides very low-interest rate loans up to \$25 million (per applicant) to municipal governments for a wide variety of municipal infrastructure. While this program represents a loan rather than funding, the City may be able to borrow against other sources, such as Measure B. An application is required for these loans, and loans require a stable and reliable source of repayment. If approved, loan repayment can be funded through a commitment of city general fund revenues or a pledge of a particular revenue source, including a citywide tax, land secured assessment, or special tax levied on a particular area.

### **Community Infrastructure Program**

The Statewide Community Infrastructure Program (SCIP) is a program of the California Statewide Communities Development Authority (CSCDA) that makes use of a local government's ability to create land-secured financing districts. The Program "pools" debt obligations to gain a comparatively lower interest rate and issuance costs (particularly if the issue is less than \$5 million). SCIP provides low-cost, long-term financing of fees and improvements, which can otherwise entail substantial upfront cash outlays. Local agencies benefit from SCIP when fee funds are made available upfront or infrastructure is financed with attractive terms. Again, the

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<sup>9</sup> See, California Grade Separation Program Priority List:  
<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M163/K416/163416575.pdf>

City could potentially use this source as bridge financing, to be paid back by other sources such as Measure B.

Typically, most public improvements required as conditions of project approval are eligible, including roads, street lights, landscaping, storm drains, water and sewer facilities, and parks. Further, the availability of low-cost, long-term financing also can soften the burden of rising fees and improvement costs, which benefits developers and local agencies. According to CSCDA, the SCIP program has assisted communities and developers throughout California to finance over \$150.2 million in impact fees since 2003.

CSCDA is a Joint Powers Authority sponsored by the League of California Cities and the California State Association of Counties. Membership in the Authority is open to every California city and county, and most are members. SCIP financing is available for development projects situated within cities or counties (local agencies) which have elected to become SCIP participants. Eligibility to become a local agency requires only (a) membership in the League of Cities or California State Association of Counties, (b) membership in the Authority, and (c) adoption of a resolution making the election (the "SCIP Resolution").

Participation in SCIP entails the submission of an application by the property owner of the project for which development entitlements either have been obtained or are being obtained from a local agency. For projects determined to be qualified, SCIP provides non-recourse<sup>10</sup> financing of either (a) eligible development impact fees payable to the local agency or (b) eligible public capital improvements (or both). Under certain circumstances, determined on a case-by-case basis, development impact fees payable to local agencies also may be used as repayment for upfront SCIP funding.

SCIP funding awards are aggregated for inclusion in a round of financing authorization. Periodically, as warranted by the accumulation of approved funding applications, the California Statewide Communities Development Authority issues tax-exempt revenue bonds. For projects involving a sufficient amount of financing (generally \$5 million or more), a special series of bonds may be issued to fund the project separately if the timing of issuance of a pooled financing does not suit the project. Revenues to pay debt service on the SCIP bonds are derived from special assessments pursuant to the Municipal Improvement Act or through the levy of special taxes by establishing a CFD pursuant to the Mello-Roos Community Facilities Act.

### **State Road Repair and Accountability Act (SB 1)**

Another source of funding may come from California's SB 1, the Road Repair and Accountability Act of 2017. SB 1 will contain \$250 million in funds solely for the Solutions for Congested Corridors Program. The California Transportation Commission will allocate the generated revenues to projects that improve highly congested corridors, with transportation, environmental, and community access considerations as a priority. Preference will be given to Caltrans, but no more than half of the available funds may be awarded to projects nominated by Caltrans. Eligible projects include state highways, local streets and roads, public transit facilities

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<sup>10</sup> Non-recourse financing is a loan structure in which the lending bank is only entitled to [repayment](#) from the proceeds of the project, not from other assets of the borrower.

(including rail), bicycle/pedestrian facilities, and habitat restoration. Projects to be funded and associated allocations are unknown at this time.

## **Federal Funding**

There are a variety of competitive federal grant and /or low-cost loan programs that are potentially applicable to grade separation improvements. The more notable of these are summarized with an emphasis on key factors such as competitiveness, funding levels, and specific examples of how each have been used for similar projects, as available.

### **TIGER Grants**

The highly competitive Transportation Investment Generating Economic Recovery (TIGER) grant program supports innovative projects, such as projects which repair bridges or improve decaying infrastructure, enhance safety, allow better access to commuters' jobs/education and/or critical health services, and improve economic activity or job growth within a region. As of 2017, the TIGER grant funds contain \$500 million. These federal funds leverage money from private sector partners, states, local governments, metropolitan planning organizations and transit agencies. In urbanized areas, a 20 percent match is required.

Specifically, there have been grade separation projects funded in the past. In 2015, the SR 347 Grade Separation Project in Phoenix, Arizona received \$15 million. A TIGER I grant was also given to the Colton Crossings Grade Separation in Colton, CA. This project received totaling to \$33.8 in funding and construction was completed in 2013.

Demand for the TIGER funds far exceed available funds. By way of example, in 2016 the U.S. Department of Transportation's (DOT) received 585 eligible applications from all 50 States, and several U.S. territories, tribal communities, cities, and towns throughout the United States, collectively requesting over \$9.3 billion in funding. During the previous seven rounds, the Department received more than 7,300 applications requesting more than \$143 billion for transportation projects across the country.

### **Infrastructure For Rebuilding America Grants**

The DOT Infrastructure For Rebuilding America Grants or INFRA program will generate approximately \$1.5 billion available to projects that help rebuild aging infrastructure. In addition to providing direct federal funding, the INFRA program aims to increase the total investment by state, local, and private partners.

INFRA advances a pre-existing grant program established in the FAST Act of 2015 and utilizes updated criteria to evaluate projects to align them with national and regional economic vitality goals and to leverage additional non-federal funding. The new program will increase the impact of projects by leveraging capital and allowing innovation in the project delivery and permitting processes, including public-private partnerships. Additionally, the new program promotes innovative safety solutions that will improve our transportation system.

The DOT will make awards under the INFRA program to both large and small projects. For a large project, the INFRA grant must be at least \$25 million. For a small project, the grant must be at least \$5 million. For each fiscal year of INFRA funds, 10 percent of available funds are reserved for small projects. For example, previous awards for grade separation from FY 2016

include a \$45 million grant to the South Lander Street Grade Separation and Railroad Safety Project in the City of Seattle, and a smaller grade separation project in Tukwila, WA called Strander Boulevard Extension and Grade Separation Phase 3, which received \$5 million in funding.

INFRA grants may be used to fund a variety of components of an infrastructure project, however, the DOT is specifically focused on projects in which the local sponsor is significantly invested and is positioned to proceed rapidly to construction. Eligible INFRA project costs may include: reconstruction, rehabilitation, acquisition of property (including land related to the project and improvements to the land), environmental mitigation, construction contingencies, equipment acquisition, and operational improvements directly related to system performance.

### **TIFIA Program Loans**

The DOT sponsored Transportation Infrastructure Finance and Innovation Act (TIFIA) provides low cost credit assistance for qualified projects of regional and national significance in the form of direct loans, loan guarantees, and standby lines of credit. The 2015 FAST Act extended the TIFIA program through 2020 with annual average allocations of credit assistance of \$287 million. Many large-scale, surface transportation projects - highway, transit, railroad, intermodal freight, and port access - are eligible for assistance. Eligible applicants include state and local governments, transit agencies, railroad companies, special authorities, special districts, and private entities.

The TIFIA credit program is designed to fill market gaps and leverage substantial private co-investment by providing supplemental and subordinate capital. Major features and requirements of TIFIA loans include:

- Large surface transportation projects (\$50 million generally, \$15M for intelligent transportation systems (ITS), \$25 million for rural infrastructure projects)
- Financed projects require a 25 percent non-federal match
- TIFIA loan amounts have historically been less than 33 percent of eligible costs and DOT requests that applicants provide a rationale for TIFIA loan requests of up to 49 percent of costs (permitted by statute)
- Senior debt must be rated at investment grade level by two rating agencies, unless project cost is less than \$75 million
- Dedicated revenues for repayment
- Applicable federal requirements, including but not limited to Civil Rights, NEPA, Uniform Relocation, Titles 23 and 49
- Public or private highway, transit, rail and port projects are eligible to apply for TIFIA assistance

TIFIA allows borrowers the flexibility to request a TIFIA loan disbursement at any time during construction or wait and submit requests up until one year after the Substantial Completion Date of the project. This flexibility in disbursement timing provides borrowers with an inherent option

for take-out of short-term financing at the fixed TIFIA rate. Borrowers can use short-term debt (commercial paper, bank loans, EB-5 loan, etc.) to eventually be refinanced with the TIFIA loan, following substantial completion. Given current relatively low short-term interest rates, and with guaranteed long-term TIFIA Loan refinancing of a short-term debt option, a short-term financing strategy may save borrowers significant interest costs.

Applicants must submit detailed letters of interest so DOT can evaluate creditworthiness and other eligibility requirements and, after invitation from the TIFIA Joint Program Office (JPO), a formal application. Given TIFIA's limit on loan amounts, credit rating requirements, and springing lien structure (subordinate unless event of default), TIFIA lending is best suited for use in combination with other financing structures that will receive investment grade ratings such as sales tax revenues or SAD's.

As noted earlier, a major grade separation trench in Reno, Nevada was financing in part with a \$111.5 million TIFIA loan, payed back over time with sale and transient occupancy tax. The City depressed a 2.25-mile long rail corridor into a trench and managed to eliminate ten at-grade crossings.

### **RRIF Program**

The Railroad Rehabilitation & Improvement Financing (RRIF) program, established by the Transportation Equity Act for the 21<sup>st</sup> Century, helps refinance debt incurred from railroad projects through federal loans. Unlike TIFIA, RRIF requires loan recipients to deposit the equivalent of a bond, referred to as a credit risk premium, which is intended to offset the risk of a default on their loan. The Federal Railroad Association (FRA) administers this funding to projects that rehabilitate or acquire intermodal or rail equipment of facilities, such as tracks, bridges, yards, or buildings. RRIF favors projects that increase safety levels and encourage economic revitalization. Up to \$35 billion in financing is available, though the largest loan thus far has been \$2.5 billion.

Since 2009 the RTIF program has executed 12 loans totaling to \$1.95 billion, an average of about \$163 million per project. By way of example, the New York Metropolitan Transportation Authority received \$967.1 million in loans from the RRIF program in 2015. Over half of the financing has been for infrastructure enhancement, with the remainder for railroad acquisition, equipment acquisition, and refinancing outstanding debt (7 percent).

The RRIF loan terms require:

- Direct loans for up to 100% of the project cost
- Repayment of loan within 35 years
- Interest rates equal to U.S. Treasury rate for comparable-term securities
- Credit Risk Premium = percent of total loan amount (varies by risk and loan period)

## APPENDIX A: CASE STUDIES

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The following case studies provide additional information on how various California municipalities have financed grade separation projects. Additional research is being conducted to flush out additional information on funding and financing strategies uses.

### **San Mateo**

The City of San Mateo was the project sponsor for the 25th Avenue grade separation. Near the Hillsdale station area, the roads have been designed to be partially lowered, while the tracks will be elevated; the Hillsdale station will be moved to 25th Avenue. With these improvements, motorists and pedestrians will experience greater safety, and local traffic congestion will be reduced. Additionally, the east and west side will be better connected, which will encourage transit oriented development near the 28th and 31st Avenues.

The total project cost was \$240 million, with the project's construction costing \$180 million. The project received \$84 million from the HSRA Prop 1A funds, \$74 million from Measure A, \$12 million from the City of San Mateo, and \$10 million from State Section 190. Construction will occur fall 2017 to early 2020.

SMCTA and Caltrain evaluated potential grade separation projects to fund based on safety and traffic congestion relief. CPUC keeps a list of most hazardous railroad crossings to prioritize grade separation projects. San Mateo, Burlingame, South San Francisco/San Bruno, and Mountain View are on the 2016-2018 list. San Mateo County has transportation tax revenue available through 2033 from voter approved initiative passed in 2004, in which 15% is to be allocated to grade separations.

### **San Bruno**

In 2014 San Bruno completed a \$147 million grade separation project to elevate the Caltrain tracks above three crossings at the San Bruno, San Mateo, and Angus avenues. Three pedestrian underpasses were also built. San Bruno received \$92.4 million from SMCTA (Measure A sales tax funding from San Mateo County), \$55.9 million from the State (including Proposition 1B/HSR, STIP, and PUC 190 funds), and \$6.6 million from federal (FTA) funds.

Prior to the improvements there had been many accidents at San Bruno's crossings for both vehicles and pedestrians. This was potentially due to the close proximity of two of the City's crossings (San Bruno and San Mateo Avenue), the acute 25 degree angle at San Mateo Avenue, and the high traffic levels, among other factors. In fact, one year the San Mateo Avenue/San Bruno Avenue was ranked fifth on the CPUC's priority list for funding for grade separations.

### **Alameda Corridor-East**

San Gabriel's 2.2-mile trench project will cost \$293.7 million and is expected to be complete early 2018. The project will lower a 1.4-mile section of the Union Pacific railroad track into a 65 feet wide, 30 feet deep trench. There will be four bridges for vehicles and pedestrians to pass over the tracks. Over the past ten years, there were notably four crossing collisions recorded,



inducing further public funding. This project is funded by DOT, State Transportation Funds, and LA County Metro (Prop C and Measure R).

## **Mountain View Grade Separation**

The Mountain View Transit Center Master Plan, began in December 2015, seeks to provide regional transportation access to the city's residents and employees. Phase I includes improving the Castro Street configuration. Castro Street's at-grade crossing by the Caltrain tracks currently causes significant traffic delays and is a barrier for pedestrians and bicyclists to access other parts of the City. Thus the Master Plan advocates for re-directing Castro Street to Evelyn Avenue, creating a connection to Shoreline Boulevard. The Plan also suggests underground pedestrian and bicycle crossings. This grade separation project is expected to cost \$4.8 million. *Specific funding sources are still being investigated by EPS, but include a variety of value capture tools and local sources.*

## **Berkeley**

During BART's initial expansion in the 1960's, BART had planned an aerial line to run right through the City of Berkeley. However, many Berkeley residents were concerned about the noise impacts, aesthetics, or division caused by the tracks cutting across the community. Provisions to the CPUC in 1965 had allowed cities to form a Special Service District to pay for unplanned augmentations. Subsequently the City of Berkeley voted in 1966 to tax its citizens in order to pay the difference in costs to make the train go underground. The bond issue received 83 percent voter approval for additional costs of \$18 million.

This election was held under a set of unique provisions conceived to meet the Berkeley problem and inserted with BART's support into its enabling act in 1965 as CAL. PUB. UTIL. CODE §§ 29660-29740 (West 1965). These provisions allow cities or unincorporated territories within the overall District boundaries to form, by resolution or petition, a "Special Service District" in order to modify BART plans into a form more acceptable to the community. The purpose of forming such a "Special Service District" is to incur additional bonded indebtedness to finance its local design and configuration plans. If the bond issue fails to carry, the district can be dissolved just as easily as it was created.

## **Menlo Park**

The Ravenswood Avenue railroad crossing project seeks to replace the at-grade crossings of Caltrain's tracks by creating grade separations. There are four potential streets that Menlo Park could build grade separations for, but the Ravenswood Avenue is the first priority. The alternative to only fund a grade separation at Ravenswood has a preliminary construction cost estimate between \$140 million to \$190 million. This option's largest impact is that it would better connect Alma Street with Ravenswood Avenue. The other two alternatives, to fund two to three grade separations in the City, would cost \$230 million to \$380 million.

## **San Diego**

Part of the Mid-Coast Corridor Transit Project, the Blue Line Trolley service will extend 11 miles from the Santa Fe Depot (downtown) to the UCSD campus, and take 40-years to complete. In 2016 the Trolley extension received \$1.04 billion in match funding from the U.S. Department of

Transportation (FAST Act – Capital Investment Grant program), which covers about 50 percent of total costs and allowed for construction to officially commence. The rest of the project is funded by the countywide TransNet half-cent sales tax, administered by the San Diego Association of Governments (SANDAG). San Diego first passed the TransNet sales tax in 1988 to fund public transit, highway, and road improvements, and approved an extension of the tax again in 2004. SANDAG estimates that the project will result in

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