

**From:** Board.Secretary  
**Sent:** Friday, June 03, 2016 5:45 PM  
**To:** VTA Board of Directors  
**Subject:** VTA Correspondence: Comments Regarding Potential 2016 Sales Tax Measure

**VTA Board of Directors:**

We are forwarding you the following:

<b>From</b>	<b>Topic</b>
Members of the Public	Comments Regarding Potential 2016 Sales Tax Measure

Thank you.

Office of the Board Secretary  
Santa Clara Valley Transportation Authority  
3331 N. First Street  
San Jose, CA 95134  
408.321.5680  
[board.secretary@vta.org](mailto:board.secretary@vta.org)

**COMMENTS FROM MEMBERS OF THE PUBLIC  
REGARDING POTENTIAL 2016 SALES TAX BALLOT MEASURE**

**From:** Debbie Cunningham  
**Sent:** Thursday, June 02, 2016 6:44 AM  
**To:** Board.Secretary  
**Subject:**

I depend on Caltrain having a bathroom as do my kids and my mother - if you have to have only one then so be it but please provide at least one- thanks  
Debbie in mountain view

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**From:** Forouhi, Leila  
**Sent:** Thursday, June 02, 2016 12:40 PM  
**To:** Board.Secretary  
**Subject:** PUBLIC COMMENT ON VTA 2016 TRANSPORTATION FUNDING MEASURE

To Whom It May Concern,

I am writing to express my grave concerns regarding certain measures in VTA's proposed 2016 Transportation Funding Measure.

Specifically, my concerns arise from a large chunk of funding being allocated to highway and expressway expansions rather than to local transit, bicycle and pedestrian projects and programs.

As global warming and air pollution are increasing, where Spare the Air alerts are in effect both today and tomorrow, we should not be expanding vehicle miles traveled in personal automobiles and instead should look for alternatives to business as usual.

I support the findings in TransForm's recent report "Cutting Carbon as well as Commutes" which recommends the following measures to be included:

- 1) Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.
- 2) Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled. VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy; and

3) Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern as well as those in proximity to schools.

Thank you for your consideration. I look forward to speaking in person tonight VTA's Board meeting.

Regards,  
Leila Forouhi

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**From:** Charu Madan  
**Sent:** Thursday, June 02, 2016 1:00 PM  
**To:** Board.Secretary  
**Subject:** Highway 85 Sound Mitigation

Hello VTA Board members,  
I am a resident of Saratoga and I am in support of the 2016 Sales Tax Ballot Measure as long as there is definitive wording for Highway 85 Sound Mitigation / Noise Abatement from Highway 87 to 237! We deal with noise pollution from highway 85 on a daily basis and it is about time that this funding source addresses that. Please ensure that funds are available from this Ballot Measure to alleviate the noise impacts of highway 85 across all the cities.

I thank you for your consideration  
Charu Madan

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-----Original Message-----

**From:** Christine Hlavka  
**Sent:** Thursday, June 02, 2016 1:08 PM  
**To:** Board.Secretary  
**Subject:** Maximize per-dollar benefits for climate, mobility, equity in the transportation funding measure

I agree with Transform that more investments in alternative transportation are needed in the transportation measure. For decades, alternative transportation has been under-funded to the point where we have this county has some of the worst congestion in the country. I know it is politically difficult to provide much for alternative transportation - but pedestrians and cyclists can be helped with "complete streets" projects that also improve conditions for drivers. I'm opposed to adding more car lanes unless needed for safety or efficiency at intersections or exchanges.

Please know - my vote depends on what you decide will be funded!

-----Original Message-----

From: Javier A Perez

Sent: Thursday, June 02, 2016 1:36 PM

To: Board.Secretary

Subject: Support for Recommendations from Transform

Hi,

I am requesting the VTA Board to seriously consider Transform's recommendations to:

1) shift funding from highway and expressway options to local transit, bicycle and pedestrian projects;

2) Include performance-based language in funding measure to ensure highway/expressway projects reduce congestion And reduce vehicle miles traveled(VMT).

Thank you,

Javier Perez

Sent from my iPad

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**From:** J.D. Contreras

**Sent:** Thursday, June 02, 2016 2:21 PM

**To:** Board.Secretary

**Subject:** RE: Proposed funding

Honorable VTA Board of Directors,

I am writing to express my concerns regarding certain measures in VTA's proposed 2016 transportation funding measure.

Specifically, my concerns arise from a large chunk of funding being allocated to highway and expressway expansions without sufficient funding of local transit, bicycle and pedestrian projects and programs.

As global warming and air pollution are increasing, where Spare the Air alerts are in effect both today and tomorrow, we should not be expanding vehicle miles traveled in personal automobiles and instead should look for alternatives to business as usual.

I support the findings in TransForm's recent report "Cutting Carbon as well as Commutes" which recommends the following measures to be included:

1) Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs;

2) Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled. VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy; and

3) Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern.

Thank you for your consideration.

Sincerely,

Jaime Contreras

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JD Contreras

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**From:** Lisa Chau  
**Sent:** Thursday, June 02, 2016 2:31 PM  
**To:** Board.Secretary  
**Subject:** VTA plan

Hello VTA Board,

My name is Lisa, and I'm a high school student here living in the Santa Clara County. I believe it's a right thing to divert efforts into climate responsible transportation solutions because this will not only affect my future, but also generations ahead of me. Climate issues should not be something placed on OUR generation's hands to solve when it could be solved/helped right NOW. Please reconsider your VTA plans for the sake of our community's wellbeing!

Thank you,  
Lisa Chau

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**From:** Andy Chow  
**Sent:** Thursday, June 02, 2016 2:50 PM  
**To:** Board.Secretary; envision.sv  
**Cc:** Adina Levin; Chris Lepe  
**Subject:** Letter to VTA board

VTA Board of Directors:

I have lots of problems with your transportation tax proposal. The biggest is that it has no vision. It is merely just a list of how to spend the money. It doesn't propose enough transit to make a difference (less ambitious than the 2000 Measure A). The highway element isn't helpful nor it is something that transit can take advantage of. The plan still proposes to build redundant transit facilities (BART station in Santa Clara) while excluding other transit improvements that are not duplicative. Also, given the nearly \$2 billion investment for electrification and another \$1 billion proposed in this package, there's no vision for Caltrain to provide more service than it is currently running. I believe that VTA should make a commitment with some language in the ballot measure to indicate a vision of Caltrain operating at LRT/BART frequency.

After 16 years, with billions made available under the 2000 Measure A, transit projects have been scaled back, delayed, if not outright canceled. It is questionable whether this will be a repeat of that. Even with BART Santa Clara station continues to be in the plan, there are many reasons why this segment could be a problem (the biggest is the fact that it is redundant), but it is something that the VTA leadership is unwilling to recognize because of the fear of losing support from Santa Clara City officials, despite the fact that they do not have a consistent transit vision for their city. On the other hand, as long as it remains in the plan, it is a clear indication that politics trumps sound transportation planning.

I have lost faith in this process because VTA's inability to pursue a real change in the transportation planning paradigm. This region may have seen economic growth faster than many other regions, but our transit vision is behind regions like Seattle and Los Angeles.

Andy Chow

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**From:** David E Marsland  
**Sent:** Thursday, June 02, 2016 3:16 PM  
**To:** Board.Secretary  
**Subject:** Please cut Carbon and commutes, fund transit, bike-ped and reduce VMT

Honorable VTA Board of Directors,

I am writing to express my concerns regarding certain measures in VTA's proposed 2016 transportation funding measure.

Specifically, my concerns arise from a large chunk of funding being allocated to highway and expressway expansions without sufficient funding of local transit, bicycle and pedestrian projects and programs.

As global warming and air pollution are increasing, where Spare the Air alerts are in effect both today and tomorrow, we should not be expanding vehicle miles traveled in personal automobiles and instead should look for alternatives to business as usual.

I support the findings in TransForm's recent report "Cutting Carbon as well as Commutes" which recommends the following measures to be included:

- 1) Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs;
- 2) Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled. VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy; and
- 3) Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern.

Thank you for your consideration.

Regards,  
David Marsland

**From:** aldeivnian **On Behalf Of** Adina Levin  
**Sent:** Thursday, June 02, 2016 3:17 PM  
**To:** Haywood, Scott; Colin Heyne  
**Cc:** Board.Secretary  
**Subject:** VTA ballot measure - detail on Local Streets and Roads

Dear Board members and staff,

Thank you for including spending on Local Streets and Roads in the proposed ballot measure.

One minor language detail - In the section on Local Streets and Roads, the language reads that cites that have a PCI of 70 or better can use the funds for "other congestion relief projects." Logically this would include bicycle and pedestrian projects. It would be helpful to clarify as such in the language.

Thanks,

- Adina

Adina Levin  
Friends of Caltrain  
<http://greencaltrain.com>

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**From:** Monica Nanez  
**Sent:** Thursday, June 02, 2016 3:23 PM  
**To:** Board.Secretary  
**Subject:** VTA's proposed funding measure  
Good afternoon,

I am a life long San Jose native. I love this City and I know that we can be a model city in terms environmental and community health and well being. However, we need significant improvements to our public transportation system and bike and pedestrian pathways to really become the healthy city we want to be. I support Transform's recommendations:

- Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.
- Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled (VMT). VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy.
- Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern as well as those in proximity to schools.

A healthy environment and healthy community addressed the needs of all residents!

Thank you,

Monica Nanez,

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**From:** John Yiyang Zhao  
**Sent:** Thursday, June 02, 2016 3:45 PM  
**To:** Board.Secretary  
**Subject:** More Aggressive Climate Action in Sales Tax Measure

Dear Board Members,

I am writing this email to comment on the proposed budget for the upcoming sales tax measure. I am concerned that a disproportionate amount of money is being dedicated towards highway and expressway spending and other auto-centric uses. If the VTA wants to push for a transportation system that is consistent with California's goals to reduce greenhouse gas emissions for adequate climate change mitigation, the budget should not prioritize automobiles but public transportation. **I call on the board to shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.**

Moreover, a sustainable transportation system should be accessible to all people, especially populations such as low-income riders, youth, seniors, and riders with disabilities. The current infrastructure and spending patterns of the VTA do not prioritize these populations but instead cater to wealthier groups. For example, the light rail lines have wealthier riders than the bus lines. Even though light rail has a lower ridership, the VTA has been investing disproportionately more for light rail riders compared to bus riders. **I call on the board to prioritize strengthening the core bus network.**

Finally, the Next Network initiative needs to be approached with caution. The VTA must not remove bus service for key destinations such as the VA Hospital, El Camino Hospital, and Oshman JCC senior residences. Instead of removing bus lines in order to strengthen high ridership lines, the VTA must provide more funding for transit operations. **The current proposed level of \$500 million for transit operations is not enough, and I urge the board to allocate the additional \$400-500 million for transit operations necessary to increase ridership without costing senior riders and riders with disabilities.**

In summary, the VTA must invest more in solutions that will **move us away from the current auto-centric transportation system we have.** We cannot lock ourselves into another 30 years of living with the status quo. The time window to act on climate change is closing, and it is crucial that this sales tax measure sets us on the right path. **Invest in public transportation and prioritize services for marginalized populations. Stay true to the VTA mission statement and provide solutions that are accessible to everybody.**

Thank you for reading this.

Sincerely,  
John

**From:** Fadi Saba  
**Sent:** Thursday, June 02, 2016 4:07 PM  
**To:** Board.Secretary  
**Subject:** budget priorities

Dear VTA Boardmembers,

I believe that spending \$1.5 billion on roads is far more than should be the case. I believe if you took a third of that amount and placed it in bus-LRT service, as well as bike improvements, the County will go a long way to reducing CO2 immisions \_and\_ making urban core centers more desirable.

Yours,

Fadi Saba  
San Jose, CA

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**From:** Aaron Wilcher  
**Sent:** Thursday, June 02, 2016 4:09 PM  
**To:** Board.Secretary  
**Subject:** VTA's proposed 2016 transportation funding measure

To the VTA Board of Directors,

I am writing to express my concerns regarding the road and freeway expansion allocations in the VTA's proposed 2016 transportation funding measure.

Time and time again, studies show that expanding the carrying capacity of roads and freeways in dense metropolitan areas only provides temporary traffic relief, but invites more car travel and future traffic snarls on a broader scale. I'd like to see the current allocations for roadway and freeway expansion in your current proposal directed instead to sustainable transportation programs, including bicycle commuting, pedestrian facilities, and transit expansion as outlined in TransForm's report, "Cutting Carbon as well as Commutes."

I hope the board will reconsider its proposal.

Regards,

Aaron Wilcher

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**From:** Hilary Noll  
**Sent:** Thursday, June 02, 2016 4:40 PM  
**To:** Board.Secretary  
**Subject:** Highway and Expressway Spending

Hello,

I am a communist member who is in favor of the following changes to the VTA's proposed highway and expressway funding:

- Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.
- Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled (VMT). VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy.
- Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern as well as those in proximity to schools.

Hilary Noll, AIA

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**From:** Sierra Rose Garcia  
**Sent:** Thursday, June 02, 2016 4:42 PM  
**To:** Board.Secretary  
**Subject:** Vote for a Sustainable and Accessible Transportation System

Dear VTA Board Secretary,

I am writing this email to comment on the proposed budget for the upcoming sales tax measure. I am concerned that a disproportionate amount of money is being dedicated towards highway and expressway spending and other auto-centric uses. If the VTA wants to push for a transportation system that is consistent with California's goals to reduce greenhouse gas emissions for adequate climate change mitigation, the budget should not prioritize automobiles but public transportation. **I call on the board to shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.**

Moreover, a sustainable transportation system should be accessible to all people, especially populations such as low-income riders, youth, seniors, and riders with disabilities. The current infrastructure and spending patterns of the VTA do not prioritize these populations but instead cater to wealthier groups. For example, the light rail lines have wealthier riders than the bus lines. Even though light rail has a lower ridership, the VTA has been investing disproportionately more for light rail riders compared to bus riders. **I call on the board to prioritize strengthening the core bus network.**

Finally, the Next Network initiative to increase ridership needs to be approached with caution. The VTA must not remove bus service for key destinations such as the VA Hospital, El Camino Hospital, and Oshman JCC senior residences. Instead of removing bus lines in order to strengthen high ridership lines, the VTA must provide more funding for transit operations. **The current proposed level of \$500 million for transit operations is not enough, and I urge the board to allocate the additional \$400-500 million for transit operations necessary to increase ridership without costing senior riders and riders with disabilities.**

In summary, the VTA must invest more in solutions that will **move us away from the current auto-centric transportation system we have**. We cannot lock ourselves into another 30 years of living with the status quo. The time window to act on climate change is closing, and it is crucial that this sales tax measure sets us on the right path. **Invest in public transportation and prioritize services for marginalized populations. Stay true to the VTA mission statement and provide solutions that are accessible to everybody.**

Thank you for reading this.

Sincerely,

Sierra Garcia

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**From:** Nicole Kemeny  
**Sent:** Thursday, June 02, 2016 4:45 PM  
**To:** Board.Secretary  
**Subject:** Future carbon emissions

To the Board,  
We have to make sure we don't lock ourselves into high emissions for the next 20 years or more. We should be funding transportation that helps us meet our statewide emissions cuts, considers the serious climate situation, and enhances fairness in our region.

Nicole Kemeny

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**From:** Lauren Mary Gibson  
**Sent:** Thursday, June 02, 2016 4:49 PM  
**To:** Board.Secretary  
**Subject:** Vote for a Sustainable and Accessible Transportation System

Dear Board Secretary,

I am writing this email to comment on the proposed budget for the upcoming sales tax measure. I am concerned that a disproportionate amount of money is being dedicated towards highway and expressway spending and other auto-centric uses. If the VTA wants to push for a transportation system that is consistent with California's goals to reduce greenhouse gas emissions for adequate climate change mitigation, the budget should not prioritize automobiles but public transportation. **I call on the board to shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.**

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Thank you for your time, and I look forward to hearing the VTA's decision.

Sincerely,  
Lauren Gibson

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**From:** Neil Shea  
**Sent:** Thursday, June 02, 2016 4:51 PM  
**To:** Board.Secretary  
**Subject:** Feedback on VTA Ballot measure

Dear Board Members,

THANK YOU for the solid package of funding for Caltrain, both increasing service and for grade separations.

One request - PLEASE do not extend BART to Santa Clara. This is a very expensive way to duplicate Caltrain service for one stop only. \$200M for construction plus it costs more to operate than if we just increase service along the whole line! (If necessary it could be added later but it wont be needed.)

Let's make Diridon the best possible terminal station for BART, and then focus on making Caltrain the best possible service throughout the County.

Let's also try to allocate more funds to sustaining bus operations as ridership grows.

Let's also study and support efforts to extend Cap Cor to Monterey County, and create a dedicated line from Diridon to SJC airport (rather than going under the tracks from Santa Clara).

THANK YOU ALL!

Neil Shea

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**From:** Emma Carolina Hutchinson  
**Sent:** Thursday, June 02, 2016 4:57 PM  
**To:** Board.Secretary  
**Subject:** Vote for a Sustainable and Accessible Transportation System

Dear VTA Board Secretary,

I am writing this email to comment on the proposed budget for the upcoming sales tax measure. I am concerned that a disproportionate amount of money is being dedicated towards highway and expressway spending and other auto-centric uses. If the VTA wants to push for a transportation system that is consistent with California's goals to reduce greenhouse gas emissions for adequate climate change mitigation, the budget should not prioritize automobiles but public transportation. **I call on the board to shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.**

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Thank you for reading this.

Sincerely,  
Emma Hutchinson

**From:** Emma Fisher  
**Sent:** Thursday, June 02, 2016 9:59 PM  
**To:** Board.Secretary  
**Subject:** Vote for a Sustainable and Accessible Transportation System

Dear VTA Board Secretary,

I am writing this email to comment on the proposed budget for the upcoming sales tax measure. I am concerned that a disproportionate amount of money is being dedicated towards highway and expressway spending and other auto-centric uses. If the VTA wants to push for a transportation system that is consistent with California's goals to reduce greenhouse gas emissions for adequate climate change mitigation, the budget should not prioritize automobiles but public transportation. **I call on the board to shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.**

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Thank you for reading this.

Sincerely,  
Emma Fisher

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**From:** Mansi Jain

**Sent:** Thursday, June 02, 2016 11:58 PM

**Subject:** Vote for a Sustainable and Accessible Transportation System

Dear Sir/Ma'am,

I am writing this email to comment on the proposed budget for the upcoming sales tax measure. I am concerned that a disproportionate amount of money is being dedicated towards highway and expressway spending and other auto-centric uses. If the VTA wants to push for a transportation system that is consistent with California's goals to reduce greenhouse gas emissions for adequate climate change mitigation, the budget should not prioritize automobiles but public transportation. **I call on the board to shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.**

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Thank you for reading this.

Sincerely,  
Mansi Jain

**From:** Board.Secretary

**Sent:** Friday, June 03, 2016 3:41 PM

**To:** VTA Board of Directors; VTA Advisory Committee Members

**Subject:** Last installment of VTA's information series: 40 Years of Transportation Investment

VTA is sharing the last two installments of the four-part informational series that shares how Santa Clara County's transportation network has evolved over the last 40 years through thoughtful planning, broad-based collaboration and solid investment. We hope you enjoyed the first two parts of the series sent to you earlier this month. Our hope is to provide residents and the communities we serve with a deeper appreciation for where we have been, as well as a clearer vision for where we are headed.

Please share far and wide, thank you!

[Part III: VTA Stays the Course \(1996-2005\)](#)

[Part IV: Leveraging Technology to Maximize Our Investment \(2006-2016\)](#)

In case you missed the first two installments:

[Part I: The Early Years, County Transit Growing by Leaps and Bounds \(1976-1985\)](#)

[Part II: Strengthening the County's Transportation Backbone \(1986-1995\)](#)

## Traffic Congestion Relief Program

In 2000, then-Governor Gray Davis signed into law AB 2928, which came to be known as the Traffic Congestion Relief Act of 2000, providing approximately \$6.8 billion in state revenues for transportation (FY'01-FY'06). Revenues were generated in part by a transfer of gasoline sales tax dollars from the General Fund. The Traffic Congestion Relief Act was supposed to represent the first major state investment in transportation infrastructure since 1990. However, in 2001, the economy experienced a severe downturn, resulting in significant General Fund deficits.

In FY'02, the practice of diverting transportation dollars to shore up the General Fund began. This eventually led to the 2010 Fuel Tax Swap and a variable-rate gas tax that is adjusted by the state Board of Equalization annually. The rise of more fuel efficient vehicles, among other economic influences, has resulted in less money to fund much-needed improvements to and maintenance of existing transportation infrastructure.

Before the Traffic Congestion Relief Program ended, VTA received \$649 million to help pave the way for the BART Silicon Valley Extension.



Light rail expanded to reach Milpitas, 2001



Palo Alto Transit Center Improvements



US 101 Widening Project, 2003

**Santa Clara Valley Transportation Authority**  
3331 N. First Street, San Jose, CA 95134  
Administration (408) 321-5555  
Customer Service (408) 321-2300



# Santa Clara Valley Transportation Authority Laying the Foundation for Economic Growth: FOUR DECADES OF TRANSPORTATION INVESTMENT IN SANTA CLARA COUNTY 1996-2005

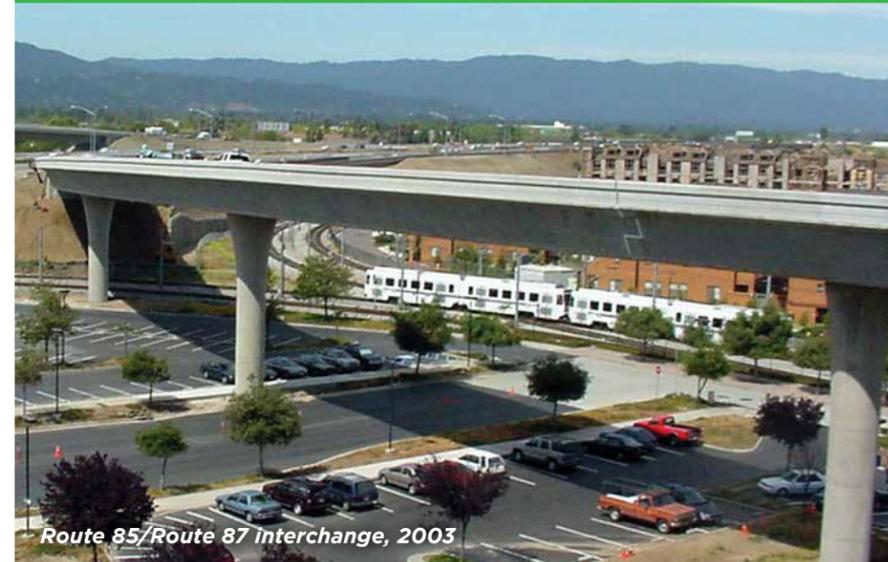
1976-1985

1986-1995

1996-2005

2006-Present

## VTA Staying the Course



Route 85/Route 87 Interchange, 2003

*Often it is said we must explore the past to understand the present, and to shape the future. In this four-part series, we will reflect on how Santa Clara County's transportation network was created over the last 40 years with thoughtful planning, broad-based collaboration, and a solid investment of your tax dollars. We hope that this series will provide county residents and the businesses that we serve with a deeper appreciation for where we have been, as well as a clearer vision for where we are headed.*

Those who lived in Silicon Valley during the “go-go 90’s” remember this decade well. During this time, the Valley benefited from an unprecedented level of venture capital and record number of IPOs as internet companies took the world by storm. Tech workers lured by high pay and attractive stock options endured grueling commutes as housing prices soared and employees moved further away from jobs. The County’s transportation network strained to keep pace with the rapid growth and large influx of daily commuters. Additional capacity was needed, and quickly, to sustain the booming economy.

In November 1996, Santa Clara County voters approved “Measure B”, a nine-year, half-cent sales tax to fund much needed improvements to county roads,

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In early 2000, the NASDAQ peaked and in the following months, as nervous investors began to divest their holdings and the tech bubble started to burst, Silicon Valley remained bullish on transportation investment. County voters were pleased with the progress being made on the transportation network and supported funding future projects by passing a 30-year, half-cent sales tax on the November 7, 2000 General Election ballot. The Measure passed by 70.3 percent of the vote!



Altamont Commuter Express (ACE) - now Altamont Corridor Express - began operation in October, 1998

occupancy vehicle (HOV) or carpool lanes, bicycle and pedestrian improvements, landscaping and sound walls. An extensive collaborative planning process, involving city elected officials, County Supervisors, and County Roads Commission members, was used to ensure the local cities and their residents' needs were considered.

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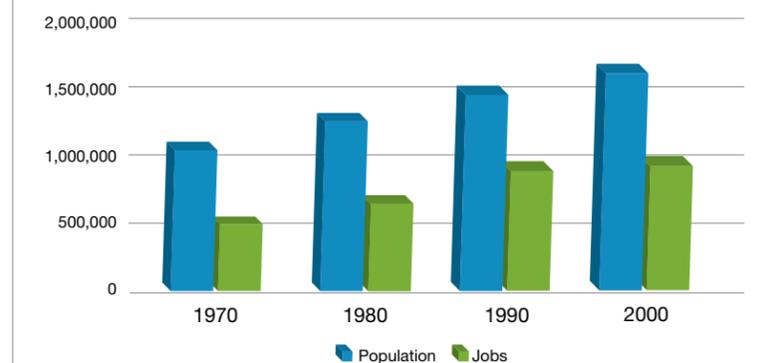
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*(continued on next page)*





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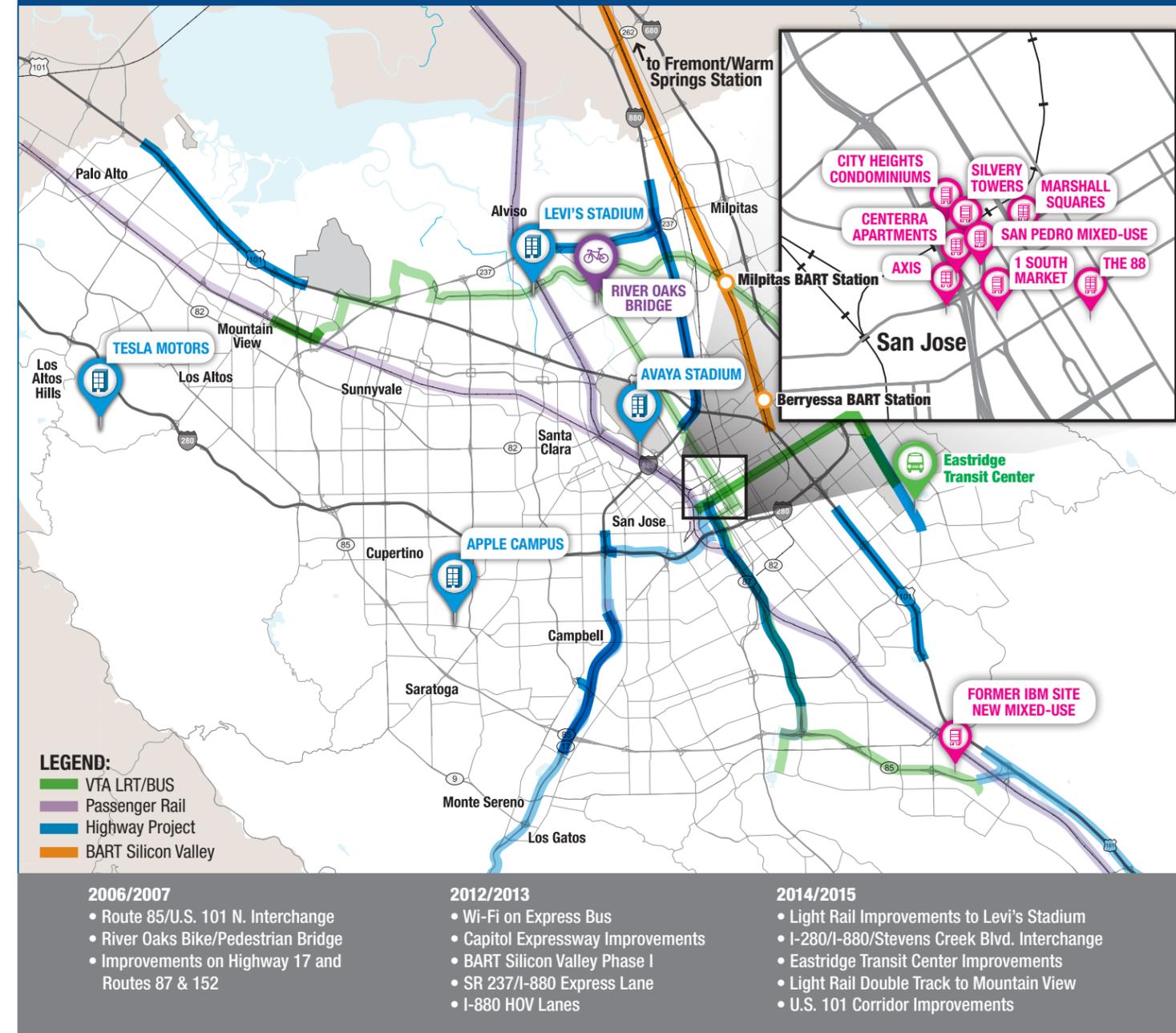


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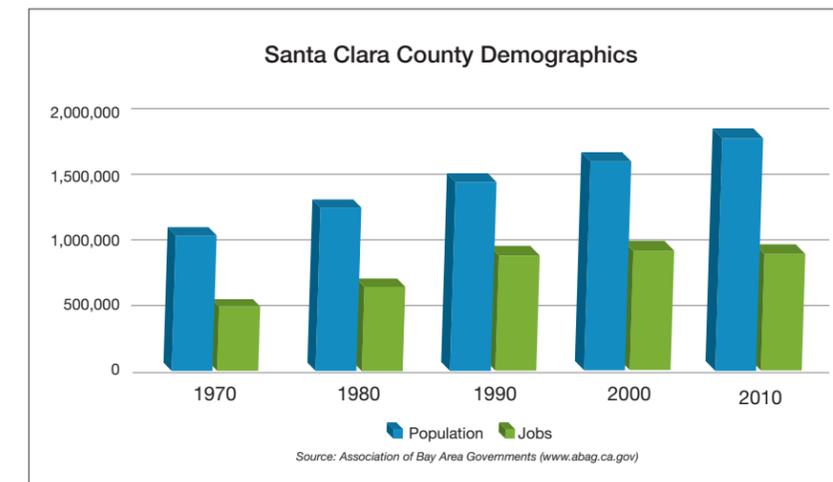
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## VTA Staying the Course



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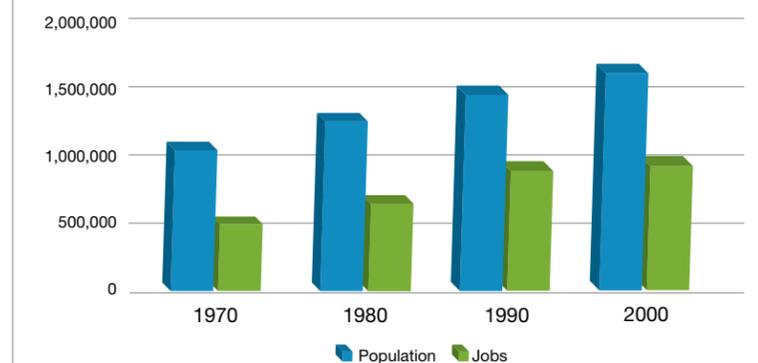
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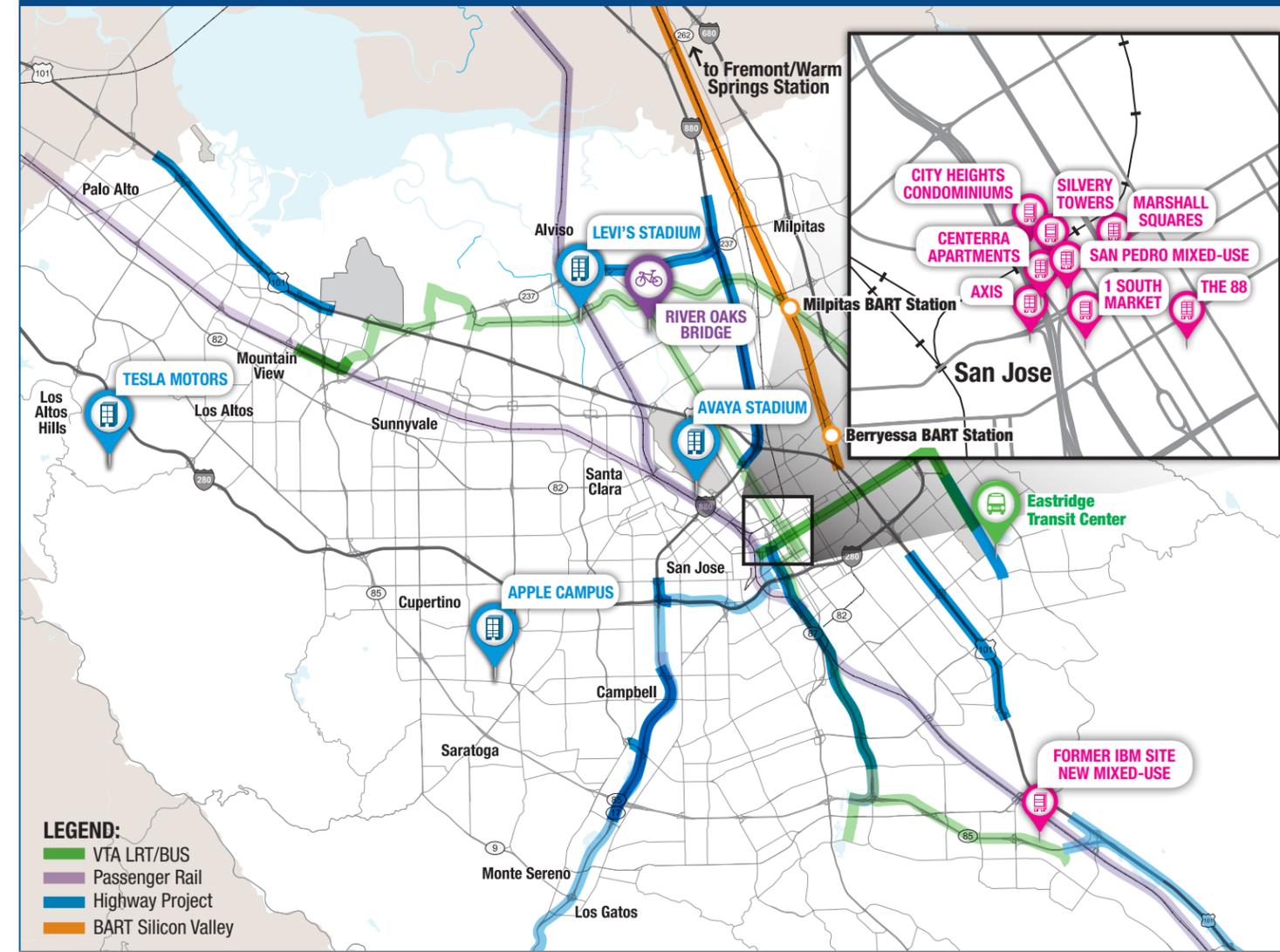


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#### LEGEND:

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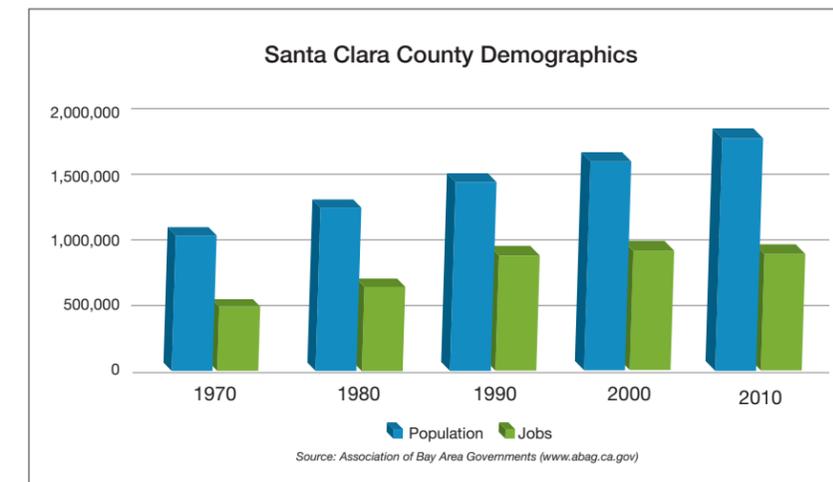
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Those who lived in Silicon Valley during the “go-go 90’s” remember this decade well. During this time, the Valley benefited from an unprecedented level of venture capital and record number of IPOs as internet companies took the world by storm. Tech workers lured by high pay and attractive stock options endured grueling commutes as housing prices soared and employees moved further away from jobs. The County’s transportation network strained to keep pace with the rapid growth and large influx of daily commuters. Additional capacity was needed, and quickly, to sustain the booming economy.

In November 1996, Santa Clara County voters approved “Measure B”, a nine-year, half-cent sales tax to fund much needed improvements to county roads,

highways, bicycle/pedestrian facilities, and rail networks. With this funding VTA delivered a diverse list of projects, from widening congested highways to expanding public transit service connecting business centers and residential communities. Santa Clara County and VTA committed to an ambitious program of projects entering into a formal agreement to deliver 24 rail and highway transportation improvements in less than 10 years. The County established the program, prioritized the transportation projects, and acted as the project monitor, dispersing sales tax revenues for project construction. VTA assumed the role of “contractor,” implementing rail and highway projects to move Silicon Valley’s workforce, with the help of private sector engineering and

(continued on next page)



(continued)

construction companies. VTA also successfully secured outside funding to augment the program as the economy started to decline, delivering more projects than local funds alone would have allowed. With local, regional, and statewide support, the partnership delivered an impressive number of improvements, including: Route 17 and 152 improvements; the Sunnyvale parking and transit center; widening U.S. 101 from Morgan Hill to south San Jose; completing the Route 85/87 interchange and numerous Caltrain improvement projects. VTA frequently outperformed baseline schedules and budgets for project delivery.

In early 2000, the NASDAQ peaked and in the following months, as nervous investors began to divest their holdings and the tech bubble started to burst, Silicon Valley remained bullish on transportation investment. County voters were pleased with the progress being made on the transportation network and supported funding future projects by passing a 30-year, half-cent sales tax on the November 7, 2000 General Election ballot. The Measure passed by 70.3 percent of the vote!



Altamont Commuter Express (ACE) - now Altamont Corridor Express - began operation in October, 1998

occupancy vehicle (HOV) or carpool lanes, bicycle and pedestrian improvements, landscaping and sound walls. An extensive collaborative planning process, involving city elected officials, County Supervisors, and County Roads Commission members, was used to ensure the local cities and their residents' needs were considered.

At the same time that the County was building out its many expressways, VTA was constructing freeway improvements and busy improving the transit system. During this decade, light rail service was expanded throughout the county. In December 1999, VTA began service into downtown Mountain View and in May 2001 extended service into Milpitas. In June 2004, VTA completed an extension to east San Jose and in October 2005, VTA opened an extension to Campbell. Today, the three light rail lines include 42.2 miles of track and 61 light rail stations.

In this decade, planning began in earnest to bring BART to Silicon Valley. VTA's BART Silicon Valley project was the first step to extend BART's heavy rail system into Santa Clara County. The project costs were significant and the ultimate decision was to phase the project. The first 10-mile, 2-station segment, referred to as the Berryessa Extension, travels along the existing Union Pacific Railroad alignment south of the future Warm Springs Station in Fremont to Milpitas and the Berryessa area of north San Jose. This fully grade-separated project includes two stations – one near the Great Mall in Milpitas and one in northeast San Jose.



One hundred low-floor light rail vehicles were imported from Japan, 2000

In 2001, Santa Clara County launched the Comprehensive County Expressway Planning Study, providing a long-term plan for the improvement and maintenance of the County Expressway System. The Study prioritized the investment of resources including all areas of need: capacity and operational improvements, signal operations, high-

## Santa Clara County Transportation, 1996-2005



**LEGEND:**  
 VTA LRT  
 Passenger Rail  
 Highway Project

**Light Rail Openings:**

- 1999 - to Mountain View
- 2001 - to Milpitas
- 2004 - to East San Jose
- 2005 - to Campbell

**2003**

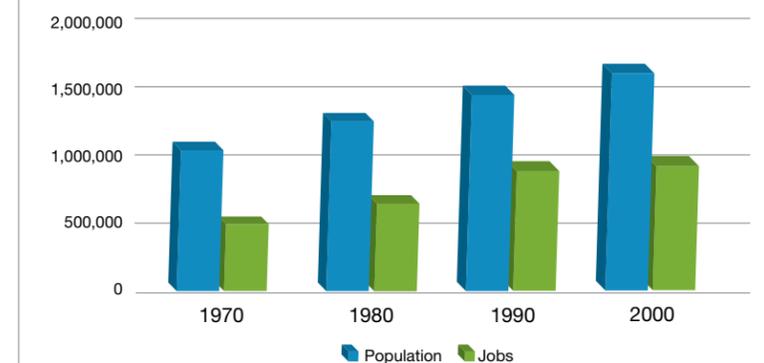
- U.S. 101 Widening Project
- I-880 Widening Project
- Route 85/Route 87 Interchange

**2004/2005**

- Route 237/I-880 Interchange
- Palo Alto Transit Center Improvements
- Route 85/U.S. 101 Interchange (South San Jose)

The Berryessa Extension received strong countywide support. The 2000 30-year, half-cent sales tax measure passed overwhelmingly with BART Silicon Valley as the priority project. In 2008, over 66% of Santa Clara County voters approved an additional eighth-cent sales tax to fund BART Silicon Valley's annual operating and maintenance expenses. Local and regional champions credited with the success of helping bring BART to Silicon Valley include the Silicon Valley Leadership Group, San Jose Chamber of Commerce, local city partners, and other labor and business organizations.

### Santa Clara County Demographics



## Funding Highlights

In November 2006, California voters approved Proposition 1B, authorizing the state to issue \$19.925 billion in bonds for transportation purposes over 10 years. The Corridor Mobility Improvement Account (CMIA), under Prop 1B, provided \$4.5 billion for projects that improve mobility in congested highway corridors. The California Transportation Commission approved CMIA funding for improvements including: I-880 HOV lanes (Milpitas to San Jose); U.S. 101 improvements (Mountain View to San Mateo County); and the U.S. 101/Tully Road Interchange Project. During the 2007 Great Recession, cost savings came from completed projects and ultimately provided funding for two more VTA projects: the

U.S. 101 improvements in the Evergreen area of San Jose and the I-280/I-880/Stevens Creek Boulevard Interchange Project.

In early 2012, VTA received a \$900 million federal funding commitment for VTA's BART Silicon Valley Berryessa Extension Project. VTA worked closely with the Federal Transit Administration (FTA) since 2002 to design a project that would meet the stringent criteria of FTA's New Starts Program which funds new and expanded rapid or commuter rail projects. A Full Funding Grant Agreement was executed followed by a groundbreaking ceremony kicked off project construction on April 12, 2012.

# Santa Clara Valley Transportation Authority Laying the Foundation for Economic Growth: FOUR DECADES OF TRANSPORTATION INVESTMENT IN SANTA CLARA COUNTY 2006-2016

1976-1985

1986-1995

1996-2005

2006-2016

## Leveraging Technology to Maximize Our Investment



SR 237/I-880 Express Lanes open, 2012

*Often it is said we must explore the past to understand the present, and to shape the future. In this four-part series, we will reflect on how Santa Clara County's transportation network was created over the last 40 years with thoughtful planning, broad-based collaboration, and a solid investment of your tax dollars. We hope that this series will provide county residents and the businesses that we serve with a deeper appreciation for where we have been, as well as a clearer vision for where we are headed.*



I-280/I-880/Stevens Creek Boulevard Improvements Project, 2015



VTA Express Buses featuring free Wi-Fi, 2012



VTA's BART Silicon Valley Phase I construction begins, 2012

### Santa Clara Valley Transportation Authority

3331 N. First Street, San Jose, CA 95134  
Administration (408) 321-5555  
Customer Service (408) 321-2300



In the last decade, transportation agencies across the country faced serious challenges as the great recession, combined with more fuel efficient cars, reduced funding available for much needed infrastructure maintenance and investment. In Silicon Valley, there is an estimated \$4.5 billion gap between available funding and what is needed to keep our roads in good repair. In addition to funding constraints, most of Silicon Valley is now physically built out, limiting options for expansion of the highway and road system.

To keep Silicon Valley freeways moving, VTA employed innovative approaches and leveraged the latest technology to maximize the efficiency and performance of the infrastructure already in place. Developing an "Intelligent Transportation System" (ITS), which uses big data and

mobile communications, has improved our ability to plan for and respond to varying travel demands during peak and non-peak hours. VTA installed smart ramp meters to manage traffic flow onto freeways. In 2012, VTA launched the first phase of its Silicon Valley Express Lanes Program on the SR 237/I-880 interchange in Milpitas. Express Lanes allow solo drivers to pay a fee to access carpool lanes during peak commute hours. Through ITS and dynamic pricing, the level of demand is managed in the express lanes to maintain free-flowing speeds even when general purposes lanes are congested. Plans for extension of the network include express lanes on U.S. 101 and SR 85, improving travel times in these corridors and generating revenue that can be reinvested in other transportation improvement projects.

*(continued on next page)*





River Oaks Bicycle/Pedestrian Bridge, 2006

(continued)

### Heavy Rail for Heavy Lifting

While ITS technology will continue to evolve and contribute to improving the safety and performance of our transportation system, technology can only provide so much relief. To move large numbers of Bay Area commuters requires mass transit options. Commuter rail operators like Caltrain and Capitol Corridor scrambled to pull together a funding plan to provide additional capacity to serve the increasing number of employees traveling into the county while freeway congestion and travel times increased. In 2012, Caltrain committed to a plan to electrify the system, which would enhance performance, operating efficiency, capacity, safety and reliability. As a partner in Caltrain, VTA has allocated over \$80 million to fund electrification. Caltrain electrification is being coordinated with planning for High Speed Rail service, which will share the Caltrain corridor in our county and feature major transportation hubs in downtown San Jose and Gilroy.

Of all the major rail projects under way, none has generated more excitement than the extension of BART to Santa Clara County. Construction on the extension's first phase began in April 2012. The fully grade separated project includes stations in Milpitas and northeast San Jose. After construction and system testing is completed, passenger service will begin in late 2017. The extension will provide easy connections to VTA light rail and buses, and when fully built out, will also connect with Caltrain, Altamont Commuter Express, Capitol Corridor, Amtrak, and High Speed Rail at the San Jose Diridon Station.

Silicon Valley employees work hard but they also play hard and convenient transit access to popular shopping destinations, restaurants and entertainment venues is important. When Levi's® Stadium opened in Santa Clara in 2014, VTA was ready for front door service after more than a year of planning and system upgrades. To support the demand on infrastructure, VTA delivered three light rail projects which had to be completed in a very short time frame. The first, a new "pocket track" finished just before the pre-season opener, allowed VTA to store trains near the stadium and accommodate large crowd departures. A second light rail platform in front of Levi's Stadium was constructed by the Santa Clara Stadium Authority to prevent crowding and move customers more quickly. These improvements, plus an added track in Mountain View, have made it possible for VTA to move tens of thousands of customers in and out of stadium events, including this year's Super Bowl 50, as well as meet the service demands when BART service begins.

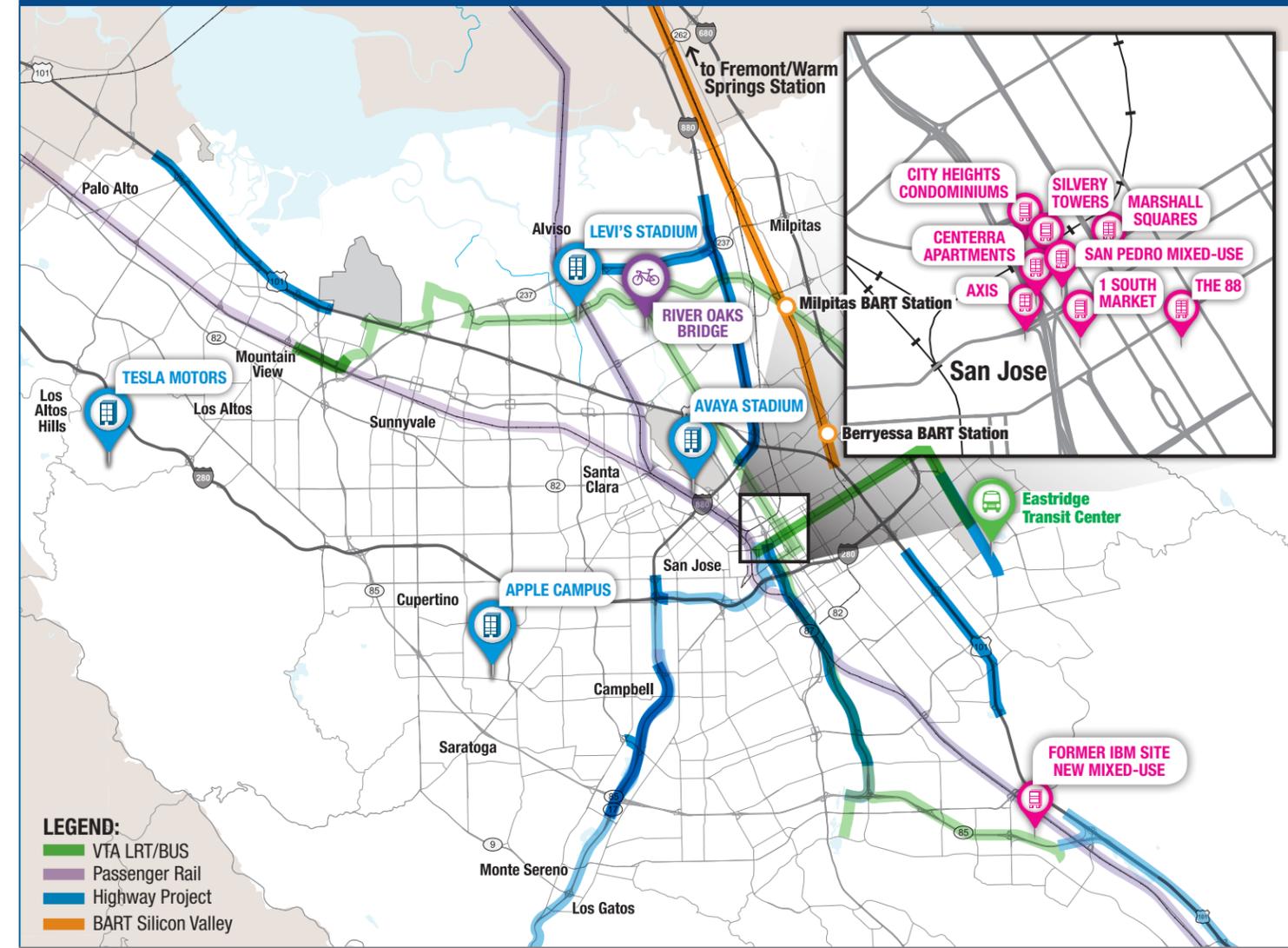


Transit service to Levi's Stadium

### The Importance of Collaboration

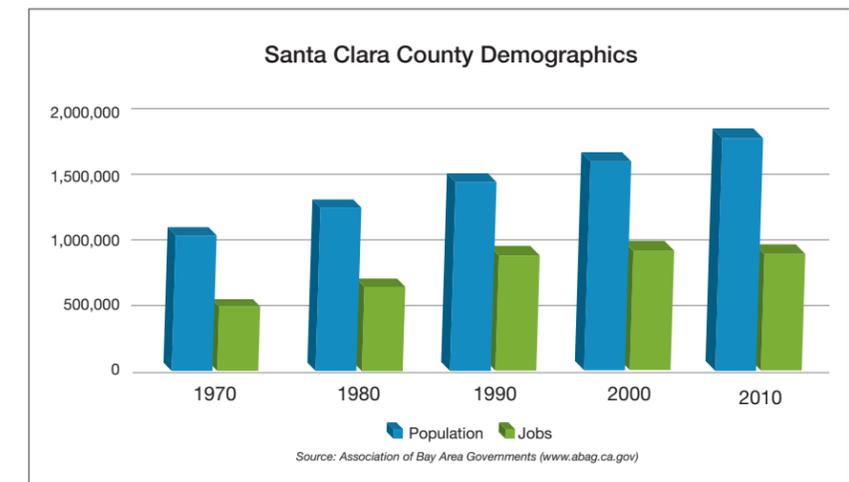
As we continuously plan for the future, the importance of thinking creatively and collaborating with Silicon Valley tech companies, universities, and emerging transportation providers can not be overlooked. In the past five years, we have seen an increasing number of ridesharing companies enter the market, experimenting with new ways to use mobile apps and new business models to meet our mobility needs. Every day we hear of a new app that has been developed to share information about traffic delays and recommend ideal routes,

## Santa Clara County Transportation, 2006-2016



- |   |  |   |
|---|--|---|
| <p><b>2006/2007</b></p> <ul style="list-style-type: none"> <li>• Route 85/U.S. 101 N. Interchange</li> <li>• River Oaks Bike/Pedestrian Bridge</li> <li>• Improvements on Highway 17 and Routes 87 &amp; 152</li> </ul> | <p><b>2012/2013</b></p> <ul style="list-style-type: none"> <li>• Wi-Fi on Express Bus</li> <li>• Capitol Expressway Improvements</li> <li>• BART Silicon Valley Phase I</li> <li>• SR 237/I-880 Express Lane</li> <li>• I-880 HOV Lanes</li> </ul> | <p><b>2014/2015</b></p> <ul style="list-style-type: none"> <li>• Light Rail Improvements to Levi's Stadium</li> <li>• I-280/I-880/Stevens Creek Blvd. Interchange</li> <li>• Eastridge Transit Center Improvements</li> <li>• Light Rail Double Track to Mountain View</li> <li>• U.S. 101 Corridor Improvements</li> </ul> |
|---|--|---|

facilitate carpools, and make paying for transit easier. In 2015, VTA launched its own Innovation Center to work with tech companies and other partners, sharing experience and working together to improve our transportation system. In early 2016, we launched a demonstration project in north San Jose to test an on-demand transit service with no pre-set routes or schedules. Each project is an invaluable opportunity to learn and lead as we jointly create the future of transportation in Silicon Valley.



**From:** Board.Secretary  
**Sent:** Friday, June 03, 2016 12:39 PM  
**To:** VTA Board of Directors  
**Subject:** VTA June 2016 Take-One is now available

**VTA Board of Directors and Advisory Committee Members:**

The June 2016 Take-One is now available. Please click on the link below:

<http://www.vta.org/sfc/servlet.shepherd/document/download/069A0000001ELoEIAW>

Thank you.

Office of the Board Secretary  
Santa Clara Valley Transportation Authority  
3331 N. First Street  
San Jose, CA 95134  
408.321.5680  
[board.secretary@vta.org](mailto:board.secretary@vta.org)

**From:** Board.Secretary  
**Sent:** Thursday, June 02, 2016 1:16 PM  
**To:** Board.Secretary  
**Subject:** VTA Information: Correspondence pertaining to agenda items on the June 2, 2016, Board of Directors Meeting

**VTA Board of Directors:**

We are forwarding you the following correspondence pertaining to **Agenda Item #7.2** - Potential ½-cent 30-year Sales Tax Measure, of the [June 2, 2016, Board of Directors](#) meeting:

<b>From</b>	<b>Topic</b>
Transportation Justice Alliance/Working Partnerships USA	Letter of Support
Silicon Valley Chamber Coalition Chair Matthew Mahood	Letter of Support
Members of the Public	Comments regarding the Potential 2016 Sales Tax Ballot Measure

Copies of materials attached herein, as well as correspondence sent to you via email on June 1, 2016, will be provided for you at the meeting in your Reading Folder.

Thank you.

Office of the Board Secretary  
Santa Clara Valley Transportation Authority  
3331 N. First Street  
San Jose, CA 95134  
408.321.5680  
[board.secretary@vta.org](mailto:board.secretary@vta.org)

*Transmitted via email*

June 1, 2016

Honorable Members of the Board of Directors  
Santa Clara Valley Transportation Authority  
River Oaks Administration Offices  
3331 North First Street  
San Jose CA 95134

**RE: Comments on Agenda Item #7.2 – SUPPORT for half-cent 30-year sales tax proposal**

Dear Madame Chair Chavez, Honorable Members of the VTA Board of Directors, and General Manager Fernandez:

We write on behalf of the Transportation Justice Alliance (TJA) to express our strong support for the half-cent 30-year sales tax proposal, with the half a billion dollars for “transit operations” as defined in the draft resolution.

The TJA is a broad network of more than 16 organizations and the community – including environmentalists, working families, transit, land use and housing advocates, seniors, persons with disabilities, service providers and residents – all working together to advocate for equitable transit-oriented development and the transportation needs of seniors, low-income communities, and other underserved residents of Santa Clara County.

For nearly two years, the TJA has been heavily engaged in the Envision Silicon Valley process in order to craft a robust and community-informed sales tax proposal. We have appreciated the collaboration with VTA leadership and staff to co-present community meetings in Downtown and East San Jose, Mountain View, and Gilroy, through which we solicited meaningful input from more than 500 residents and transit riders about their transit needs, preferences and challenges. Moreover, Working Partnerships USA, Sacred Heart Community Service, People Acting in Community Together (PACT) and Latinos United for a New America (LUNA) have also launched on-the-ground efforts and engaged another 2,000 residents and transit riders to collect additional input for a potential transit tax. The result of this two-year comprehensive community input process and constructive engagement with VTA Board and staff has culminated in the development of a balanced and thoughtful sales tax proposal.

We are aligned in our strong support for the half a billion dollars for “transit operations” that will benefit seniors, persons with disabilities, and working families. We urge you to adopt the framework, funding amounts, and resolution for the half-cent 30-year sales tax proposal for the November 2016 ballot. We look forward to ongoing meaningful collaboration with VTA and the community at-large to ensure this measure passes.

Sincerely,

Charisse Ma Lebron  
Director of Health Policy & Community Development  
**Working Partnerships USA**

Poncho Guevara  
Executive Director  
**Sacred Heart Community Service**

Salvador "Chava" Bustamante  
Executive Director  
**Latinos United for a New America (LUNA)**

Akemi Flynn  
Executive Director  
**People Acting in Community Together (PACT)**

Diana Hermone  
President and Business Agent  
**Amalgamated Transit Union Local 265 (ATU Local 265)**

Ben Field  
Executive Officer  
**South Bay AFL-CIO Labor Council (SBLC)**

Sheri Burns  
Executive Director  
**Silicon Valley Independent Living Center**

Bob Allen  
Policy and Advocacy Campaign Director  
**Urban Habitat**

**Aging Services Collaborative of Santa Clara County**

Ryan Kawamoto  
Executive Director  
**Yu-Ai Kai**

David Zisser  
Staff Attorney, Metropolitan Equity Team  
**Public Advocates, Inc.**

cc: John Ristow, Director of Planning and Program Development  
Chris Augenstein, Deputy Director of Planning

**OFFICERS**

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President & Chief Executive Officer  
*San Jose Silicon Valley Chamber*

First Vice Chair: John Horner  
President & Chief Executive Officer  
*Morgan Hill Chamber*

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*Fremont Chamber of Commerce*

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Vice President, Membership & Program:  
*Santa Clara Chamber of Commerce &  
Convention & Visitors Bureau*

Judy Kleinberg  
President & CEO  
*Palo Alto Chamber*

Tony Siress  
President & CEO  
*Mountain View Chamber*

June 2, 2016

Honorable Cindy Chavez  
Santa Clara County Board of Supervisors  
70 W. Hedding St., 10<sup>th</sup> Floor  
San Jose, CA 95110

**Re: SANTA CLARA COUNTY TRANSPORTATION SALES TAX**

Honorable Chairperson Chavez:

On behalf of the Silicon Valley Chamber Coalition, we would like to express our support for the Santa Clara County 30 Year ½ cent transportation sales tax proposed for November of 2016.

The Silicon Valley Chamber Coalition believes strongly this approach to a sales tax revenue measure is the most prudent moving forward and supports the allocation of investment. The proposed expenditure plan provided by the Silicon Valley Leadership Group encompasses the substantial need of transportation and transit improvements in every segment of our County.

We applaud SVLG for their leadership on this initiative and if successful, look forward to seeing those infrastructure investments in our local highways, expressways and BART to Downtown San Jose.

In short, the Silicon Valley Chamber Coalition supports this proposed sales tax.

Sincerely,



Matthew R. Mahood  
Chair

Silicon Valley Chamber Coalition

**COMMENTS FROM MEMBERS OF THE PUBLIC  
REGARDING THE POTENTIAL 2016 SALES TAX BALLOT MEASURE**

**From:** Rani Fischer  
**Sent:** Wednesday, June 01, 2016 8:41 PM  
**To:** Board.Secretary  
**Subject:** invest in public transit

Dear VTA Board,

Please put more of the transit tax money into buses and other public transportation, less into road building. Studies show that increasing miles of pavement only leads quickly to more congestion; transit on the other hand takes cars off the road. Transit is used most frequently by low income people — and supporting transit is a social justice issue.

Thanks,

Rani Fischer  
Sunnyvale, CA

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**From:** Mark Grossman  
**Sent:** Wednesday, June 01, 2016 8:51 PM  
**To:** Board.Secretary  
**Subject:** Maximize the greater good

The VTA plan must promote the mobility of all area residents. Expanding roads for single occupancy vehicles should take a backseat (pun intended) to projects that are healthier and more equitable.

Regards  
Mark Grossman  
Palo Alto

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**From:** V.H. Stinger  
**Sent:** Wednesday, June 01, 2016 10:48 PM  
**To:** Board.Secretary  
**Subject:** Reesponse to June 2 Agenda

Dear VTA Board,

As you finalize the details for a November bond issue, I would like to express my enthusiasm for the CALTRAIN improvements and my concern that the allocations for highways are excessive. This expenditure is neither forward thinking nor environmentally sound. We need options which make mass transit viable, that is a connected network with first/last mile service, and options which serve the growing population of seniors, that means preventing cuts to lifeline service for elderly and disabled as well as developing a connected service.

I look forward to supporting a November bond issue, which truly looks to a future where I can navigate using new networks of transit options and which emphasizes transit alternatives to the highway system..

Thank you for working to this goal.

Respectfully,

Valerie Hunt Stinger  
Palo Alto, California 94303

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From: Kristal C  
Sent: Wednesday, June 01, 2016 11:34 PM  
To: Board.Secretary  
Subject: Maximize per-dollar benefits for climate, mobility, equity in the transportation funding measure

Dear VTA Board of Directors,

As a long time resident of Santa Clara County, I would like to see a healthier county with regards to commuting and growing population growth.

I support the VTA staff proposal for bus operations and services for transit-dependent. I would like to see money invested into Light rail transit because BART will connect to VTA and I believe operations are important to sustain the system. I would like to see more bike/ped improvements in Santa Clara county because we need to be active and healthy. For instance, the Center for Disease Control and Prevention (CDC) states that 1 in 5 adults in Santa Clara county are obese and 1 in 4 middle and high school students are overweight or obese. We need an integrated transit system that supports healthy lifestyles and reduces air pollution and divest from oil dependence.

Thanks,

Kristal Caidoy

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**From:** Paul Bickmore  
**Sent:** Thursday, June 02, 2016 12:14 AM  
**To:** Board.Secretary  
**Subject:** Maximize per-dollar benefits for climate, mobility, equity in the transportation funding measure

To the Santa Clara Valley Transportation Authority Board of Directors:

I oppose any spending on increasing road capacity in the upcoming ballot measure. We know that this sort of thing doesn't improve level of service (Duranton and Turner, 2009; Goodwin, 1996). It subsidizes a destructive, carbon intensive lifestyle, often by simultaneously degrading the experience for people on foot. Public transit doesn't alleviate traffic either, but it does allow people to live in denser, less carbon-intensive neighborhoods. We should be planning and preparing for this kind of development, and not by continuing to force people into cars.

This is a huge ballot measure, figuratively, after three other sales tax increases. Something like this probably won't be done in the near future again, so it must be something good. There is no

reason we should be wasting money on things such as the Tier1 Expressway Projects or others that quixotically cater to polluting forms of living and getting around.

Thank you,

Paul Bickmore  
Santa Clara, California

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**From:** Virginia Smedberg  
**Sent:** Thursday, June 02, 2016 12:36 AM  
**To:** Board.Secretary  
**Subject:** thoughts re VTA spending on transit, incl Caltrain

Dear Board:

The question that I'm interested in is, should VTA build a duplicate station in order to get more frequent service, or use a fraction of the money to increase Caltrain frequency, and use the savings for non-redundant transit improvements?

VTA could get more value for the money if they refrained from building the extra BART station, and used the money instead to increase Caltrain service frequency to match BART frequency in Santa Clara County from Palo Alto to San Jose. I'm sure you've seen the analysis, but here's the link anyway:

<https://docs.google.com/spreadsheets/d/1HU9EWWkmY88IpCNcEQZtUyFNfl1oDHu29YCQJGyvNS8/edit?pref=2&pli=1#gid=0>

The article I've read shows that there are better ways to use the money. I'm sure you've heard these ideas, but here's the link to the article:

<http://www.greencaltrain.com/2016/05/vta-savings-from-integrated-bartcaltrain-service/>

I'd like to see the money spent as efficiently as possible, and much more on transit than on car-based development. I copy here part of another article:

"While the developer has shown illustrations of substantial improvements to the Great American Station, currently served by ACE and Capitol Corridor, buses and shuttles, with light rail not far away, there is no indication yet that the city will demand major investment in these improvements. The development is advertised as "transit-oriented development" but is [planning for the vast majority of visitors and employees to arrive by car](#), without strong policies and programs to reduce driving. In nearby areas planning major developments, cities have required developers to make major investments in transit infrastructure. "

Seems to me that we ALL need to demand investments in transit, from any group that plans to attract people. I've quoted and linked words from others who have done the research that I can't do personally, because what they say makes sense to me. I hope it does to you as well. I use transit (and bike) whenever I can; when I have to use the car, to carry large musical instruments with my carpool and to deliver us directly to the theater, I always wish that some of the people in the cars I am sharing the

freeway with, could have used transit instead of being out there in the mess with me.

Sincerely,

Virginia Smedberg  
Palo Alto CA 94301

violinist with Opera San Jose (to which I carpool) and West Bay Opera (to which I bike w/ violin in my backpack)

---

**From:** Amanda Michal Siegel

**Sent:** Thursday, June 02, 2016 12:50 AM

**To:** Board.Secretary

**Subject:** Please adjust ballot measure for more sustainable transportation.

Thank you for putting considerable effort into your current proposal for a 2016 transportation sales tax ballot measure. However, I would feel a lot better about the measure if it more effectively enhanced the county's public transit infrastructure, including the local bus network, and avoided encouraging an increase in cars on the road.

The increase in driving encouraged by the freeway and expressway improvements seemingly are at odds with the goal of reducing greenhouse gas emissions. Especially since this is such a long-term funding measure, the benefits of expensive provisions to improve car trips might be relatively short-lived, as I fear that such improvements might spur suburban sprawl until driving increases to match the increased capacity. Further, it seems premature to fully invest in Phase II of BART as currently planned-- especially with a duplicitous connection between Diridon and Santa Clara stations-- until local bus and light rail service has been substantially improved. I had been looking forward to long-term infrastructure improvements to light rail and the emergence of time-efficient BRT. It also seems that with just a few more hundred million dollars devoted to bus operations than currently planned, ridership-oriented service could be significantly improved but without having to cut existing coverage-oriented service.

On the other hand, thank you for allocating funding to Caltrain capacity improvements and grade separation, in the current proposal.

Please consider adopting the alternative proposal presented in <http://www.transformca.org/transform-report/cutting-carbon-as-well-as-commutes>.

Thank you,

Amanda Siegel  
San Jose resident

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**From:** Cedric de La Beaujardiere  
**Sent:** Thursday, June 02, 2016 3:09 AM  
**To:** Board.Secretary  
**Cc:** Cedric de La Beaujardière; Chris Lepe; City Council  
**Subject:** VTA Sales Tax funding allocations

Honorable VTA Board Members and staff,

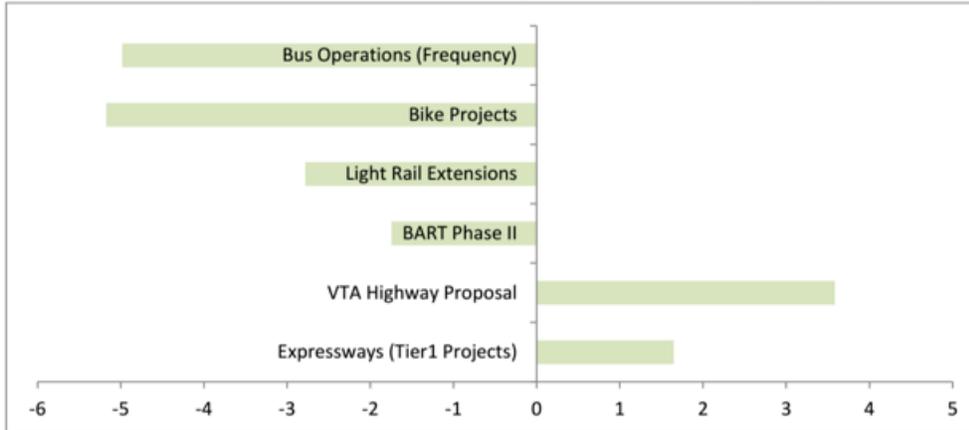
I support TransForm's position and [analysis](#) that more of the proposed sales tax should be directed towards transportation projects which reduce rather than increase our community's carbon impacts. Global climate change is the pivotal peril of our day with tremendous negative impacts to our economy, ecology, and humanity, and we really need to get serious and get this right. In regards to the proposed tax, I support the following recommendations:

- Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.
- Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled (VMT). VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy.
- Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern as well as those in proximity to schools.

It will be hard enough to get 2/3 voter approval for a new tax, without creating opposition to the measure by environmental groups which believe the proposal is too auto-centric. Let's create a tax proposal that can garner the support of these groups, and invest our dollars in the smartest and most responsible way, protecting people and planet.

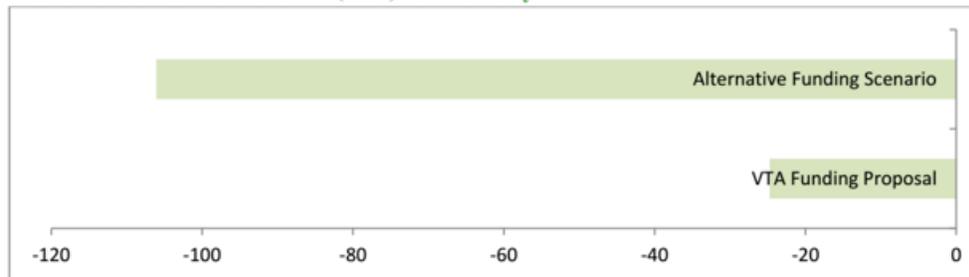
I was born and raised and have lived in Palo Alto nearly 4 decades. I am a life long cyclist and transit rider and use these modes for 90% of my regional travel. I commute by bike and train to SF 3 days a week (and telecommute 2) to do my part for the planet. My choice to bike and train have the added benefits of providing exercise and time to work, relax, or socialize on the train, and it saves me a lot of money on car insurance, gas, and parking. Let's strengthen our transit and bike and pedestrian networks so these transportation modes are accessible to more people and increase in viability relative to more polluting and socially-disconnecting modes like solo driving.

**Metric Tons of Carbon Pollution (CO2) Per Weekday (Per \$100 Million in Spending)**



An alternative funding scenario developed by TransForm, with more funding for local transit and active transportation projects, performed far better than VTA’s draft funding proposal, including over 90 times the VMT reduction benefits and four times the CO2 reduction benefits.

**Metric Tons of Carbon Pollution (CO2) Per Weekday**



**VTA and Alternative Project Allocations**

Project	VTA Staff Proposal (In \$ millions)	Alternative Funding Scenario (In \$ millions)
VTA bus operations and services for transit-dependent	500	1,000
VTA transit capital (LRT)		500
BART	1,500	1,250
Highway/expressway capital	1,500	400
Bike/ped improvements (Active transportation)	250	600
Total	3,750	3,750

Thank you for your vision and support to strengthen our communities.

Sincerely,

Cedric de La Beaujardiere

**From:** Ellyn Freed  
**Sent:** Thursday, June 02, 2016 5:53 AM  
**To:** Board.Secretary  
**Subject:** Caltrain

It is outdated. We need BART to ring the Bay and cross the Bay in more than one spot.

---

**From:** Ryan Lynch  
**Sent:** Thursday, June 02, 2016 8:23 AM  
**To:** Board.Secretary  
**Subject:** What is the point of Santa Clara station on BART

Hello-

I see that the Santa Clara BART station continues to be funded. I still do not see the reason \$1.5 billion is being spent on a silly extension when the same Caltrain corridor could be upgraded instead. Santa Clara has refused transit oriented development, and existing service likely meets the needs of this car-oriented city.

Thanks,

Ryan

---

**From:** Serge Bonte  
**Sent:** Thursday, June 02, 2016 9:07 AM  
**To:** Board.Secretary; supervisor.yeager@bos.sccgov.org; jbruins@losaltosca.gov  
**Cc:** McAlister, John; supervisor.simitian@bos.sccgov.org; Siegel, Lenny; Showalter, Pat  
**Subject:** re: Envision Sales Tax Proposal, Santa Clara (un-necessary?) BART station and today's Mercury News editorial

Dear VTA Board

The proposed sales tax measure is the result of a very challenging balancing act. To me (and I'm sure many North County voters), balance is key in insuring that most tax proceeds would not once more go to BART. While I find the 25% limit too high, I can live with it as long as it's a firm line in the sand.

I am disturbed with today's Mercury News' editorial which seems to set a different line in the sand: build the Santa Clara BART station at all costs by setting that station as a clear objective of the envision measure.

First, having BART go to Santa Clara seems completely useless; the route would parallel the existing Caltrain route and would merely connect a Caltrain station with high train frequency (Diridion) to one with very low train frequency (Santa Clara). I can't think of one scenario where a BART commuter connecting to Caltrain would stop at Santa Clara vs. Diridion (unless that commuter wanted to run some errands while waiting up to an hour for his/her Caltrain connection). The Mercury News editorial tries to

make the case that commuter parking is better located in Santa Clara than at Diridion. Again, Caltrain's train schedule -existing and future- seems to show just the opposite to be true.

Second, I (and I'm sure many other North County voters/taxpayers) have had enough of most taxes going to BART. BART is important but we already gave it a lot of taxes and there are many other pressing transportation needs in the County.

So, please do not heed to the Mercury News editorial and do not draw a line in the sand for that (unnecessary) Santa Clara BART station. I'm fine if you can build it within 25% of the tax proceeds, but the true line in the sand for many voters is that it shall not be one penny above.

Sincerely,

Serge Bonte  
Mountain View

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From: Rochelle Younan-Montgomery  
Sent: Thursday, June 02, 2016 9:21 AM  
To: Board.Secretary  
Subject: Highway widening

Hello Board,

My name is Rochelle and I'm with the Alliance for Climate Education.

VTA's highway and expressway spending, as currently proposed, will counteract many of the benefits achieved by the transit and active transportation projects in the measure - something we cannot afford to do as temperatures globally continue to rise. Our recommendations:

- Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs. This report shows why it is critical to boost funding levels for VTA's core bus network in particular.
- Include performance-based language in the funding measure so to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled (VMT). VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy. This should include competitive grants instead of projects that are dictated now, to take advantage of the innovation in the transportation sector.
- Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern as well as those in proximity to schools.

Many thanks,  
Rochelle  
Rochelle Younan-Montgomery  
Associate Program Director  
Alliance for Climate Education

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**From:** Julie Lovins  
**Sent:** Thursday, June 02, 2016 10:41 AM  
**To:** Board.Secretary  
**Subject:** Comments on Agenda Item 7.2, June 2, 2016 Board meeting

Honorable members of the VTA Board of Directors:

The proposal before you is inherently self-contradictory. I hope we can agree that trying to save our air and our climate, along with improving countywide mobility, is a critically important goal. The vast sums proposed to be invested in non-vehicular transportation projects (including BART) will be largely nullified, in relation to the climate-salvation goal, by the highway and expressway proposals as currently envisioned.

Despite all the political capital invested in coming up with these proposals, I see no reason why anyone should object to a major focus on incentives and technology to increase substantially the number of riders-per-car, for example, rather than simply letting the Law of Induced Demand hold sway. Any additional new lanes will fill immediately with additional vehicles, so that congestion remains constant. Clearly any "congestion reduction" project that we know will not reduce congestion should be a non-starter.

The appropriate metric for greenhouse gas reduction, despite the increasing number of electric cars on the road, is probably (low) Vehicle Miles Travelled. All vehicle-oriented projects should be pre-evaluated on, among other things, reduction of VMT that they can produce. In twenty years, a new metric might be needed (I have no idea what), but let's use what makes sense now.

This will reduce funding "needed" for highway and expressway projects. Putting that money into other ways of getting around by making it easier for people not to drive will further reduce this funding "need". That's a wonderful circular situation to be in. I was delighted to see a "Complete Streets" requirement embedded in this measure. That will take us far and relatively cheaply.

Another way to achieve what we all want (better mobility, better air) is to remove funding for the redundant BART extension to Santa Clara. San Jose, yes. Santa Clara, no.

A second major thrust of this proposal should be true mobility for all. The best way to accomplish this is to increase funding greatly for the apparently triple-headed ballot question item "enhanced transit for seniors, students, disabled" that is also then characterized in the actual ballot measure text as "transit operations" and is a mysterious blend of these categories in the measure text and in Appendix D. Clearly \$500M will not go as far as it needs to: please make that \$1B or \$1.5B.

To approach this another way: Because Next Network initiatives that cut "inefficient" bus routes while improving service on "core" routes will probably eliminate many "lifeline" routes, please make sure that the ballot measure text guarantees that a particularly unfortunate "unintended consequence" will never occur. No one should, or needs to, lose his mobility on the way to the laudable goal of increasing overall ridership. We all know that paratransit services associated with these "lifeline" routes will also be curtailed, automatically, as the bus routes are cut, because of Federal guidelines. That's a really bad domino effect.

Before bus lines are cut, funding and operations must be in place for whatever transit services are

needed for seniors, students, people who are disabled, and in general everyone who is transit-dependent anywhere in the county. Please guarantee explicitly: continuation of service, in whatever innovative form is appropriate, at or beyond the current level, and with no reduction of areal coverage. (In fact, the service area currently covered by Outreach should be expanded.)

There will be money do to this. Please reallocate the tax proceeds accordingly, so everyone wins: increase the "operations" allocation to the point where high-ridership routes can be better served and also low-ridership, "lifeline" routes can be reimagined appropriately, and paratransit is continued and even expanded. There are probably also synergies between these low-ridership routes and "last mile" strategies that are needed to increase ridership on major fixed-schedule routes.

Finally, looking at public comments over many months, I have noticed persistent complaints about elimination of day passes, and the added cost of transferring between lines allegedly making it impractical for some people to ride buses at all. Please ask Staff to mount a vigorous advertising campaign, right away, to promote the wonderful virtual daypass function embedded in Clipper cards! Clipper cards are easy to get, and immediately cap charges for all rides on a single day to what a day pass would cost. I don't know why this isn't well-known but obviously it isn't.

Thank you very much for making sure that this all-important initiative gets done right.

Sincerely,

Julie B. Lovins  
Mountain View

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From: Doug Rabert  
Sent: Thursday, June 02, 2016 12:00 PM  
To: Board.Secretary  
Subject: June 2nd Board Meeting - Support for TransForm's recommendations for Transportation Sales Tax Proposal

Dear Members of the Board,  
I am writing with regard to the proposed transportation sales tax that is being considered for the November 2016 ballot.

As a resident of Santa Clara County since 1990, I have observed tremendous growth of the economy as well as a significant increase in the population in this region. Although there have been many benefits from this expansion, it has also been accompanied by a tremendous strain on the transportation infrastructure and resulted in epic traffic congestion.

Transportation is one of the leading contributors of green house gases (GHG) in California and it is critical that we tackle this problem using strategies that maximize the reduction of GHG. TransForm has conducted analyses that show how VTA's highway and expressway spending, as currently proposed, will counteract many of the benefits achieved by the transit and active transportation projects in the

proposed tax measure. The following are TransForm's recommendations with regard to funding as well as the ballot language for the measure:

- Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs.
- Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled (VMT). VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy.
- Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern as well as those in proximity to schools.

I urge the Board to incorporate these recommendations as part of the tax proposal to ensure we have the best plan to address the reduction of GHG emissions and to develop a balanced well-connected transportation system.

Thank you,  
Doug Rabert  
Mountain View, CA

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**From:** Board.Secretary

**Sent:** Wednesday, June 01, 2016 6:42 PM

**To:** VTA Board of Directors

**Subject:** VTA Information: Correspondence pertaining to agenda items on the June 2, 2016, Board of Directors Meeting

**VTA Board of Directors:**

We are forwarding you the following correspondence pertaining to agenda items on the [June 2, 2016, Board of Directors](#) meeting:

<b>From</b>	<b>Agenda Item #</b>	<b>Topic</b>
VTA	4.1 - SVBX Resolution of Necessity	Staff response to Jenny & Jenny, LLP's Letter of Objection (attached within) to the Notice of Intent to Adopt a Resolution of Necessity for Property ID B2016
VTA	6.30 - Rebranding Paratransit Services	Staff response to VTA Committee for Transit Accessibility (CTA) Chairperson Aaron Morrow
Members of the Public	7.2 - Potential ½-cent 30-year Sales Tax Measure	Comments regarding the Potential 2016 Sales Tax Ballot Measure
Member of the Public	7.2 - Potential ½-cent 30-year Sales Tax Measure	Comment regarding the Potential 2016 Sales Tax Ballot Measure
Chris Lepe, TransForm	7.2 - Potential ½-cent 30-year Sales Tax Measure	Comments regarding VTA's Proposed Transportation Sales Tax Measure
San Jose Silicon Valley Chamber of Commerce President & CEO Matt Mahood	7.2 - Potential ½-cent 30-year Sales Tax Measure	Letter of Support
League of Women Voters San Jose/Santa Clara President Cecilie Schulze	7.2 - Potential ½-cent 30-year Sales Tax Measure	Comments regarding VTA's Proposed Transportation Sales Tax Measure
City of San Jose Seniors Citizen Commission Chairman Warren Gannon	7.2 - Potential ½-cent 30-year Sales Tax Measure	Comments regarding the Potential 2016 Sales Tax Ballot Measure
City of Saratoga Mayor E. Manny Cappello	7.2 - Potential ½-cent 30-year Sales Tax Measure	Letter of Support
VTA	7.2 - Potential ½-cent 30-year Sales Tax Measure	Staff response to CTA Chairperson Aaron Morrow

VTA	7.2 - Potential ½-cent 30-year Sales Tax Measure	Envision Silicon Valley – VTA Community Outreach Report
Board of Supervisors President Dave Cortese	7.4 - Measure A Project Funding Recommendation	Measure A Project Funding
Member of the Public	7.6 - Seven-Party Regional Funding Supplement to the 2012 High Speed Rail Early Investment Strategy for the Peninsula Corridor Electrification Project (PCEP)	Comments regarding the PCEP

Thank you.

Office of the Board Secretary  
Santa Clara Valley Transportation Authority  
3331 N. First Street  
San Jose, CA 95134  
408.321.5680  
[board.secretary@vta.org](mailto:board.secretary@vta.org)



Writer's Direct Telephone:  
408/321-7565  
Fax: 408/321-7547

June 1, 2016

**Via Facsimile (925) 228-2841 and mail**

Scott E. Jenny, Esq.  
Jenny & Jenny, LLP  
736 Ferry Street  
Martinez, CA 94533

*Re: Mayfield Homeowners Association  
Property Identification No. B2016  
Notice of Intent to Adopt of a Resolution of Necessity  
Hearing Date: June 2, 2016*

Dear Mr. Jenny:

VTA is in receipt of your letter dated May 27, 2016 in connection with your client's objection to the VTA Board's adoption of a Resolution of Necessity. Per your request, your letter will be made part of the administrative record.

This letter serves as VTA's response to the objections raised in your correspondence.

Mayfield Homeowner's Association ("Mayfield") asserts that the proposed taking fails to meet the conditions necessary for the Board to make the required findings in order to adopt a Resolution of Necessity. The crux of Mayfield's objection is that the language contained in the access easements is too broad because, according to Mayfield, an "unlimited number of government and private entities [will] have the right to use all of [it's] property at any time." Therefore, Mayfield argues, the project is not planned nor located in the manner that will be the most compatible with the greatest public good and the least private injury, and the property is not necessary for the Project.

In balancing the public good and the private injury, it is important to note that the express language of the relevant statute compels the weighing of the public good and the private injury on a global, project-wide basis. Here, the Board may consider all components of the public good of the Project as a whole, including the social, economic, environmental, and aesthetic factors. It would be within the Board's discretion therefore to conclude that VTA's Silicon Valley Berryessa Extension Project as a whole is planned or located in the manner that will be most compatible with the greatest public good and the least private injury, even if there is evidence that some private injury exists.

Despite the foregoing and contrary to Mayfield HOA's assertions, VTA did minimize potential private injury by locating the proposed access easements within an already existing access easement held by the Alameda County Flood Control and Water Conservation District and the City of Fremont. It also located the easement within an existing private street/driveway used by residents and their invitees, which poses the risk of parked cars or other obstructions impeding access in the easement area. The easement language thus enables VTA to bypass these obstructions. Although Mayfield claims that the language gives VTA free reign to "use every square foot of the property at [its] discretion," this is untrue given that VTA is limited to only using existing roads or other practical routes, and only to the extent necessary to reach the easement.

Mayfield also claims that the easement language allows an "unlimited" number of public and private entities to use the easement. This also is inaccurate as the language limits use to VTA, BART, MCI, and Chevron, and their successors and assigns, and only for the purpose of gaining access to the rail corridor where their facilities are located.

Finally, Mayfield claims that the scope of the use was not considered in VTA's offer of just compensation. The subject property was appraised and the appraisal was reviewed by a review appraiser. The record shows that VTA made an offer of compensation that is no less than the appraisal of fair market value of the property. While Mayfield HOA may believe compensation should be higher, compensation disputes is not a proper issue for the Board to consider in determining whether to adopt a Resolution of Necessity.

If VTA's Board adopts the Resolution of Necessity, Mayfield HOA will still have an opportunity to submit its own appraisal to the extent it believes the amount of VTA's offer is insufficient. Please be assured that VTA is committed to continuing the dialogue with you and your client in hopes of reaching an amicable resolution.

Sincerely,



Evelynn Tran  
Assistant General Counsel

JENNY & JENNY, LLP  
Attorneys at Law

Scott E. Jenny, Esq.  
Richard K. Jenny, Esq.

736 Ferry Street  
Martinez, California 94553  
Telephone: (925) 228-1265  
Facsimile: (925) 228-2841  
JennyandJenny.com

Eminent Domain  
Inverse Condemnation  
Real Estate Law

May 27, 2016

Santa Clara Valley Transportation Authority  
Office of the Board of Directors  
3331 North First Street, Building B, First Floor  
San Jose, CA 95134-1906

**Re: Mayfield Homeowners Association  
Property Identification No. B2016  
*Notice of Intent to Adopt of a Resolution of Necessity*  
Hearing Date: June 2, 2016**

Dear Board of Directors:

I represent the Mayfield Homeowners Association. The Santa Clara Valley Transportation Authority seeks to use its power of eminent domain to acquire a portion of the property belonging to my client according to a NOTICE OF INTENT TO ADOPT A RESOLUTION OF NECESSITY dated May 17, 2016. This letter is in response to the hearing scheduled for June 2, 2016. The following are our objections to the adoption of this Resolution of Necessity being considered at the upcoming hearing.

The proposed taking fails to satisfy the statutory requirement of providing for the greatest public good with the least private injury. California Code of Civil Procedure section 1240.030 states that the power of eminent domain may only be used if the following conditions are satisfied:

1. The public interest and necessity require the project;
2. The project is planned or located in the manner that will be the most compatible with the greatest public good and the least private injury; and
3. The property sought to be acquired is necessary for the project.

The proposed taking fails all three prongs because of the over-broad nature of the rights being taken. Exhibit A to the Notice sets forth the property rights being taken. These include two descriptions that we object to.

The first is the sentence that states: "This easement shall carry with it the right to use existing roads or other practical route(s) to reach the Easement to carry out the rights granted hereunder, including the rights for the grantee to construct and maintain a drivable surface for the access way." This language places a blanket access and use easement over the entire property owned by my clients. The VTA would be able to use every square foot of the property if it chose to do so. This scope of use was not considered in the offer of just compensation, is not planned or located in the manner that will be the most compatible with the greatest public good and the least private injury, and is not necessary for the project. We object to this language and request that it be removed before a resolution is adopted.

The second sentence that we object to states: "Grantee shall have the right to assign the rights under this Access Easement to the Bay Area Rapid Transit District, MCI Communication Services, Inc., and/or Chevron U.S.A. Inc., a Pennsylvania Corporation, and their affiliates, successors, and assigns for the purposes designated herein." This language allows an unlimited number of government and private entities the right to use all of my client's property at any time. Each of the named entities are able to assign their rights to other entities, who would then have the right to use the property. When read with the first sentence objected to, this easement provides an unlimited number of public and private entities the right to use every square foot of the property at their discretion. The entities listed (and their assignees etc.) must use their own powers of eminent domain to acquire their own rights to use the property, or negotiate such rights privately. This scope of use was not considered in the offer of just compensation, is not planned or located in the manner that will be the most compatible with the greatest public good and the least private injury, and is not necessary for the project. We object to this language and request that it be removed before a resolution is adopted.

For the foregoing reasons, my client objects to the VTA adopting this Resolution of Necessity, and requests that the VTA remove the two sentences above if it intends to proceed with the proposed Project and eminent domain case. Please make this letter a part of the administrative record. Thank you.

Sincerely,



Scott E. Jenny

cc: Client

1 **PROOF OF SERVICE – C.C.P. 1013a, 2015.5**

2 I declare:

3 I am employed in the City of Martinez, Contra Costa County, State of California. I am  
4 over the age of 18 years and not a party to the within action. My business address is 736 Ferry  
5 Street, Martinez, California 94553.

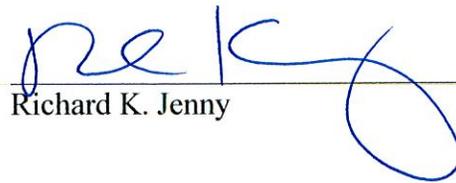
6 On May 27, 2016 I served the foregoing document described as: **LETTER OF MAY 27,**  
7 **2016 TO SCTVA BOARD OF DIRECTORS** on all interested parties in this action by placing  
8 a true copy thereof in a sealed envelope addressed as follows:

9 Santa Clara Valley Transportation Authority  
10 3331 North First Street, Building B, First Floor  
11 San Jose, CA 95134-1906  
12 Email: board.secretary@vta.org

13 X (BY MAIL) I am readily familiar with the practice of this firm for the collection  
14 and processing of correspondence for mailing with the United States Postal  
15 Service and such envelope was placed for collection and mailing on the above  
16 date according to the ordinary practice of Jenny & Jenny.

17 X (BY ELECTRONIC MAIL) I had such document delivered via email as to the  
18 addressee above.

19 I declare under penalty of perjury under the laws of the State of California that the  
20 foregoing is true and correct, and that this declaration was executed on May 27, 2016 at  
21 Martinez, California.

22   
23 Richard K. Jenny

**Staff response to VTA Committee for Transit Accessibility (CTA) Chairperson Aaron Morrow**

**From:** Board.Secretary  
**Sent:** Wednesday, June 01, 2016 4:23 PM  
**To:** 'morrowa  
**Cc:** Board.Secretary  
**Subject:** FW: Transit Planning and OPS Committee Item 12 comments  
**Importance:** High

CTA Chairperson Morrow:

Thank you for your inquiry about rebranding VTA's Paratransit Program. The Committee for Transit Accessibility (CTA) was given a presentation on this item April 13, 2016. This rebranding is to strengthen VTA's commitment to the paratransit services that it is ultimately our responsibility. VTA has not clearly established its own brand and identity since the passing of Americans with Disability Act (ADA) in the early 1990s.

The item you reference is an information item only. The intent of sharing this information item is to mitigate any possible concerns the committee may have and to share the upcoming change with the public. This item was presented to CTA to hear comments. CTA provided four comments and questions on the information item, which staff promptly responded to via an email memorandum on April 28, 2016.

The memorandum responded to the following Committee comments.

*Paratransit is very important and cannot get around without it, please do not change it.*

Actual paratransit services will not be interrupted or affected by VTA Access Paratransit branding.

*People will not know what VTA Access is when they call for a ride.*

Outreach employees will answer the phone by saying, "Outreach/VTA Access" to eliminate any confusion.

*What benefits are there by changing the name to VTA Access Paratransit?*

The new name speaks to the importance we place on helping our riders access the resources they need through safe and reliable transportation. You may have noticed that VTA as a whole has launched a number of communications and branding efforts to improve its engagement with customers. (Such as VTA Flex, VTA Express, Community Bus, etc.).

As any organization evolves to keep up with the needs of its community, change is an important and necessary part of that process. For the last two years, under new leadership, VTA has been working hard to be the best organization that it can be - implementing new practices, strengthening operations, and most importantly working diligently to enhance customer experience.

The company Outreach and Escort, Inc. is VTA's contractor for transportation services. "OUTREACH" has been the identifying name utilized for the Paratransit services here in Santa Clara County for many years. The name has served us well but failed to identify that the service is provided by VTA and is one of many transportation options provided by VTA.

Over the years, the county has experienced a growth in population at an accelerated rate. As this growth continues, now is the time or opportunity for the Authority to re-introduce itself to the community by rebranding our vehicles to say "VTA ACCESS." This identifier is clear, concise and is easily understood as many agencies across the United States utilize ACCESS to identify their Paratransit services.

- Strong organizations have a clear, consistent, easy identifiable brand. VTA as a whole is working on creating that strong brand with all of its customers.
- It is important that paratransit customers build a direct relationship with VTA, as VTA is ultimately responsible for funding and delivering paratransit services. Through this direct connection, VTA will continue to ensure ongoing customer feedback and engagement.
- VTA ACCESS marks the beginning of a new chapter with the paratransit program. VTA ACCESS as a brand represents a set of commitments that VTA is making to its customers.

*I am used to seeing Outreach on the side of the cars. I will not know when my vehicle arrives without it.*

The VTA logo and the words "Paratransit" on the side doors will remain in the exact same place. In addition to mitigate any confusion, VTA will still have the word Outreach on the vehicle in red.

VTA will be taking additional steps for communicating this name change:

- News release on VTA website
- Mail out information to eligible passengers
- Mail out information to Top 50 rider destinations
- Updating Rider Guides and Paratransit Literature

Thank you for your continued commitment to the community.

If you have any questions, please reply to this e-mail.

Office of the Board Secretary  
Santa Clara Valley Transportation Authority  
3331 N. First Street  
San Jose, CA 95134  
408.321.5680  
[board.secretary@vta.org](mailto:board.secretary@vta.org)

**From:** Aaron Morrow  
**Sent:** Sunday, May 29, 2016 7:01 PM  
**To:** Board.Secretary  
**Cc:** Cindy.Chavez; [mayoremail@sanjoseca.gov](mailto:mayoremail@sanjoseca.gov); [District10@sanjoseca.gov](mailto:District10@sanjoseca.gov); supervisor.yeager; jbruins  
**Subject:** Transit Planning and OPS Committee Item 12 comments  
**Importance:** High

Hello All

As Chairperson of the Committee for Transit Accessibility I would like to moment and inform you about item 12 Rebranding of VTA Paratransit Program. The Committee for Transit Accessibility was given a presentation on April 13. 2016. The current option you are deciding to send to the VTA Board of Directors was not supported by Committee Members. I feel this item was done in isolation with lack of any other option for the committee to consider.

Thank you

Aaron Morrow

CTA Chairperson

Board Sec. Please Pass this along

CC: VTA Board of Directors

CTA Members

**COMMENTS FROM MEMBERS OF THE PUBLIC  
REGARDING THE POTENTIAL 2016 SALES TAX BALLOT MEASURE**

**From:** Sanjay Shah  
**Sent:** Saturday, May 28, 2016 4:30 PM  
**To:** Board.Secretary  
**Subject:** 2016 Sales Tax Ballot Measure - HWY 85 Sound Mitigation

Hello VTA Board members,

I am a resident of Saratoga and I am in support of the 2016 Sales Tax Ballot Measure as long as there is definitive wording for Highway 85 Sound Mitigation / Noise Abatement from Highway 87 to 237! We deal with noise pollution from highway 85 on a daily basis and it is about time that this funding source addresses that. Please make it explicit in your wording and ensure that funds are available from this Ballot Measure to alleviate the noise impacts of highway 85 across all the cities.

I thank you for your consideration

Sanjay Shah  
Saratoga, CA 95070

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**From:** Shannon Rose McEntee  
**Sent:** Saturday, May 28, 2016 6:39 PM  
**To:** Board.Secretary  
**Subject:** Bicycle Improvements

Dear VTA Board,

I write to urge you to support a transportation measure that dedicates \$250 million to stand-alone bike and pedestrian projects. The real benefit to bicyclists (and would-be bicyclists) in this measure comes from the proposed Complete Streets requirements tied to the Local Roads, Expressways, and Highway Interchange categories. Those requirements will help expand the on-road bike and ped network across the county over the next 30 years. Without such requirements, the proposed tax is far less effective in promoting active transportation. No more business as usual -- let's be visionary and transform the possibilities for safe bicycling to work, grocery shopping, visiting friends, going to the library and all the activities that enrich our lives in Silicon Valley. We need safe and direct routes to link our cities together.

Sincerely,

Shannon Rose McEntee  
Palo Alto, CA 94306

---

**From:** John Cordes  
**Sent:** Tuesday, May 31, 2016 10:09 AM  
**To:** Board.Secretary  
**Subject:** Please support cycling and walking in the Nov Ballot sales tax measure

Dear Santa Clara County Supervisors,

In the proposed Ballot measure for the sales tax, I strongly support the staff recommendations, particularly

1. Complete Streets requirements be included for all projects funded or partially funded by the measure.
2. Dedicate \$250 million to stand-alone bike and pedestrian projects.

Having Complete Streets requirements will help build a world-class bicycle and pedestrian network onto our existing roadways. Complete streets will make it safer and easier to travel by bike or foot, contributing significantly to traffic reduction and progress toward our state, regional, and local environmental goals. Without Complete Streets requirements, this measure will only be able to fund scattered bike and ped improvements, rather than a network connecting neighborhoods to jobs, schools, and retail centers. Complete Streets requirements will not mandate a bike lane on every street, but they will provide a significant incentive to cities and the county to integrate active transportation into most roadway projects.

Having a dedicated funding source for stand-alone bike and pedestrian projects will greatly enhance the active transportation network in our county which will increase all the associated health benefit, quality of life benefits, and reduce traffic congestion.

Sincerely yours,

John Cordes  
Sunnyvale Ca 94085

---

**From:** Debbie Mytels  
**Sent:** Wednesday, June 01, 2016 10:50 AM  
**To:** Board.Secretary  
**Cc:** Chris Lepe  
**Subject:** Put new tax funds into transit, not roads

Dear VTA Board members,

When voting on Thursday to decide how much of the funds from the proposed November ballot measure should go to which expense categories, please put more of the tax money into buses and other public transportation, and less into road building. Studies show that increasing miles of pavement only leads quickly to more congestion; transit, on the other hand, takes cars off the road.

Thank you!

Debbie Mytels  
Palo Alto, CA 94303

**From:** carole/steve eittreim  
**Sent:** Wednesday, June 01, 2016 11:05 AM  
**To:** Board.Secretary  
**Subject:** transit tax money

I would like to appeal to you to promote the use of the transit tax money for transit-for-the future, meaning mass transit. Buses and trains. We desperately need good alternatives to the automobile. Climate solutions cry out for it. Justice for people who prefer not, or cannot drive cars. People who are older, people who are poorer, or just people who would prefer to walk. Those people need the support of buses or trains to carry on their lives without the domination of the automobile.

We just returned from a month in England where we had a delightful time touring many parts of the nation, urban and rural, with never a need for a car or taxi. We as a nation need to get into the 21st century. That's a century turning away from fossil fuels and the automobile, especially those with internal combustion engines, and especially those containing only one person.

Thanks for listening.

Steve Eittreim  
Palo Alto

---

**From:** Jeralyn Moran  
**Sent:** Wednesday, June 01, 2016 11:10 AM  
**To:** Board.Secretary  
**Subject:** Stronger Transit needed, NOT more roads!

Dear Board,

I strongly urge you to push your forward thinking, and prioritize a truly comprehensive public transit system as the focus in the November Transit Tax Initiative to be on the November ballot. MORE of the transit tax money into buses and other public transportation, LESS into road building. Studies show that increasing miles of pavement only leads quickly to more congestion; transit on the other hand takes cars off the road - Climate Change is upon us, we owe this to our children and the future.

Thanks for your consideration,

Jeralyn Moran  
Palo Alto

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**From:** JEBEDDY  
**Sent:** Wednesday, June 01, 2016 11:14 AM  
**To:** Board.Secretary  
**Subject:** PLEASE: LESS MONEY FOR NEW ROADS

You know well that more roads mean MORE TRAFFIC.  
Please invest in better TRANSIT SYSTEMS.

Sincerely,

Jeb Eddy  
Palo Alto

---

**From:** Pat Kinney  
**Sent:** Wednesday, June 01, 2016 11:18 AM  
**To:** Board.Secretary  
**Subject:** VTA Ballot Initiative

Please put more of the transit tax money into buses and other public transportation, less into road building. Studies show that increasing miles of pavement only leads quickly to more congestion; transit on the other hand takes cars off the road.

Thank you,

Patricia Kinney  
Palo Alto, CA

---

**From:** Gladwyn D'Souza  
**Sent:** Wednesday, June 01, 2016 2:45 PM  
**To:** Board.Secretary  
**Subject:** Sierra Club is opposed to VTA's transportation tax measure that would increase fossil fuel use

Dear VTA Board,

The Loma Prieta Chapter of the Sierra Club is opposed to VTA's transportation tax measure which you will be hearing as item 7 on your 6/2/2016 agenda . We oppose expansion of the use of fossil fuels and Vehicle Miles Travelled. Please work harder on the requirements of SB 375 and SB 350. As presently conceived the measure before the board would increase greenhouse gases, PM 10, PM 2.5, NO2, and O3; for all of which the region is currently out of compliance. An EIR would analyze all these impacts and inform the public of the threat to public health- however as stated in correspondence between VTA and our chapter, you appear to be proceeding without one. In the last thirty years VTA has build three new freeways (237, 87, and 85) to significantly increase congestion. At a minimum please deliver predictability- any transport option should be time competitive with automobiles. No one will make a trip that would be two or three time faster than the comfort of their automobile. Solutions should be fast, frugal, and fair- funding that may materialize ten to fifty years from now to complete critical

networks is not feasible, given the untenable situation that the public faces with congestion and fossil fuel usage.

Regards,

Gladwyn d'Souza  
Loma Prieta Sierra Club Transportation Chair  
Palo Alto, CA 94303

---

**From:** Sheri Burns  
**Sent:** Wednesday, June 01, 2016 2:59 PM  
**To:** Board.Secretary  
**Subject:** SVILC supports the 1/2 cent 30-year sales tax measure and funding framework

June 1, 2016

Dear VTA Board of Directors:

Silicon Valley Independent Living Center (SVILC) is in support of the proposed framework and funding amounts for the ½ cent 30-year sales tax measure on the Santa Clara County November 8, 2016 ballot authorizing the VTA to enact such funding for transportation purposes (June 2, 2016 VTA Board Meeting, Action Item 7.2)

Moreover, SVILC supports the funding framework to include a designated \$500M in Transit Operations to be used for bus operations to serve vulnerable, undeserved, and transit dependent populations throughout the county. As stated in the plan, the goals of this program category are to increase ridership, improve efficiency, enhance mobility services for seniors and disabled, and improve affordability for the underserved and vulnerable constituencies in the county.

As a disability justice and service organization serving seniors and people with disabilities of all ages in Santa Clara County, SVILC strongly believes that we need to invest in a combination of roadway improvements, traffic congestion mitigation, transportation service improvements and a BART extension. We also need to support our rapidly growing aging population and significant percentage of lower income residents with disabilities, who rely exclusively on mass transportation and/or para transit services for community access needs, to experience a safe, low cost, accessible, reliable and integrated transportation system in Santa Clara County.

Regards,

~Sheri

Sheri Burns, OTR  
Executive Director  
Silicon Valley Independent Living Center (SVILC)  
San Jose, CA 95131

---

**From:** Katherine Forrest  
**Sent:** Wednesday, June 01, 2016 4:55 PM  
**To:** Board.Secretary  
**Subject:** Transit tax

In November, if there is a measure on the ballot for a half-cent sales tax increase for transportation, I will vote for it. However, I think the VTA should modify the measure so that a greater proportion of the funds will go into buses and other mass transit, not into roads. We need to take cars off the road, not encourage more people to drive. Because it causes less air pollution, mass transit is better for people's health and better for the world's climate.

Katherine Forrest, MD  
Mountain View

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**COMMENT FROM MEMBER OF THE PUBLIC  
REGARDING THE POTENTIAL 2016 SALES TAX BALLOT MEASURE**

**From:** David Coale  
**Sent:** Wednesday, June 01, 2016 2:33 PM  
**To:** Board.Secretary  
**Cc:** city.council@cityofpaloalto.org; Gil Friend  
**Subject:** Sales tax measure must address climate change and reduce VMT - we can do it!  
**Importance:** High

Dear VTA Board of Directors,

I am writing you to bring to your attention, after reviewing the sales tax measure, concerns I have about the criteria used for project selection. Having been to several meetings on the measure, the accounting for Greenhouse Gas (GHG) emissions and VMT is woefully under-represented to the detriment of the county, the region and future generations.

With all the cities in the county developing their perspective Climate Action Plans to reduce GHG emissions to hopefully avoid the worst effects of climate change, we can hardly afford to have a 30 year tax plan that does not have GHG reductions as front and center.

Transportation in this region can account for more than 60% of the GHG emissions in our cities. The current plan calls for ¼ of the tax measure, or \$1.5 billion to be spent on highway and expressway expansions, projects that will increase GHG and VMT. It has been shown over and over again that increasing the number of lanes induces more cars and more congestion with ever increasing GHG emissions. Even the County Roads and Airport report admits this to be true, and that at best we will only see a temporary decrease in congestion while VMT and GHG increase.

Without the reduction of GHG and VMT as the main criteria for the expenditure of funds, VTA and this tax measure are out of step with the cities, county, state goals and the consensus of 195 countries that were at the COP-21 climate talks in Paris. Palo Alto's Sustainability and Climate Action Plan set the goal of 80% GHG reductions below 1990 levels by 2030:

<http://www.paloaltoonline.com/news/2016/04/20/palo-alto-adopts-new-carbon-cutting-target> To paraphrase the Mayor of Palo Alto: "It may seem like we are adopting ambitious goals... it's what all other cities and nations must do if we're going to cap global temperature rise at 1.5 to 2 degrees Celsius. It's only doing our fair share."

Transform has done some excellent analysis showing the detrimental impacts of highway and expressway projects on VMT and GHG per dollar spent. This also highlights the positive affects of CalTrain and bike/ped projects and would be a great starting point to addressing the greatest contributor of GHG in our region, which is transportation; see attached report.

Please reduce the highway and expressway expenditures in this tax measure and increase the spending on cost effective transit and bike/ped projects so that this region can do its part to address climate change.

Sincerely,

David Coale  
 Carbon Free Palo Alto

# Cutting Carbon as well as Commutes

## *How VTA Can Maximize the Benefits of Santa Clara County's 2016 Transportation Funding Measure*

### Executive Summary

Transportation has risen to the top of the policy agenda in Santa Clara County, as traffic congestion grows and people don't have adequate alternatives to driving. The Santa Clara Valley Transportation Authority (VTA) is hoping to infuse the transportation system with funding to overcome existing problems and prepare for a growing population.

On June 2<sup>nd</sup>, the VTA Board of Directors will vote on a spending plan for a transportation funding measure for Santa Clara County. If approved, the half-cent sales tax measure will be on the November 2016 ballot and will need a  $\frac{2}{3}$  supermajority of voters to pass. The measure would generate approximately \$6.3 billion over 30 years.

VTA staff has done considerable work in preparing for this measure, including developing an evaluation of projects on key measures of mobility, environmental impact, health and safety. Based in part on this evaluation, as well as a healthy dose of polls and politics, the VTA Board agreed to an initial draft spending plan on April 22, 2016 (see Table 1), which allocates:

- Over half of the tax revenue for local streets, highway, and expressway projects
- 30-40% for regional rail (depending on whether one considers grade separations a rail project)
- 8% for local transit operations and transit services for transit-dependent people
- 4% for active transportation projects that make it easier and safer for people to walk and bike (VTA's current proposal also includes a complete streets requirement for roadway spending)

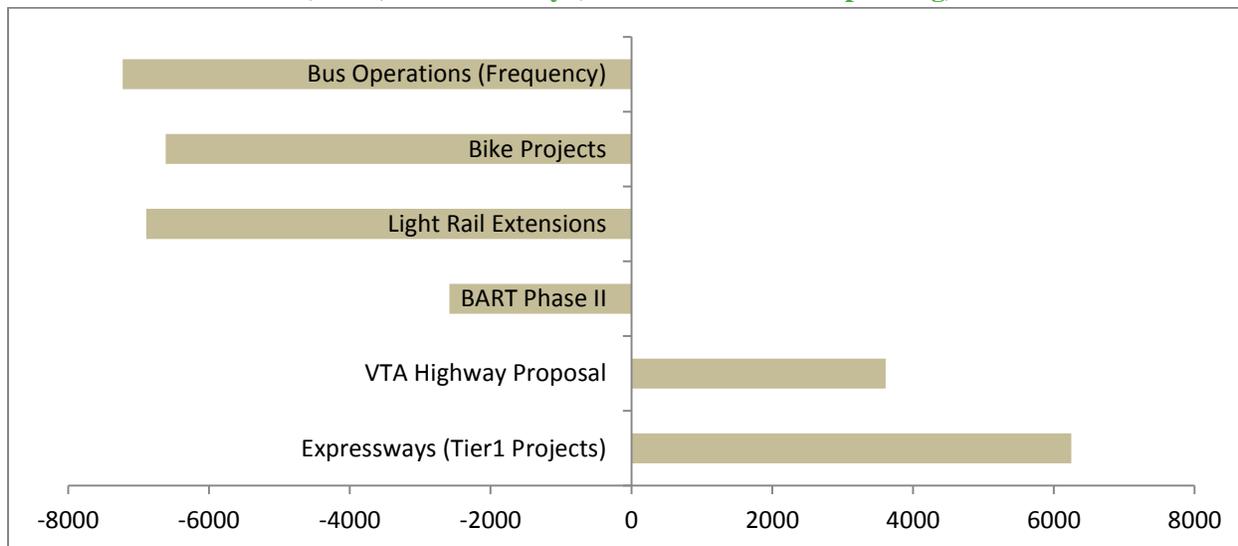
Given that this will be the fourth sales tax for transportation in Santa Clara County (the other three are already in place), it is quite possible that this will be the single largest new transportation funding source that the County will see for a generation. With such limited funding we need to understand how the current proposal can maximize benefits. Since VTA's evaluation only looked at absolute impact and did not consider the cost of the projects, TransForm requested and obtained data from VTA to conduct our own analysis on a per-dollar basis.

TransForm found that spending on transit and active transportation improvements perform well on all of the metrics analyzed, while the expressway and highway projects proposed by VTA will significantly increase vehicle miles traveled (VMT), carbon pollution (CO<sub>2</sub>), and local air pollution (PM 2.5). In fact, the expressway and highway spending will negate much of the VMT and pollution reduction benefits that we gain from the BART and bicycle project spending in the measure.

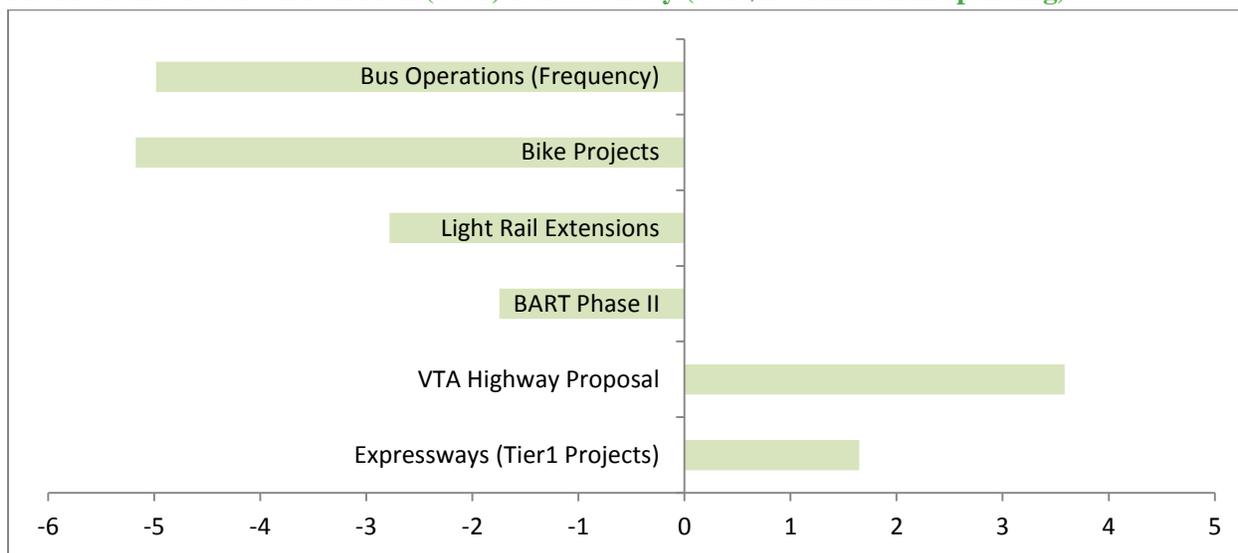
### Benefits/Impacts of Envision SV Projects Per \$100 Hundred Million in Spending

Metric	Expressways (Tier1 Projects)	VTA Highway Proposal	BART Phase II	Light Rail Extensions	Bike Projects	Bus Operations (Frequency)
VMT Per Weekday	6249	3610	-2584	-6892	-6616	-7224
VHT Per Weekday	-498	-146	-150	-516	-513	-676
Metric Tons CO <sub>2</sub> per Weekday	2	4	-2	-3	-5	-5
Metric Tons of PM 2.5 (/1,000) Per Weekday	1	20	-9	-13	-15	-32

### Vehicle Miles Traveled (VMT) Per Weekday (Per \$100 Million in Spending)



### Metric Tons of Carbon Pollution (CO2) Per Weekday (Per \$100 Million in Spending)



An alternative funding scenario developed by TransForm, with more funding for local transit and active transportation projects, performed far better than VTA’s draft funding proposal, including over 90 times the VMT reduction benefits and four times the CO2 reduction benefits.

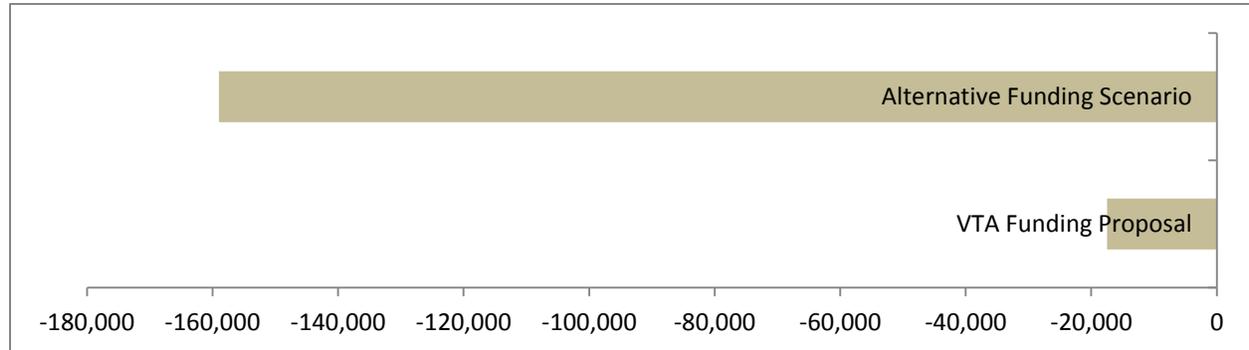
### VTA and Alternative Project Allocations

Project	VTA Staff Proposal (In \$ millions)	Alternative Funding Scenario (In \$ millions)
VTA bus operations and services for transit-dependent	500	1,000
VTA transit capital (LRT)		500
BART	1,500	1,250
Highway/expressway capital	1,500	400
Bike/ped improvements (Active transportation)	250	600
Total	3,750	3,750

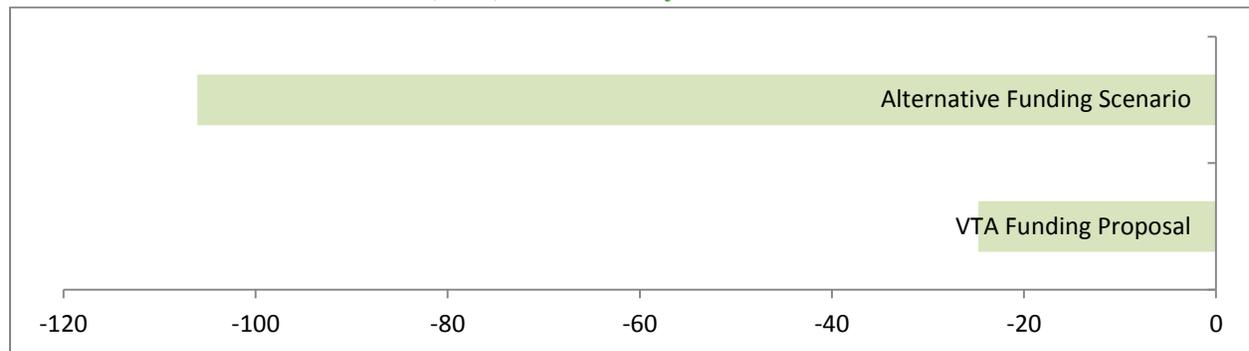
## Results of VTA and Alternative Project Allocations

Metric	VTA Funding Proposal	Alternative Funding Scenario
Vehicle Miles Traveled (VMT) Per Weekday	-17,471	-158,979
Vehicle Hours of Travel (VHT) Per Weekday	-11,751	-15,587
Carbon Pollution (CO2) Per Weekday	-25	-106
Particulate Pollution (PM2.5/1,000) Per Weekday	-177	-552

### Vehicle Miles Traveled (VMT) Per Weekday



### Metric Tons of Carbon Pollution (CO2) Per Weekday



It's not too late to craft a measure that is a win not just for mobility, but also for climate, health, equity, and the economy. **To craft a measure that will achieve a better return on our investment, we recommend that VTA:**

- Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs. This report shows why it is critical to boost funding levels for VTA's core bus network in particular.
- Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled (VMT). VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy. This should include competitive grants instead of projects that are dictated now, to take advantage of the innovation in the transportation sector.
- Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern as well as those in proximity to schools.<sup>1</sup>

<sup>1</sup> The Metropolitan Transportation Commission (MTC) defines Communities of Concern as communities in the Bay Area that face particular transportation challenges, either because of affordability, disability, or because of age-related mobility limitations.

June 1, 2016

Honorable Members of the VTA Board of Directors  
3331 North First Street  
San Jose, CA 95134-1927  
Sent Via Email  
RE: Comments on Proposed VTA Transportation Sales Tax Measure

Dear Chairperson Chavez, Honorable Members of the VTA Board of Directors, and General Manager Fernandez:

TransForm promotes walkable communities with excellent transportation choices to connect people of all incomes to opportunity, keep California affordable and help solve our climate crisis.

Transportation has risen to the top of the policy agenda in Santa Clara County, as traffic congestion grows and people don't have adequate alternatives to driving. We applaud the Santa Clara Valley Transportation Authority (VTA) for crafting a plan to infuse the transportation system with funding to overcome existing problems and prepare for a growing population.

TransForm has been engaged in the public process to develop VTA's sales tax funding measure for nearly two years, proposing a variety of solutions that we feel can help us achieve the mobility, health, equity, and climate goals established by the VTA Board of Directors. Substantial progress has been made to this period, most notably, increasing funding for local transit operations and bus stop improvements; however, there are still areas of improvement, as described below.

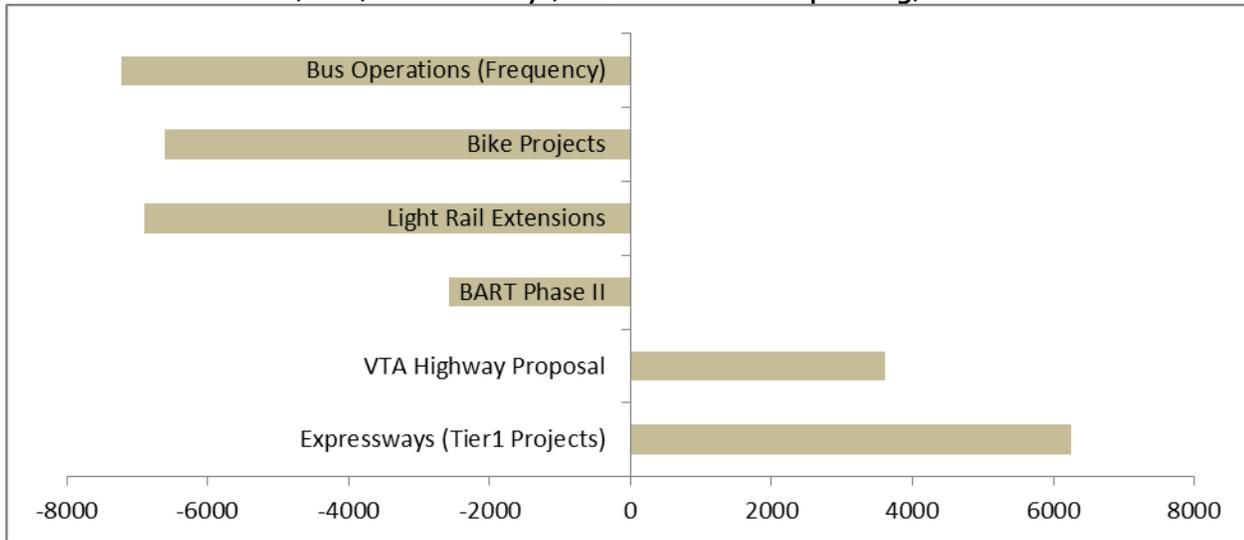
VTA staff has done considerable work in preparing for this measure, including developing an evaluation of projects on key measures of mobility, environmental impact, health and safety. Unfortunately, VTA's project evaluation only looked at absolute impact and did not consider the cost of the projects, and staff did not disclose the results for each of the criteria adopted by the VTA Board to decision makers and the public, choosing instead to lump them together into larger goals.

As a result, TransForm requested and obtained data from VTA to conduct our own analysis on a per-dollar basis, focused on key Board-adopted metrics of interest from a mobility, climate, and health perspective. We submitted an initial analysis and recommendations at the last VTA Board Workshop on April 22<sup>nd</sup>, refined our analysis and recommendations, and as promised, produced a report titled *Cutting Carbon as well as Commutes* (please see the attached report).

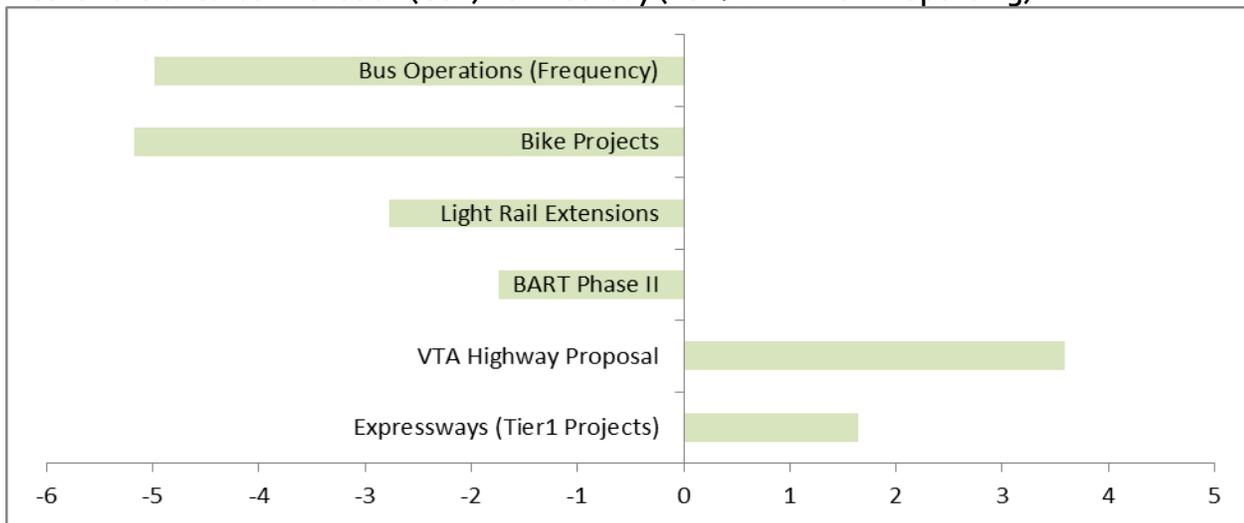
TransForm's project analysis found that spending on transit and active transportation improvements perform well on all of the metrics analyzed, while the expressway and highway projects proposed by VTA will significantly increase vehicle miles traveled (VMT), carbon pollution (CO<sub>2</sub>), and local air pollution (PM 2.5). In fact, the expressway and highway spending will negate much of the VMT and pollution reduction benefits that we gain from the BART Phase II and bicycle project spending in the measure.

**MAIN OFFICE: 436 14TH STREET, SUITE 600, OAKLAND, CA 94612 | T: 510.740.3150 |**  
**SACRAMENTO: 717 K STREET, SUITE 300, SACRAMENTO, CA 95814 | T: 916.706.2035 |**  
**SILICON VALLEY: 48 SOUTH 7TH STREET, SUITE 203, SAN JOSE, CA 95112 | T: 408.406.8074 |**

### Vehicle Miles Traveled (VMT) Per Weekday (Per \$100 Million in Spending)



### Metric Tons of Carbon Pollution (CO<sub>2</sub>) Per Weekday (Per \$100 Million in Spending)



There is still time to take in new information and improve VTA's current funding proposal. We believe there is some key language that can be added to the measure so that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled (VMT). VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy. We also feel it is critical to give priority in the bicycle and pedestrian funding for projects focused in areas with high numbers of collisions and in Communities of Concern.<sup>1</sup>

Please do look over more of the report, and feel free to contact me at [clepe@transformca.org](mailto:clepe@transformca.org) or 408-406-8074.

<sup>1</sup> The Metropolitan Transportation Commission (MTC) defines Communities of Concern as communities in the Bay Area that face particular transportation challenges, either because of affordability, disability, or because of age-related mobility limitations.

Sincerely,

A handwritten signature in black ink that reads "Christopher Lepe". The signature is written in a cursive style with a large, prominent initial "C".

Chris Lepe  
Senior Community Planner  
TransForm  
48 S. 7<sup>th</sup> St, Suite 203  
San Jose, CA 95112



## Cutting Carbon as well as Commutes

*How VTA Can Maximize the Benefits of Santa Clara County's 2016 Transportation Funding Measure*



*photo by: Michael Halberstadt*

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photo by: Michael Halberstadt

## Overview

Transportation has risen to the top of the policy agenda in Santa Clara County, as traffic congestion grows and people don't have adequate alternatives to driving. The Santa Clara Valley Transportation Authority (VTA) is hoping to infuse the transportation system with funding to overcome existing problems and prepare for a growing population.

On June 2<sup>nd</sup>, the VTA Board of Directors will vote on a spending plan for a transportation funding measure for Santa Clara County. If approved by the Board, the half-cent sales tax measure will be on the November 2016 ballot and will need a  $\frac{2}{3}$  supermajority of voters to pass. The measure would generate approximately \$6.3 billion over 30 years; however, based on analysis of data from VTA, TransForm finds that the measure could do a better job at improving mobility, while tackling the climate crisis and improving air quality.

VTA staff has done considerable work in preparing for this measure, including developing an evaluation of projects on key measures of mobility, environmental impact, health and safety. Based in part on this evaluation, as well as a healthy dose of polls and politics, the VTA Board agreed to an initial draft spending plan on April 22, 2016 (see Table 3).

Given that this will be the fourth sales tax for transportation in Santa Clara County (the other three are already in place), it is quite possible that this will be the single largest new transportation funding source that the County will see for a generation. With such limited funding we need to understand how the current proposal can maximize benefits and help meet key local, regional, and state goals. Since VTA's evaluation only looked at absolute impact, and did not consider the cost of the projects, it was impossible to gauge their "bang for the buck".

TransForm requested and obtained data from VTA to conduct our own analysis in order to identify the most effective way to spend sales tax funds on a per-dollar basis. As can be seen in this report, we found VTA can improve their spending plan, but they need to make some changes.

Specifically, the expressway and highway projects proposed by VTA will significantly increase vehicle miles traveled (VMT), carbon emissions (CO<sub>2</sub>), and local air pollution (PM 2.5). In fact, the expressway and highway spending will negate much of the VMT and pollution reduction benefits that we gain from the BART extension and bicycle project spending in the measure.

### **To craft a measure that will achieve a better return on our investment, we recommend that VTA:**

- Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs. This report shows why it is critical to boost funding levels for VTA's core bus network in particular.
- Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled (VMT). VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy. This should include competitive grants instead of projects that are dictated now, to take advantage of the innovation in the transportation sector.
- Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern as well as those in proximity to schools.<sup>1</sup>

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<sup>1</sup> The Metropolitan Transportation Commission (MTC) defines Communities of Concern as communities in the Bay Area that face particular transportation challenges, either because of affordability, disability, or because of age-related mobility limitations.

## Why We Must Focus on Performance

Over the next 15 years, Santa Clara County will grow by over 240,000 people to 2.1 million people.<sup>2</sup> If all of these additional residents get around using single occupancy vehicles (SOV), their travel will have deeply negative impacts on traffic congestion, quality of life, the economy, and the environment. VTA should be planning on ways to move existing and future populations as efficiently as possible by providing vastly improved options for walking, biking, public transportation, and carpool/ridesharing.

Reducing vehicle miles traveled (VMT) and increasing the proportion of people taking transit and non-motorized forms of transportation is a strategy being pursued in a host of state and regional plans as a means to address not just mobility but also public health and the climate crisis. Table 1 shows how regional and state agencies are focusing their planning.

**Table 1: Adopted State and Regional Policies**

Policy	Per-capita VMT reduction	Transit Use	Bicycle Use
California Transportation Plan 2040	17%	Double	Double
Caltrans Strategic Management Plan 2020	15%	Double	Triple
Plan Bay Area 2040	15%	Double	Double

Local governments too are working to shift towards greater sustainability. The City of San Jose’s General Plan, in place since 2011, set clear goals and ambitious targets for a more balanced transportation system. The General Plan states that the City shall “complete and maintain a multimodal transportation system that gives priority to the mobility needs of bicyclists, pedestrians, and public transit users”.<sup>3</sup>

**Table 2: City of San Jose General Plan Commute Mode Split Targets for 2040**

Mode	2008	2040 Goal
Drive alone	78%	No more than 40%
Carpool	9%	At least 10%
Transit	4%	At least 20%
Bicycle	1%	At least 15%
Walk	2%	At least 15%

Earlier this year, the City of Palo Alto adopted a goal of 80% greenhouse gas (GHG) reductions below 1990 levels by 2030, with better public transportation options being a key strategy towards attaining that reduction.<sup>4</sup>

While some of these goals are driven by the urgency of reducing climate emissions, there is growing evidence we also need to shift away from catering to solo driving for the sake of reducing traffic on our roads. In particular, a growing body of research indicates that road widening and other roadway capacity increases are not effective strategies for reducing congestion. According to a recent publication by the UC Davis Institute for Transportation Studies,

<sup>2</sup>[http://www.dot.ca.gov/hq/tpp/offices/eab/socio\\_economic\\_files/2012/Santa\\_Clara.pdf](http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic_files/2012/Santa_Clara.pdf)

<sup>3</sup><https://www.sanjoseca.gov/DocumentCenter/Home/View/474>

<sup>4</sup><http://www.paloaltoonline.com/news/2016/04/20/palo-alto-adopts-new-carbon-cutting-target>

Increased roadway capacity induces additional VMT in the short-run and even more VMT in the long-run. Increased capacity can lead to increased VMT in the short-run in several ways: if people shift from other modes to driving, if drivers make longer trips (by choosing longer routes and/or more distant destinations), or if drivers make more frequent trips. Longer-term effects may also occur if households and businesses move to more distant locations or if development patterns become more dispersed in response to the capacity increase. One study concludes that the full impact of capacity expansion on VMT materializes within five years and another concludes that the full effect takes as long as 10 years.<sup>5</sup>

Clearly we must think strategically about how we invest in our transportation system. Therefore it's absolutely essential that we evaluate Santa Clara County's next transportation funding measure by forward-thinking performance standards.

## VTA's Proposed Spending Plan

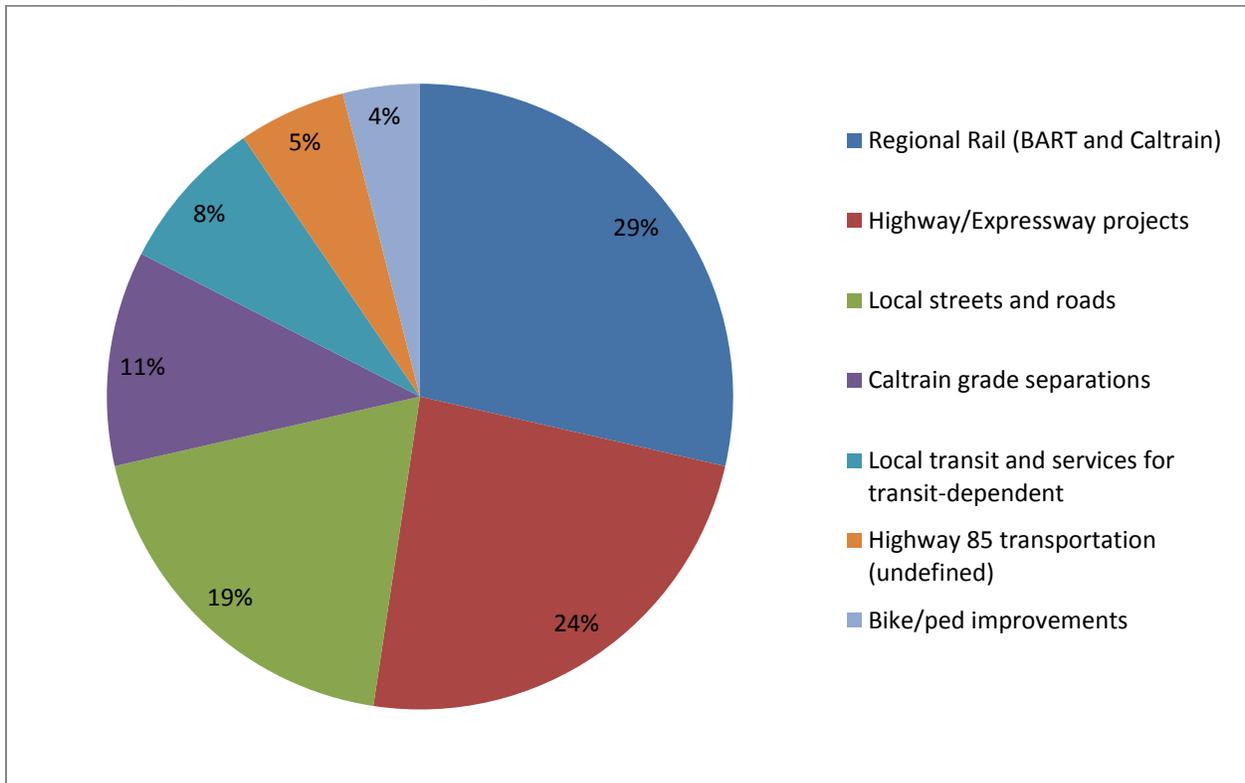
On April 22, 2016, VTA staff and the Board agreed on a draft spending plan, which will allocate over half of the tax revenue for local streets, highway, and expressway projects; 30-40% for regional rail (depending on whether one considers grade separations a rail or road investment); 8% for local transit operations and transit services for transit-dependent people such as low income transit passes; and 4% for active transportation projects that make it easier and safer for people to walk and bike. VTA's current proposal includes a complete streets requirement for roadway spending. See table 3 and figure 1 below.

**Table 3: Proposed VTA Sales Tax Expenditure Plan, as adopted April 22, 2016**

<b>Project</b>	<b>Allocation in \$ millions</b>	<b>Percent (%)</b>
BART Phase II	1,500	24
VTA bus operations and transit services for transit-dependent	500	8
Caltrain capacity improvements	300	5
Highway 85 transportation	350	6
Highway/Expressway projects	1,500	24
Local streets and roads (street maintenance and pothole repair)	1,200	19
Caltrain grade separations	700	11
Bicycle and pedestrian improvements	250	4
<b>Total</b>	<b>6,300</b>	

<sup>5</sup>*Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*, Susan Handy Department of Environmental Science and Policy University of California, Davis, National Center for Sustainable Transportation, October 2015. [http://www.dot.ca.gov/research/researchreports/reports/2015/10-12-2015-NCST\\_Brief\\_InducedTravel\\_CS6\\_v3.pdf](http://www.dot.ca.gov/research/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf)

**Figure 1: Proposed VTA Sales Tax Expenditure Plan Funding Allocation**



6

## Findings and Implications of TransForm’s Project Analysis - VTA’s Spending Plan Falls Short in Key Areas

TransForm requested and obtained data from VTA to conduct an analysis of projects under consideration for inclusion in the sales tax on a cost per dollar basis. TransForm’s analysis focuses on several criteria that are important to both the Santa Clara County residents and decision makers. In order to create a fair comparison between project types, we:

- Grouped some separate projects into categories or programs.
- Focused on a few important criteria to show exactly what kind of benefits and negative impacts of the projects under consideration would have. The criteria we selected for analysis are:
  - Vehicle Miles Traveled (VMT – impact on the distance of travel by car)
  - Vehicle Hours of Travel (VHT – impact on number of hours traveled by motorists)
  - CO2 (climate change)
  - PM 2.5 emissions (public health)
- Calculated for each of these criteria the impacts/benefits of each transportation project category divided by their cost to get an impact per hundred million dollar value.
- Excluded projects from the analysis that appeared to have questionable or insufficient data and projects that appear highly unlikely to be included in the measure.

TransForm’s found that among the projects and programs in our analysis, the bicycle and frequent bus network project categories had the greatest benefits, and light rail improvements and BART also perform well. Highway and expressway project categories, on the other hand, perform poorly on most categories analyzed, increasing VMT, CO2, and PM2.5.

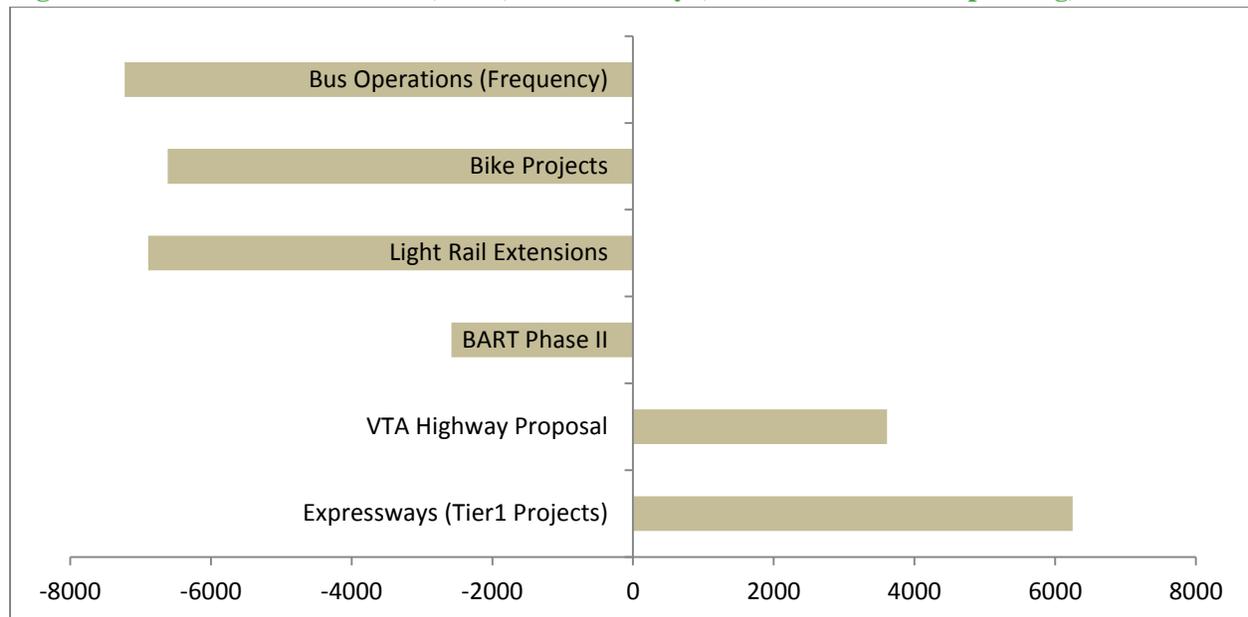
<sup>6</sup> BART Phase II and Caltrain capacity improvements were combined in this graph as “regional rail”.

Transform’s analysis should be considered within the context that VTA was not able to fully account for long-term induced demand for roadway capacity increases, such as road widening, thus understating the implications for VMT, GHG, and PM2.5, and overstating the VHT benefits (doing such an analysis would have required alternative growth scenarios; a significant amount of work).

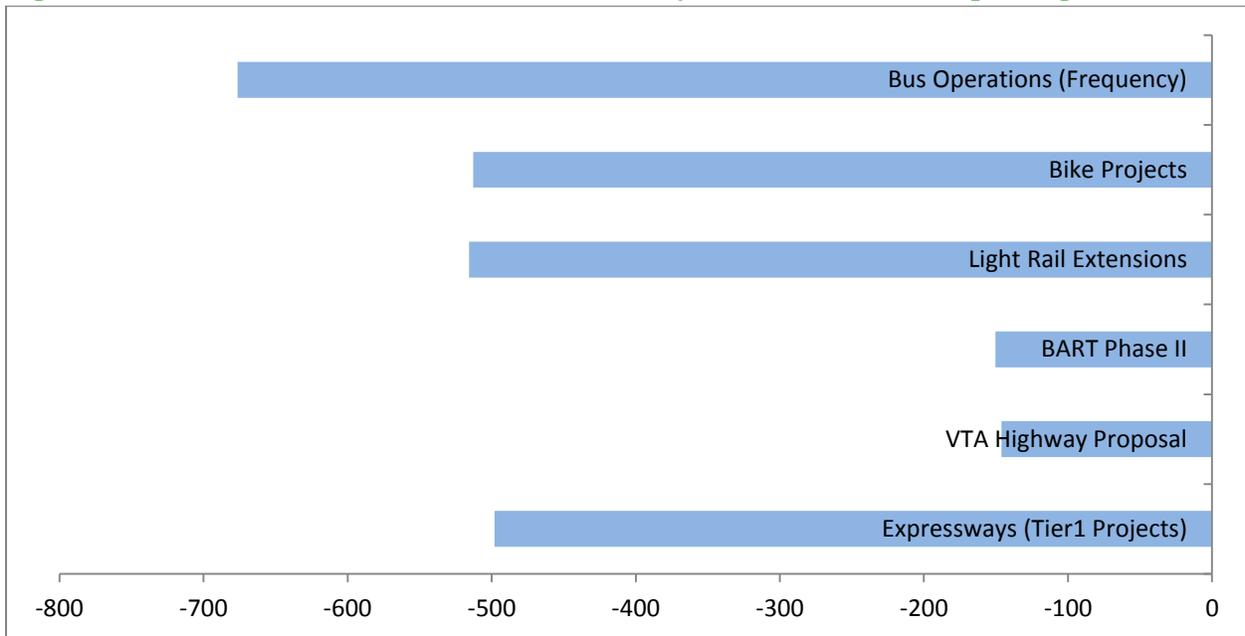
**Table 4: Benefits/Impacts of Envision SV Projects Per \$100 Hundred Million in Spending**

<b>Metric</b>	<b>Expressways (Tier1 Projects)</b>	<b>VTA Highway Proposal</b>	<b>BART Phase II</b>	<b>Light Rail Extensions</b>	<b>Bike Projects</b>	<b>Bus Operations (Frequency)</b>
Vehicle Miles Traveled (VMT) Per Weekday	6249	3610	-2584	-6892	-6616	-7224
Vehicle Hours of Travel (VHT) Per Weekday	-498	-146	-150	-516	-513	-676
Metric Tons of Carbon Pollution (CO2) per Weekday	2	4	-2	-3	-5	-5
Metric Tons of Particulate Pollution (PM2.5/1,000) Per Weekday	1	20	-9	-13	-15	-32

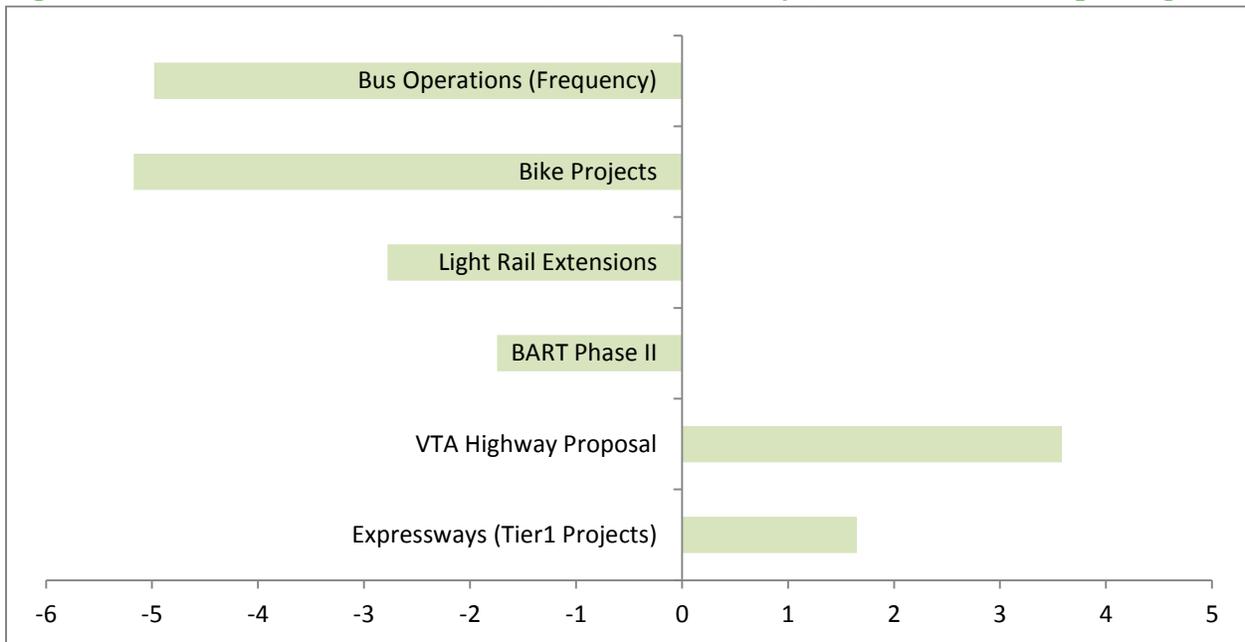
**Figure 2: Vehicle Miles Traveled (VMT) Per Weekday (Per \$100 Million in Spending)**



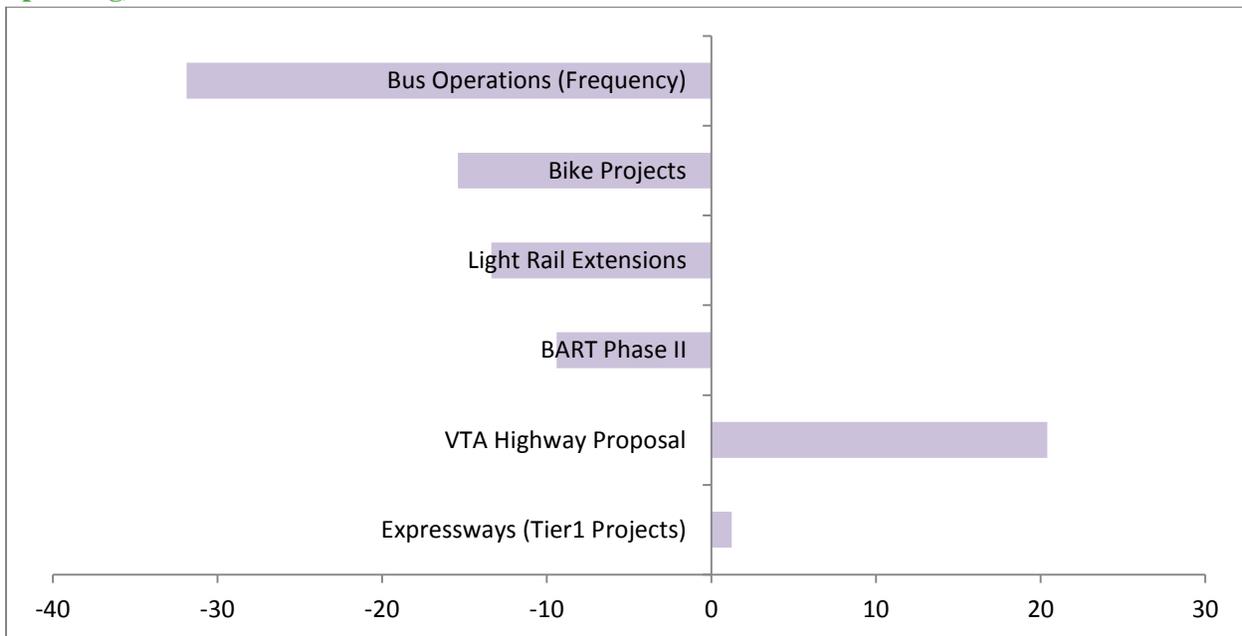
**Figure 3: Vehicle Hours of Travel (VHT) Per Weekday (Per \$100 Million in Spending)**



**Figure 4: Metric Tons of Carbon Pollution (CO2) Per Weekday (Per \$100 Million in Spending)**



**Figure 5: Metric Tons of Particulate Pollution (PM2.5/1,000) Per Weekday (Per \$100 Million in Spending)**



The frequent bus network and bike improvement categories performed extremely well in TransForm’s analysis, yet only about 12% of the measure’s funding is allocated towards these project categories. On the other hand, VTA’s draft spending plan includes \$1.5 billion (or 24%) for expressway and highway projects that will actually increase the amount of driving (vehicle miles traveled - VMT) and pump more carbon pollution (CO2) and particulate pollution (PM 2.5) into our air. In fact, according to our analysis, the expressway and highway spending will negate much of the CO2 emission and VMT reduction benefits generated by the BART Phase II extension and bicycle project spending in the measure.

## **A Key Deficiency in VTA’s Funding Measure: Improving Local Bus Service**

Bus service deserves special attention considering recent discussions about how to increase ridership on the network as part of the Transit Ridership Improvement Plan (TRIP) and NEXT Network. As described by VTA’s Transit Choices Report, adding more frequent all-day transit service along high ridership corridors with supportive land uses leads to higher ridership and more productive service overall.<sup>7</sup>

The TRIP discussions thus far have primarily taken place within the context of no significant infusion of additional bus operating funds to boost ridership. Rather, the framing has been that we must cut lower performing routes in order to reallocate resources to more productive routes. The problem is that service for the overall bus network is already 15% lower than 2000 levels, and VTA’s less productive bus routes have already been cut back significantly since that period. For people who rely on the threatened routes, transit is a lifeline for reaching employment, education, health care, and other needs. As the TRIP Transit Choices Report states, “shifting resources from coverage service to ridership service will have negative impacts on the people who depend on coverage services. Expanding resources can make this trade-off less painful by allowing ridership service to grow even as basic coverage is maintained.”<sup>8</sup>

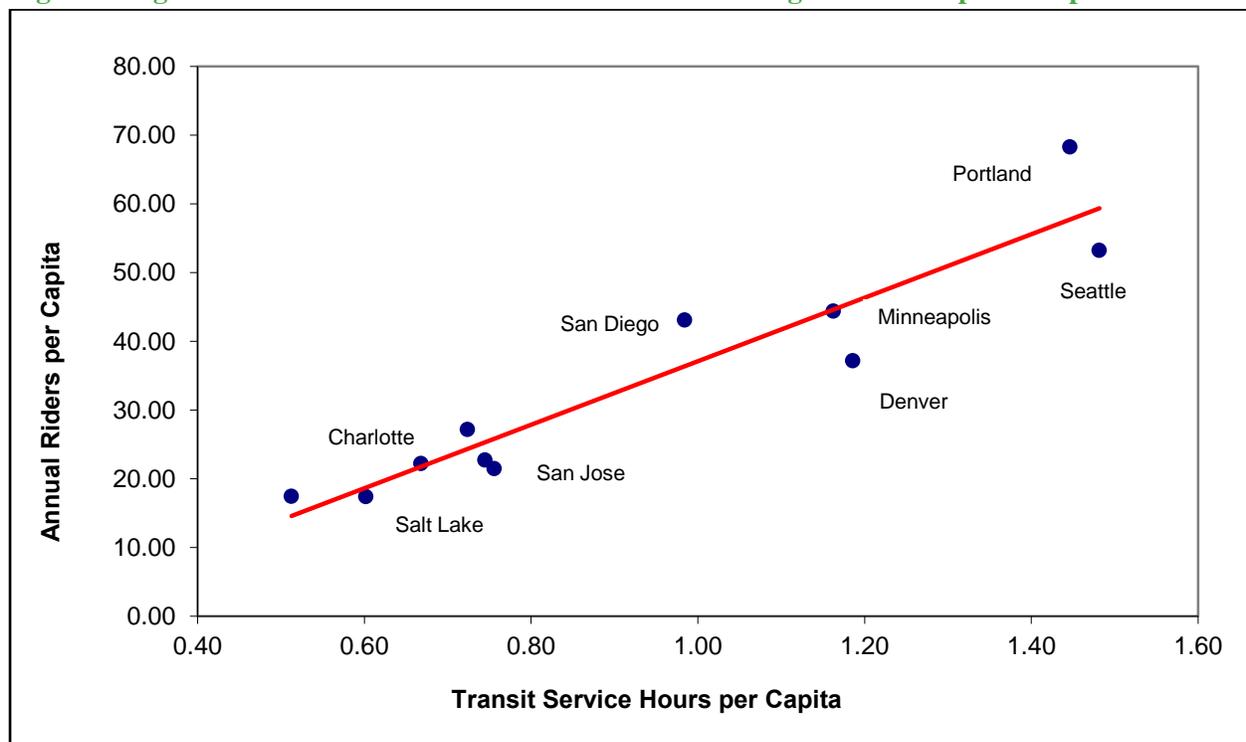
<sup>7</sup>[http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site\\_Content/Transit\\_Choices\\_Report\\_Full.pdf](http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site_Content/Transit_Choices_Report_Full.pdf)

<sup>8</sup>[http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site\\_Content/Transit\\_Choices\\_Report\\_Full.pdf](http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site_Content/Transit_Choices_Report_Full.pdf)

But how does VTA’s existing transit level of service compare to other similar metropolitan areas in the United States? If VTA were to invest in greater bus service frequency, would it result in higher ridership? Using data from the National Transit Database, Lightbody Consulting selected a group of cities based on similar urban area population (1.5-2.5 million) with light rail and bus transit and compared their transit level of service and ridership per capita.

Lightbody’s analysis found that VTA’s per-capita transit service levels are relatively anemic. Portland, OR’s Tri-Met provides double the amount of transit service per capita as VTA, and partially as a result, has three times as much ridership per capita. Similarly, Minneapolis’ Metro Transit Agency provides 50% more service than VTA per capita and has double the ridership per capita. If VTA wanted to approach Portland’s transit service hours per capita, it would need to approach something like doubling its bus operating budget of \$240 million a year, but VTA’s current sales tax proposal of \$500 million for the bus network would only increase the Agency’s bus operating budget by about 7%. The graph below shows the correlation between transit service and ridership in different regions.

**Figure 6: Agencies that Provide More Transit Service Have Higher Ridership Per Capita**



But we don’t have to look any further than Santa Clara County for an example of what occurs when transit service is increased, especially in a growing economy. From 1988 to 2000, VTA increased its bus service by 7%, and there was a 25% increase in ridership during that period. Significant ridership gains have also taken place with the introduction of more rapid service; the 323 and 522 bus lines, the Santa Teresa light rail express, and Caltrain’s Baby Bullet. This is an important model moving forward for how to expand transit service to have high impact.

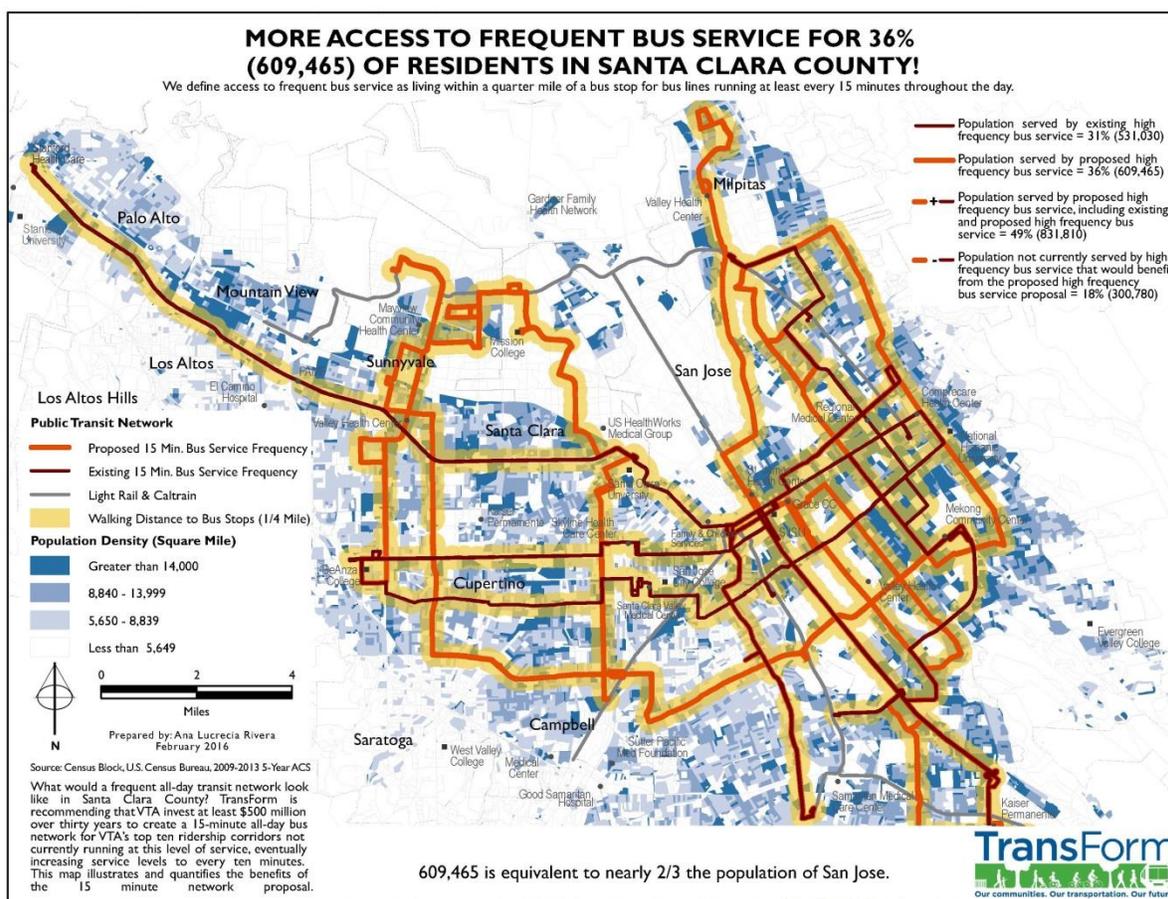
If we are to achieve the mode shift goals and VMT and GHG reduction targets of local, regional, and state plans, it is critical that VTA restore its bus service back to 2000 levels, and provide a higher level of service per capita as population grows. In order to restore transit service levels back to 2000 levels alone, VTA would need to increase funding for the network over the 30 year life of the sales tax measure by over \$1 billion, or more than twice the amount in the current proposed spending plan.

## What Would a Frequent Bus Network Look Like?

A frequent all-day bus network would increase access to opportunity and essential services, grow ridership, reduce congestion, accommodate the Valley's population growth, meet the needs of the increasing senior population and millennials, and cut down on air pollution.

TransForm was one of several organizations to propose that VTA invest \$500 million to \$2.2 billion over the thirty year life of the sales tax to increase service to every ten to fifteen minutes for VTA's ten high ridership corridors. An infusion of \$500 million in operating funds would represent about a 7% increase in bus operating funds and a ten minute network would represent a 23% increase. The following map helps visualize and quantify the benefits of a more frequent transit network.<sup>9</sup>

**Figure 7: Map of Proposed Frequent Core Bus Network**



The 15 minute frequent bus network proposal would provide 155 additional miles of frequent transit and greater access to transit to over 600,000 residents, or 36% of Santa Clara County's population.<sup>10</sup> The network would also increase access to transit for over 240,000 residents living in Communities of Concern. This represents 67% of all residents living in a Community of Concern in the county.<sup>11</sup>

<sup>9</sup> The existing high-frequency bus routes in VTA's network, defined as bus lines running at least every 15 minutes throughout the day, are composed of six lines: 22, 23, 25, 64, 68, and 70. The 15 minute network proposal would increase frequency on VTA's highest ridership routes: lines 26, 55, 60, 64, 66, 68, 71, 72, and 73, 77.

<sup>10</sup> We define access to frequent transit as living within a quarter mile of a bus stop for bus lines running at least every 15 minutes throughout the day.

<sup>11</sup> MTC defines Communities of Concern as communities in the Bay Area that face particular transportation challenges, either because of affordability, disability, or because of age-related mobility limitations.

According to VTA staff, the 15-minute network would also result in a 10% increase in ridership above current levels, and the 10-minute network would result in a 40% increase in ridership.

## Crafting a More Effective Expenditure Plan

There is still time to take in new information and improve VTA’s current funding proposal to address mobility and access needs in a way that supports a growing economy, while promoting equity, climate action, and public health. But what would it look like if we were to focus investments towards local transit and active transportation, instead of SOV-inducing highway and expressway projects as proposed by VTA? We grouped \$3.75 billion in project funding into two scenarios - VTA’s proposal and an alternative proposal with increased spending on local transit and active transportation. We then quantified the two different expenditure plans using the data from VTA’s project assessment.

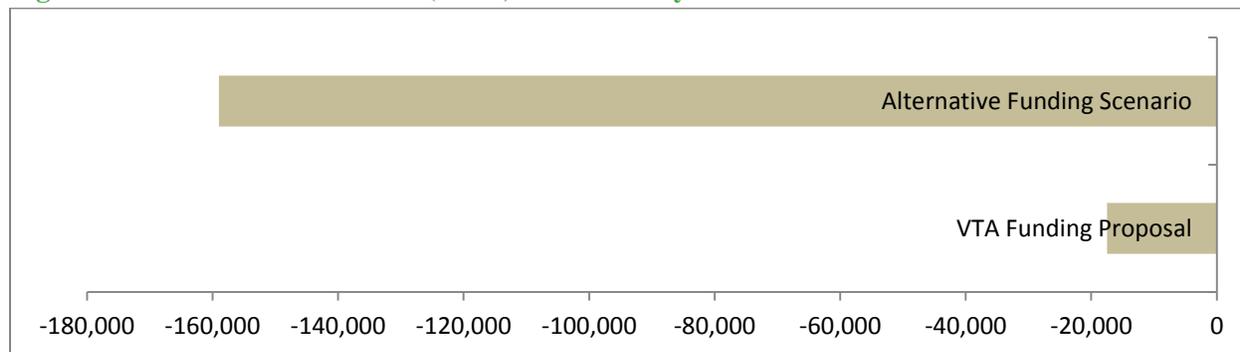
**Table 5: VTA and Alternative Project Allocations**

Project	VTA Staff Proposal (In \$ millions)	Alternative Funding Scenario (In \$ millions)
VTA bus operations and services for transit-dependent	500	1,000
VTA transit capital (LRT)		500
BART	1,500	1,250
Highway/expressway capital	1,500	400
Bike/ped improvements (Active transportation)	250	600
Total	3,750	3,750

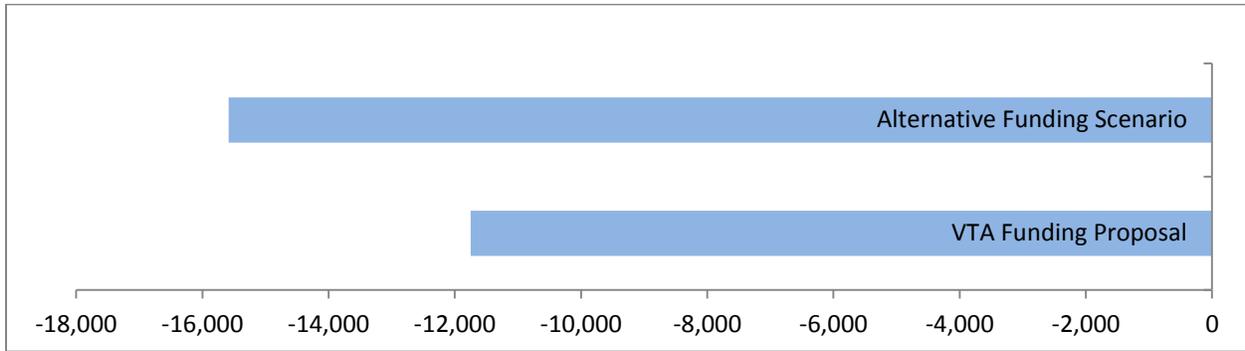
**Table 6: Results of VTA and Alternative Project Allocations**

Metric	VTA Funding Proposal	Alternative Funding Scenario
Vehicle Miles Traveled (VMT) Per Weekday	-17,471	-158,979
Vehicle Hours of Travel (VHT) Per Weekday	-11,751	-15,587
Carbon Pollution (CO2) Per Weekday	-25	-106
Particulate Pollution (PM2.5/1,000) Per Weekday	-177	-552

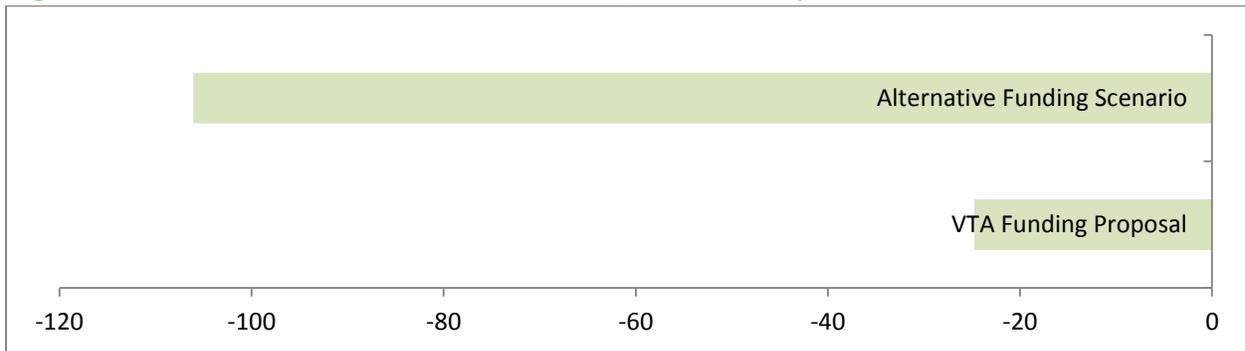
**Figure 8: Vehicle Miles Traveled (VMT) Per Weekday**



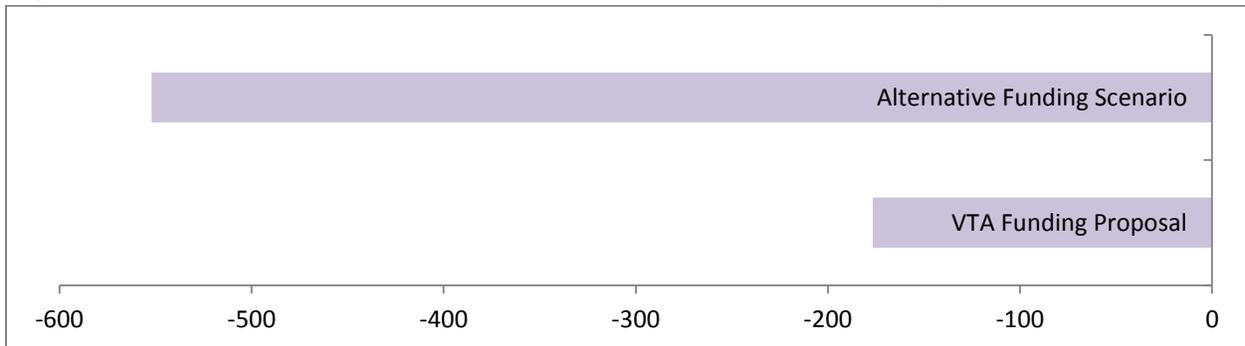
**Figure 9: Vehicle Hours of Travel (VHT) Per Weekday**



**Figure 10: Metric Tons of Carbon Pollution (CO2) Per Weekday**



**Figure 11: Metric Tons of Particulate Pollution (PM2.5/1,000) Per Weekday**



The results are clear. Investing more sales tax funding on local transit and active transportation projects and programs will lead us to a more sustainable and accessible future while improving mobility in a thriving economy. The alternative funding scenario developed by TransForm performed far better than VTA's draft funding proposal for all the projects and programs analyzed, including over 90 times the VMT reduction benefits, four times the CO2 reduction benefits, three times the PM 2.5 benefits, and a 25% greater reduction in VHT.

Local transit improvements and bicycle and pedestrian improvements are among the investments that received the most support among likely voters according to a recent poll conducted by the Silicon Valley Leadership Group (SVLG) (see Table 7 below).

**Table 7: Silicon Valley Leadership Group Poll of Santa Clara County Likely Voters**

<b>Project</b>	<b>Support %</b>	<b>Oppose %</b>	<b>No Opinion %</b>
Improve transit service for seniors, students, low-income and the disabled	72	26	2
Repair streets and fix potholes	72	27	1
Increase Caltrain capacity, easing highway congestion and improving safety at crossings	70	26	4
Improve bike and pedestrian safety, especially near schools	70	28	2
Increase Caltrain capacity to ease traffic on Highways 85, 101, 280	68	31	1
Finish the BART extension to downtown San Jose and Santa Clara	67	29	4
Relieve traffic on all 9 County Expressways	65	30	5
Relieve traffic on key highway interchanges	65	33	2

## Recommendations

It’s not too late to craft a measure that is a win not just for mobility, but also for climate, health, equity, and the economy. **To craft a measure that will achieve a better return on our investment, we recommend that VTA:**

- Shift funding from highway and expressway programs to local transit, bicycle, and pedestrian projects and programs. This report shows why it is critical to boost funding levels for VTA’s core bus network in particular.
- Include performance-based language in the funding measure to ensure that projects funded by the highway and expressway programs not only reduce congestion but also reduce vehicle miles traveled (VMT). VMT reduction strategies can include provision of improved transportation options, operations that promote carpooling, congestion pricing, and supporting new, tech-enabled services that increase vehicle occupancy. This should include competitive grants instead of projects that are dictated now, to take advantage of the innovation in the transportation sector.
- Give priority in the bicycle and pedestrian funding for projects that take place in Communities of Concern as well as those in proximity to schools.<sup>12</sup>

<sup>12</sup> The Metropolitan Transportation Commission (MTC) defines Communities of Concern as communities in the Bay Area that face particular transportation challenges, either because of affordability, disability, or because of age-related mobility limitations.

## Appendix I – Limitations of VTA’s Project Evaluation

To help Santa Clara County residents and policy makers prioritize which projects to fund, VTA conducted an evaluation for many of the transportation projects under consideration for the 2016 transportation sales tax. Each project, or group of projects, was analyzed by VTA based on criteria designed to measure how well the project meets the goals for the sales tax, as adopted by the VTA Board of Directors.<sup>13</sup>

Most of the projects included in VTA’s evaluation were submitted as part of VTA's Call for Projects. Over 600 projects were submitted by various cities, agencies, and stakeholders.<sup>14</sup> VTA grouped some projects by size, location and type to maximize the effectiveness of the analysis and reduce the number of separate projects analyzed.

VTA’s evaluation attempted to measure the impact of different investments on quality of life, environmental impact, and safety. It provided very useful information, but it had some significant limitations that made it harder to use well for decision making.

- Most problematic is the fact that VTA presented the results of their evaluation on an absolute basis, not on a cost/benefit per dollar basis. This method is likely to overstate the impacts of large projects, and understate the impacts of small projects relative to one other. Given the very limited pot of funds in the sales tax measure, projects should be evaluated based on positive or negative impacts per dollar spent to provide clarity on how to achieve the greatest return on investment.
- VTA’s 32 individual evaluation criteria were grouped together into several larger categories defined by VTA as goals. While providing a general perspective of the project categories, the grouping into goals does not provide decision makers and the public with data on specific criteria of interest such as VMT or CO2.
- The measurement of the goals were presented on a 1 to 5 scale of degree of benefits or negative impacts to help simplify the results; however, VTA evaluated some projects qualitatively based on whether or not the project met the criteria on a yes (5 points) vs no (1 point) scale. In other words, if a project met the criteria, it received a 5, or if it did not, it received a 1, but there was no variation in between the two extremes. For example, the expressway category, which includes significant capacity increases for automobiles, was given 5 out of 5 for increasing transportation choices. The rationale for this score was that the expressway projects include some facility improvements for non-automobile users or provided a new carpool lane. To put this into perspective, the planned countywide bicycle superhighway network received the exact same score. This does not provide a fair or accurate comparison between projects with different degrees of benefits and impacts.
- The results of the individual criteria analyzed by VTA were added together and divided by the number of criteria, in a one-for-one analysis without any weighting of the most important criteria. In other words, all 32 criteria were given the same level of priority, which may not be as helpful if certain criteria are more important to focus on for the region than others.
- The project evaluations conducted by VTA do not fully account for additional trips taken due to certain types of induced demand, thus understating the VMT, CO2, and PM 2.5 impacts of projects (namely in the highway and expressway categories) that increase roadway capacity.

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<sup>13</sup> [http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site\\_Content/Envision%20Evaluation%20Criteria.pdf](http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site_Content/Envision%20Evaluation%20Criteria.pdf);  
[http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site\\_Content/Final%20Goals%20for%20Envision%20Silicon%20Valley.pdf](http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site_Content/Final%20Goals%20for%20Envision%20Silicon%20Valley.pdf)

<sup>14</sup> <http://www.vta.org/envision-silicon-valley/project-evaluation#call-for-projects>

## Appendix II –TransForm’s Project Analysis Methodology

Because of the limitations of VTA’s project evaluation, TransForm requested and obtained data from VTA to conduct a separate analysis. TransForm’s analysis focuses on several criteria that are important to both the Santa Clara County residents and decision makers. In order to create a fair comparison between project types, we:

- Grouped some separate projects into categories.
  - The bike project category includes VTA countywide bike plan and bicycle superhighway network proposal.
  - The LRT extension category includes the Capitol, Vasona, and Bayshore extensions.
  - The highway category includes projects included in VTA's sales tax proposal for the following corridors (101, I-280, SR 237, SR 85, I-680, SR 17, and Hwy 87).
- Focused on a few of the 32 criteria to show exactly what kind of benefits and negative impacts of the projects under consideration would have. The criteria we selected for analysis are:
  - Vehicle Miles Traveled (VMT – impact on the distance of travel by car)
  - Vehicle Hours of Travel (VHT – impact on number of hours traveled by motorists)
  - CO2 (climate change)
  - PM 2.5 emissions (public health)
- Calculated for each of these criteria the impacts/benefits of each transportation project category divided by their cost to get an impact per hundred million dollar value.
- Excluded projects from the analysis that appeared to have questionable or insufficient data, such as Caltrain grade separations. In addition, several projects were not included in the analysis since they did not appear likely to be included in the measure (ex. downtown LRT subway and express lanes).

Additional context for TransForm’s analysis:

- Construction projects such as BART and highways/expressways do not include operations and maintenance (O&M) costs in our analysis. The bus frequency proposal, on the other hand, does include both capital and O&M, meaning that our evaluation likely understates the benefits of the bus frequency proposal compared to the capital projects.
  - VTA did not include O&M costs for capital projects in the proposed sales tax because they will be funded from other sources. For example, funding for the BART Phase II extension for O&M will come from a separate eighth cent sales tax approved by voters in 2008, and funding for expressway maintenance will come from the County’s budget.
- Some project categories could have larger overall impacts than shown in our analysis because the direct financial contribution by VTA is only one funding source for some projects. These additional funding sources will make it possible for VTA to fund more projects than just the specific funding in the sales tax. For example, while VTA has proposed spending \$1.5 billion for the BART extension in the proposed sales tax, it is also likely that the agency will obtain funding from state and federal programs. This means that the impacts per dollar appear larger than if it was fully funded by the sales tax.
- TransForm’s analysis should be considered within the context that VTA was not able to fully account for long-term induced demand for roadway capacity increases, such as highway widening, thus understating the implications for VMT, GHG, and PM2.5, and overstating the VHT benefits (doing such an analysis would have required alternative growth scenarios; a significant amount of work).



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Chamber of Commerce

June 1, 2016

Santa Clara Valley Transportation Authority  
3331 North First Street  
San Jose, CA 95134

**Re: SANTA CLARA COUNTY TRANSPORTATION SALES TAX**

Honorable VTA Board Members:

On behalf of the San Jose Silicon Valley Chamber of Commerce Board of Directors and our 1400 member businesses, we would like to express our support for the proposed Santa Clara County 30 Year ½ cent transportation sales tax proposed for November of 2016.

The San Jose Silicon Valley Chamber of Commerce strongly believes this approach to a sales tax revenue measure is the most prudent moving forward and we support the allocation of expenditures. The proposed plan provided by the Silicon Valley Leadership Group encompasses the substantial need of transportation and transit improvements in every segment of our County.

We applaud your leadership on this initiative and if successful, look forward to seeing those infrastructure investments in our local highways, expressways and BART to Downtown San Jose.

In short, the San Jose Silicon Valley Chamber of Commerce supports this proposed sales tax.

Sincerely,

Matthew R. Mahood  
President & CEO



LEAGUE of WOMEN VOTERS SAN JOSE/SANTA CLARA  
P.O. Box 5374 San Jose, CA 95150  
(408) 271-7163  
www.lwvsjsc.org  
info@lwvsjsc.org

June 1, 2016

Hon. Cindy Chavez, Chairperson, Santa Clara Valley Transportation Authority Board of Directors

cc: Board Secretary, Santa Clara Valley Transportation Authority

RE: June 2 Agenda; **Items 7.2, 7.3**

Dear Chairperson Chavez,

The San Jose/Santa Clara League of Women Voters was pleased to comment on scoping for the Environmental Impact Report, VTA BART Silicon Valley Phase II. Our comments focused on the 28th Street BART Station and addressed the environmental topics of Air Quality and Greenhouse Emissions, Transportation, and Socioeconomics.

The 28th Street BART Station is an integral part of the Five Wounds Urban Village adopted in San Jose Envision 2040 General Plan. The development of Urban Villages - high density, mixed-use development oriented to available transit facilities - carries significance at the regional level because it reduces dependence on automobile travel resulting in the reduction of Greenhouse Gas Emissions.

There is evidence from completed TOD projects throughout the Bay Area that access to a BART station carries not only measurable benefits such as increased access to job opportunities and public services, but also immeasurable benefits of walkability and community engagement. Please consider socioeconomic impacts, particularly for East San Jose when discussing the potential 30-year Sales Tax Measure. This station is also the primary access point to BART for commuters originating in South County traveling via Highway 101.

All three San Jose BART stations, Downtown, Diridon, and 28<sup>th</sup> Street are crucial factors for increasing ridership and economic development in San Jose's urban core.

We look forward to future participation in transportation issues.

Sincerely,

Cecilie Schulze, President



## SENIOR CITIZENS COMMISSION

City of San Jose, Parks, Recreation and  
Neighborhood Services  
200 East Santa Clara Street, 9<sup>th</sup> Fl.  
San Jose, California 95113  
Tel: (408) 535-3570  
Fax: (408) 292-6299

May 28, 2016

County Supervisor and VTA Board Chair, Cindy Chavez,  
Members of the VTA Board of Directors,  
70 West Hedding St., San Jose, CA 95110

Dear Honorable Chairperson Chavez and VTA Board of Directors,

On behalf of the San Jose Senior Citizens Commission, I am advising you that the following motion was passed by unanimous vote at our May 26, 2016 business meeting: "The Senior Citizens Commission supports the VTA Staff recommendation that transit operations be funded at the \$500 million dollar level. These include discount fares for seniors, mobility options for seniors and disabled (e.g. shared ride program, escorted transportation, etc.) and bus operations."

The Commission made the following comments during our discussion:

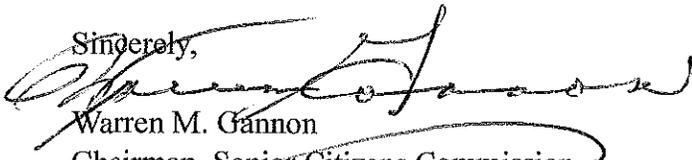
1. By the year 2030 it is estimated one in every four Santa Clara County residents will be over the age of 60. The City of San Jose is currently engaging seniors in focus groups to become an Age-Friendly community. The biggest challenge facing seniors mentioned in these focus groups are transportation and housing. **A ROBUST PUBLIC TRANSIT NETWORK IS ESSENTIAL TO ALLOW SENIORS TO AGE IN PLACE.**
2. Nearly half of all seniors in Santa Clara County cannot meet their basic needs. Seniors living on Social Security income receive an average of \$19,000 a year. Increasingly, seniors are being forced to choose between keeping a roof over their heads, paying for lifesaving medications, putting food on the table or paying for transportation. **SENIORS NEED DISCOUNT FARES, SUBSIDIZED DOOR-TO-DOOR RIDES AND RIDE-SHARE OPTIONS TO GET AROUND.**
3. Currently, two-third of Senior Nutrition Program sites are accessed by Outreach or Public Transit. For some sites, nearly half of Senior Nutrition Program meals are accessed through some form of Outreach Service. However, one-fourth of Senior Nutrition Program sites have limited transit access. **INCREASING TRANSIT OPTIONS CAN INCREASE ACCESS TO SENIOR NUTRITION PROGRAM SITES AND HELP PREVENT SOCIAL ISOLATION AND PROMOTE HEALTHY LIVING FOR SENIORS.**
4. Many seniors have mobility challenges and rely on public transit to access key senior services critical to their livelihood (e.g., Senior Nutrition Program meals, doctor's appointments, senior programming at community centers). **VTA SERVICE OFFERINGS CURRENTLY DO NOT MEET THE REQUIREMENTS OR SPECIALIZED NEEDS OF SENIORS.**

Page 2,

We are pleased the seniors transportation needs have been brought to the table by the Transportation Justice Alliance. The Senior Citizens Commission for the City of San Jose is deeply concerned about the well-being and future for seniors in our community. Our goal is to help provide and support programs that will allow the growing senior population in Santa Clara County to age in place and with self-respect and confidence.

We support the tax measure and hope that the Board will provide at least \$500 million for transit operations, including senior mobility programs.

Sincerely,



Warren M. Gannon

Chairman, Senior Citizens Commission

City of San Jose

CC: VTA Board of Directors, San Jose City Council



Incorporated October 22, 1956

# CITY OF SARATOGA

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7.2

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*Manny Cappello*

*Rishi Kumar*

*Emily Lo*

*Howard Miller*

May 31, 2016

Cindy Chavez, Board Chairperson  
Valley Transportation Authority  
3331 North First Street  
San Jose, CA 95113

CINDY

Dear Chairperson Chavez,

Thank you for the Valley Transportation Agency's effort in developing a Santa Clara County-wide sales tax measure to address County-wide transportation priorities. The proposed expenditure plan attempts to balance the significant needs of our existing infrastructure with a vision of future shifts in transportation modes. I know that improving the quality of life for the residents we serve is among the highest priorities for you and the entire VTA Board of Directors. The inclusion of noise abatement funding for the SR 85 corridor is a step toward improving the quality of life for residents living along the corridor in San Jose, Los Gatos, Saratoga, Cupertino, Sunnyvale, and Mountain View. You have my full endorsement of the funding plan and I urge you and the Board to adopt the resolution as drafted.

Sincerely,

E. Manny Cappello  
Mayor

CC: Board Secretary

**Staff response to VTA Committee for Transit Accessibility (CTA) Chairperson Aaron Morrow**

**From:** Board.Secretary  
**Sent:** Wednesday, June 01, 2016 5:43 PM  
**To:** 'Aaron Morrow'  
**Cc:** Board.Secretary  
**Subject:** RE: Item 7 BOD 6.2.16 Comments

CTA Chairperson Morrow:

At the April advisory committees, VTA staff presented the sales tax recommendations from the Envision stakeholder committee. The committee members stated the measure should: a) include funding for persons with disabilities, seniors and low income residents; b) voiced concern about the FTA Section 5310 Process; and c) that specific funding should be set aside for a dedicated mobility management option. Because there was not a quorum, the CTA was unable to take a formal action.

At the May advisory committee meetings, the formal staff recommendation was presented to the advisory committees for their consideration. The sales tax staff memo for the June VTA Board of Directors meeting reflect the comments/actions from the Advisory Committees regarding the staff recommendation from their May meetings. Because the CTA did not meet in May, there are no comments or actions to report in the memo. However, it should be noted that the comments from the CTA were recorded and considered by the staff and presented to the Board in their April minutes. The current recommendation does contain funding for transit operations to "...provide additional funds specifically for bus operations to serve vulnerable, underserved and transit dependent populations throughout the county. The goals of the program category are to increase ridership, improve efficiencies, enhance mobility services for seniors and disabled, and improve affordability for the underserved and vulnerable constituencies in the county."

If you have any questions, please reply to this e-mail.

Thank you.

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**From:** Aaron Morrow  
**Sent:** Sunday, May 29, 2016 5:04 PM  
**To:** Board.Secretary  
**Subject:** Item 7 BOD 6.2.16 Comments  
**Importance:** High

Hello

I am curious why committee for transit accessibility comments were not included under advisory committee discussion/recommendation. I clearly remember Scott Hayward providing an overview and soliciting comments from the group. Wednesday, April 13, 2016 originally item 15 on the CTA agenda. Although we did not have a quorum and could not take action on the item I expected our comments to be clearly passed along to the Board of Directors. Please provide me with an explanation why the comments were not included in memo number 5577.

Thank you

Aaron Morrow

# ENVISION

## SILICON VALLEY

### VTA Community Outreach Report Group presentations/Public comments August 2015 – May 2016

#### **Transit Justice Alliance, 8/8/15 (Gilroy)**

Attendance: approximately 35

- Future tax measures should incorporate the needs of the residents of South County.
- Add more transit service during the evenings after 6 p.m. (for those who must travel to work or to essential facilities such as hospitals) and on weekends. (several comments)
- Add Express buses in South County. (several comments)
- Concerned about too many tax dollars being allocated to BART rather than Caltrain in Gilroy. (several comments)

#### **Transit Justice Alliance, 8/27/15 (Mt. View)**

Attendance: approximately 80

Top priorities among 6 work groups:

- Build coordinated transit system (2).
- Improved bus service frequency (4).
- Restore cuts to bus services in high-need areas (2). Specific lines: 304
- Expand bus lines and BRT.
- Reduce cost of bus fares for low-income, youth/students and seniors. (3)
- Improve reliability and speed of bus network.
- Improve bicycle/pedestrian safety and connectivity (certain communities lack connectivity of bike lanes) (2).
- Improve connectivity of last-mile connections to mass transit systems, particularly bus and LTR.
- Improve street safety.
- Promote greenhouse gas reductions.

Other general comments:

- Bus stops need to provide shaded seating, especially for seniors.
- Extend service hours on certain bus routes, including 304 and 26 (service stops too early at 7 p.m.); increase frequency on bus route 53 to once every 15 minutes (route K-12 students take to school).<sup>1</sup>
- Extend bus routes to community centers (e.g., Sunnyvale Community Center).
- Extend bus service into the Shoreline Ave. area to reduce car commutes to work
- Add more space for loading bikes on buses.
- Allow K-12 students to ride bus for free (to and from school); free passes for elderly and handicapped.
- Decrease transfer time for intermodal transport (i.e., between buses and LTR)
- Caltrain service to infrequent during peak use times (overcrowding on trains)
- Caltrain too expensive for fixed income/low income persons.
- Improve safety where Caltrain crosses roadways. Currently not safe enough for drivers/cyclists.
- Add more overcrossings for cyclists at highways (e.g., Hwy. 101, Lawrence, San Tomas, El Camino Real).<sup>2</sup>
- Improve safety of bicycle paths; many are dangerous (i.e., Almaden Expressway, El Camino Real, Lawrence Expressway, San Tomas Expressway).<sup>2</sup>
- Consider alternatives to BART. Too expensive for amount of ridership anticipated.

**Transit Justice Alliance, 9/2/15 (San Jose, MLK Library)**

Attendance: approximately 100

- TJA consolidated comments to provide to VTA staff

**Transit Justice Alliance, 9/9/15 (San Jose, Mexican Heritage Plaza)**

Attendance: approximately 150

(Partial “top 3” lists: Lists are from three of several breakout groups)

- More frequent and better bus service (e.g., run routes later in evening, such as bus route 71; bus from SJ City College to Willow Glen runs only once every hour and is easy to miss if class runs late, especially in low-income areas such as East San Jose, and where ridership is high (2)).<sup>1</sup>
- Expand bus rapid transit, especially to low-income areas, after doing demand study to better support transit-dependent areas.
- Improve pedestrian/bike street infrastructure in support of ped/bike-friendly streets.
- Reduce cost of transit for low-income, youth and seniors (2).
- Provide lower cost transit passes for students.<sup>1</sup>

- Do focused densification around BART (transit-oriented development, high-density housing).

Other general comments:

- Buses are too expensive for community college students; reduce cost.
- Not enough parking near LTR in Willow Glen and San Pedro Street stations. If one bikes over, there are no lockers to store bikes, making it impossible to use LTR.<sup>1</sup>
- On-road bike network through downtown San Jose is unsafe (no lighting).<sup>2</sup>
- Buses don't run on time.

### **Mountain View Kiwanis, 9/9/15**

Attendance: 15

- Extend BART to Mineta San Jose Airport. Why should the public trust VTA to build anything if it is unwilling to make such an obvious connection?
- Individuals who take corporate buses are filling up Park and Ride lots, making it more difficult for VTA transit users to park. Please make policy changes or expand lots to accommodate users.
- Off-road bicycle paths should be separated by user type, rather than direction. There should be separate lanes for bikers and pedestrians to avoid accidents. The speed differential makes for a dangerous situation.
- VTA need to improve LTR revenue (fare box return).
- VTA has an image problem.

### **Sunnyvale Neighborhoods (represents neighborhood associations in Sunnyvale), 9/14/15**

Attendance: approximately 20

- Work with private industry to establish a Marguerite-type bus shuttle similar to the one in Palo Alto and provide parking by shuttles.
- VTA park and ride lot near SR 237 (Moffett Park LRT station) is insufficient for shuttle riders.<sup>1</sup>
- Consider implementing a personal rapid transit (PRT) system that can be called up on demand using a mobile app and provide more efficient service.

### **Gavilan College Associated Students, 9/17/15**

Attendance: 5

- Expand bus service to Gavilan past 6 p.m. Many students can't take night classes, which dismiss as late as 10 p.m., because there is no bus service.<sup>1</sup>

## **Joint Venture Silicon Valley Economic Development Alliance, 9/23/2015**

Attendance: 10

## **San Jose Districts 2 and 3 community meeting, 9/28/15**

Attendance: approximately 15 (Most attendees had also attended the 9/24/15 meeting on the East Santa Clara/Alum Rock BRT project.)

- Why should our community give you our tax money when there has been a failure to deliver on the ESC/Alum Rock BRT project?
- Opponents of the sales tax measure will use the ESC/Alum Rock BRT “disaster” against the VTA. How will the VTA respond?
- Will actively oppose 2016 sales tax measure. VTA has history of broken promises to community, including CELR/LTR on Alum Rock/Capitol Expressway; lost businesses during LTR construction through downtown; LTR never made it to Eastridge Transit Center; VTA tried to move Alum Rock BART station to 23<sup>rd</sup> Street; and the current problems (“disaster”) with ESC/Alum Rock BRT.
- BART: More parking needed around 28<sup>th</sup> Street.<sup>1</sup>
- BART: Lack of parking equals lost access to resources. Can VTA work with City to acquire parking at empty lots, as many businesses don’t use all of their lots?<sup>1</sup>
- BART: Concern that U.S. 101 bridge will not be able to handle the weight of the trains.
- BART: Why is VTA building BART when a PRT system would carry 3X the capacity of BART in 20 years?
- BART: What will VTA do to protect businesses during construction?
- BART supporter: Need to add business compensation to the tax measure as part of the “cost of construction.”
- BART: Need to make sure that vibrations from construction don’t damage Five Wounds Church, which is investing \$450,000 in stained glass panels.<sup>1</sup>
- BART: Build above ground.
- BART: Build below ground because “above ground’ will physically divide the community.
- Need to build a wheel and spoke design with VTA that connect LTR past Eastridge and loops it back to Tasman.
- Would Stevens Creek BRT project be funded through the sales tax measure and how does the community provide feedback on this project to VTA?

### **Sunnyvale Sunrise Rotary Club, 9/30/15**

Attendance: 15

- Fund long-range with a gas tax, not a sales tax. There will be pushback when the sales tax reaches 10%.
- Fund smaller community buses that can run more frequently during peak transit times and provide more localized connections from some of the VTA bus routes.
- Express lanes don't work as advertised. At SR 237 and U.S. 101, commute times are higher because carpoolers have trouble entering the express lanes.<sup>1</sup>
- Work in conjunction with an Uber-type system to help commuters make get to and from transit more easily.
- Add more bike racks to buses.<sup>2</sup>
- Install GPS system on buses and build a bus app that enables riders to find out in real-time when buses are arriving at the bus stop; add text alerts when buses break down.
- Develop safer bike routes across freeways to enable bike commuters to get to work (e.g., Wolfe Road to N. Fair Oaks and crossing over U.S. 101).<sup>2</sup>
- Revenue (fare box return) generated by LTR is too low, proving the system isn't broadly used.
- The transit system is too disconnected. Buses to the airport from LTR and BART are not a good solution. Need to connect BART and LRT directly to the airport.
- Sales tax is regressive. Need to find alternatives.

### **Seniors in Retirement (SIRs), The Villages (Branch 114), 10/6/15**

Attendance: 60

- Traffic at SR 85/Cottle Road will be extremely congested after high-density housing complex (Ascent Apartments) is completed. Need to do something to lessen congestion for vehicles entering/exit SR85.
- Need to improve bike corridors, especially over overpasses, and color-code the bike lanes.<sup>2</sup>
- Work with large companies to partially subsidize a bus transportation system that can be used by members of the public as well (e.g., Marguerite shuttle, Palo Alto)
- Make bus service in the Silver Creek area more convenient for riders who want to reach LTR by providing a direct connection to LTR. Bus route 39 currently requires a transfer to get to LTR.<sup>1</sup>
- VTA should consider the equivalent of Google buses to take people to employment centers.
- U.S. 101/Tully Road interchange is bad all day. Southbound traffic at Tully is especially bad.<sup>1</sup>

- Consider a wage tax, not a sales tax, to help fund transportation. This would be fairer to retired people, who are not using the roadways and public transit during commute hours.

### **Seniors in Retirement (SIRs), Los Altos Hills (Branch 51), 10/7/15**

Attendance: 38

- VTA is playing a losing game with public transit. Will not be able to change “car culture.”
- Use a Marguerite-type shuttle system or Google bus system subsidized by private industry in various locations around the county that the public can also use to go to places such as shopping centers and medical centers.
- Use smaller community buses. It’s annoying to see the long, articulated buses on the streets with a handful of people inside.
- Consider imposing a bike registration fee to use bike lanes and paths to help fund long-range projects.
- Consider imposing a vehicle tax based on type of vehicle and weight to help fund long-range projects
- It seems like a lot of LTR riders skip paying their fares. Is this why LTR is being subsidized (fare box return)?

### **Viva Calle Festival, 10/7/15 (downtown San Jose location)**

Approximately: 40 reached

- Spoke with approximately 40 individuals about Envision Silicon Valley and Transportation Challenge beta. Handed out business cards with [envisionsv.org](http://envisionsv.org) URL. Three people completed Transportation Budget Challenge at event.

### **West Metro San Jose Kiwanis, 10/14/15**

Attendance: 15

- With the development along Winchester Boulevard, the VTA will need to add more buses and find ways to alleviate additional vehicle traffic, especially at I-280.<sup>1</sup>
- Once high-speed rail is built in the county, the VTA will need to make LTR and buses easily connect to HSR. Will also need to build connections to the airport.
- The transit system is too disconnected. Buses to the airport from LTR and BART are not a good solution. Need to connect BART and/or LRT directly to the airport.

## **Alameda Business Association, 10/15/15**

Attendance: 18

- VTA is spending money building out a transit infrastructure that is going to be obsolete due to new technologies such as driverless cars.
- Don't restrict The Alameda to two lanes for BRT.
- Focus on transit projects is constraining drivers. Focus on better moving people in their vehicles on city streets, expressways and highways.
- Transit system is not connected; takes too long to use buses and LTR. Example: Individual lives 4 miles from work, which is located on The Alameda. Driving would take 30 minutes in rush hour; transit takes 1.25 hours and requires two buses; biking takes 15 minutes. He bikes to work.
- People will not use transit because it's too slow and cumbersome. VTA needs to look at increasing service on routes people use the most.
- Ensure good coordination when linking transit systems intra-county and make it affordable.
- Transit systems need to be built with elderly and disabled in mind so that it's easy for them and their caregivers to use. Most can't manage multiple elevators, escalators and too much walking in-between transit modes.
- Hope the VTA is learning from the mistakes made on ESC/Alum Rock BRT so that the same problems don't take place on El Camino BRT. Work done in front of businesses on ESC/Alum Rock should be completed block-by-block to limit business disruptions.

## **San Jose State University, 10/20/15**

Attendance: 16

- Expand parking (parking structures) at park-and-ride lots. If people can't find parking, they'll stop using transit. This is a significant problem at Ohlone/Chynoweth. Corporate bus users and adjacent apartment residents are parking in the lots. Enable entry only for transit riders, possibly by issuing dashboard stickers or using gates that require a Clipper Cards to enter. Analyze park-and-ride lot usage and require industry to subsidize the building of parking structures if their employees are parking in the lots. Meantime, stop ticketing people who are parking along the curbs in the park-and-ride lots. Some are students who get to the lots after morning rush because of their class schedules. They are regular transit users and may be issued citations because corporate workers taking advantage of free parking have taken up parking spots. One-third of SJSU students use mass transit because parking near SJSU is too expensive. Don't discourage their usage.
- The three side park-and-ride lots at Ohlone/Chynoweth are not convenient. Need to improve number of space and access.<sup>1</sup>

- Develop bike paths adjacent to the SR 85 corridor.<sup>2</sup>
- Make Clipper Card kiosks and readers easy to find at LTR stations. Don't place them at the far ends, forcing people to walk a distance. Install better signage at the stations and on trains so that people know where to go, and install more machines at stations.<sup>1</sup>
- Add pay station kiosks in downtown San Jose. Put tag readers by pay stations.<sup>1</sup>
- Invest more in social media to reach younger generation who are in their formative years of taking transit, and do not have a car.
- Overhaul VTA's website to make it user friendly. Users want to scroll, not click multiple times, to reach the content they need. Regarding travel planning, users should be able to input their beginning and destination points and be taken to a non-Google map that lists all necessary information: bus routes and LTR options they can take, departure and arrival times, price. Second, make sure links from event sites (e.g., Levi Stadium, SAP, Avaya, Shoreline Amphitheater) link back to a VTA landing page that enables people to easily plan their trip via transit.<sup>1</sup>

### **Seniors in Retirement (SIRs), San Jose (Branch 32), 10/21/15**

Attendance: approx. 60

- Build LTR on SR87 past the Mineta San Jose International Airport, and elevate it at N. 1<sup>st</sup> Street.
- Extend LTR on SR85 between SR87 and I-280.
- Speed up LTR, especially through downtown San Jose.
- VTA should improve customer service at LTR stations (e.g., more help with ticket purchases, boarding trains, help with travel routes/transfers).
- Leverage local brain trust of high-tech companies to develop innovative transit options.

### **Refugee and Immigrant Forum, 10/21/15**

Attendance: 22

### **Evergreen Community Center (seniors), 10/22/15**

Attendance: 60

- Make transit free for seniors age 65+. "We've paid our dues."
- Expand bus service in the Evergreen area, where there are a lot of retired/elderly people.
- Buses need to serve the Edenvale Business Park. Bus routes on Monterey Highway could easily loop into this destination.<sup>1</sup>

- Bring back the Outreach program door-to-door services. “We’re worried about how we’ll get around when we can no longer drive our cars.”

### **Envision SV Community Open House, Mt. View City Hall, 10/22/15**

Attendance: approximately 25

- Too few LTR projects are in the VTP. Need to extend LTR to Valley Medical Center/San Jose City College and to Shoreline Park/Google.
- Extend Caltrain rail service from Gilroy to Morgan Hill and directly to the area where many corporations are located, specifically Lafayette and San Tomas, Tasman, and SR 237.
- VTA has a credibility problem and needs to deliver on previously promised projects, otherwise voters will not pass a sales tax measure. Specifically, VTA should stop deferring projects such as 1) LTR Winchester extension, 2) Eastridge/Alum Rock LTR; 3) San Jose Mineta International Airport people mover, and 4) double track to Gilroy.
- Upgrade service to Levi’s Stadium by 1) initiating separate express trains from the stadium to Mt. View and eventually east to BART to handle crowds at football games and concerts, and 2) eliminating stopping at every single station unless it’s needed. This is frustrating for riders who want to go to Caltrain, or eventually, to BART.
- Reduce the number of drivers by increasing/promoting transit, walking and biking.
- To install greater confidence in the long-range planning process, place expenditure caps on program categories (e.g., 25% cap on sales tax revenue generated for BART).
- Improve speed and lengthen service hours for transit.
- Install BRT dedicated lane on El Camino with protected bike lanes. El Camino is a death trap for cyclists.<sup>2</sup>

### **Envision SV Community Open House, Morgan Hill Library, 10/26/15**

Attendance: approx. 13

- Not in favor of project **R9**, local street improvements (10<sup>th</sup> Street bridge over Uvas Creek in Gilroy). This is a bridge to nowhere that cuts into Christmas Hill Park where we hold the Garlic Festival. Building the bridge would increase traffic by the north end of Gilroy High School and in the surrounding residential area.
- VTA should “get out of people’s pockets and not ask for any money until it gets its own house in order.” Executive staff pay raises are not justified unless there is data that show increased transit ridership.

- Favor South County commuter rail enhancements, including coordinating a commuter bus from Hollister to a rail stop.

**Billy De Frank Vintage Program (seniors), 10/28/15**

Attendance: 16

- Bus service needs to be more frequent (individual could not provide specific routes).

**San Jose City College, 10/28/15**

Attendance: 23

- No long-range planning comments given.

**Santa Teresa Foothills Neighborhood Association, 10/28/15**

Attendance: 34

- Expand lanes on SR 85 to accommodate increased traffic.
- LTR safety and cleanliness needs to be improved.
- BART should be “underground” as much as possible.
- Need smaller buses to travel from South San Jose to downtown San Jose.
- LTR is too slow. “If it were faster, I’d take it more often.”
- Provide earlier Caltrain service from South San Jose toward north part of county. Doesn’t run early enough for those commuting to work from south San Jose. Resident currently has to drive to Tamien LTR station every day to catch LTR to Moffett Field. The need for earlier service will become more acute once the high density housing at Village Oaks and Cottle and Monterey Roads is leased.
- Expand both SR 85 and SR 87. The latter is very congested.

**Foothill Community College Associated Students, 10/29/15**

Attendance: 40

- Add a shuttle between Foothill College and De Anza to accommodate students who take to want to take classes at De Anza. (4)<sup>1</sup>
- Need more bus routes to Foothill Community College.<sup>1</sup>
- Establish reverse commute lanes using movable barriers.

## Envision SV Community Open House, San Jose City Hall, 10/29/15

Attendance: approximately 25

- Project **R83**, Local streets and roads: At the intersection of Great America Parkway and Mission College Boulevard, the GAP bike lane vanishes. Please make the intersection safe for bikers, too.<sup>2</sup>
- Carefully evaluate bike and pedestrian options whenever interchange improvement are on the list because highway/freeway interchanges are hostile and barriers for bikers.<sup>2</sup>
- Please coordinate bike lane additions/improvements whenever pavement maintenance is done.<sup>2</sup>
- Coordinate with cities to evaluate all underground utility projects in conjunction with pavement repairs to avoid tearing up new pavement.<sup>2</sup>
- Please consider bicycle/pedestrian projects above car-oriented infrastructure going forward.<sup>2</sup>
- **Project B1** (Hamilton Ave/Highway 17): Is this intended to only cover the overpass, or would it continue to Bascom, or even to the other segment of bike trails on Hamilton, past Meridian?<sup>2</sup>
- **(Unlisted - Milpitas)**: Coyote Creek Trail would be an excellent way of biking to Milpitas from northern Santa Clara - had there been a decent way of crossing 880, where Dixon Landing Road seems to be the only overpass available, and that road is not in any way bicycle friendly.<sup>2</sup>
- **Project B102** (Newhall Street): Overcrossing over Caltrain tracks would be very nice, but Newhall street itself would need to be improved on both sides of the tracks. On the east side, it would be nice to have a connection to Coleman; west of the tracks, there needs to be a bike lane at least west of Bascom, or a marked alternate route.<sup>2</sup>
- Projects **B118-119** (Bay Trail 9/9B, lower Guadalupe River trail connection and Alviso Frontage): I wholeheartedly support connecting and improving the Bay Trail countywide.
- I support El Camino BRT complete streets/bike plans/grand boulevard. This is my least favorite place to ride in its current state.<sup>2</sup>
- Project **B129** (Kiely bicycle and pedestrian overcrossing): Please also consider making Kiely/Bowers Ave. friendly as well, or maybe instead of Kiely. There is a shared bicycle lane marking there, but I have been honked at, nearly hit, and lectured while riding legally.<sup>2</sup>
- **Project B132** (Benton Street, San Tomas to Lawrence): Passing the high school, and being the one bike unfriendly section of the otherwise pleasant Benton Street, I think this probably is the most important missing piece of bike infrastructure in the city of Santa Clara. I think that if one additionally set up some signage, one could get a bike corridor along Benton, Dunford, Quail, Inverness, Bittern, and Alberta where cyclists can use some bike lanes on Benton, and some designated "official" quiet side streets (Dunford to Alberta) to

get between Santa Clara Caltrain Station in east, and Hollenbeck Ave in west (perhaps even via The Dalles past 85!), without ever going out on the much more heavily trafficked Homestead Road. I have attempted to use this road myself, but always seem to get lost somewhere west of Lawrence.<sup>2</sup>

- **Project B133** (Bowers/Kiely): I'd be glad to see bike lanes instead of sharrows anywhere, but this might be the most high-profile "issue" in the city of Santa Clara.<sup>2</sup>
- **Project B134** (Calabazas Creek Trail): Just wonder why the proposed trail would end at Lochinvar instead of going all the way to Homestead?<sup>2</sup>
- **Project B135** (Lafayette Street): Agnew to Reed: Good start. But past the railroad (between Reed and Warburton) there is only a pedestrian overpass, which isn't very easy to deal with on a bike.<sup>2</sup>
- **Project B96 + B138** (Hedding Street bikeway: Winchester Boulevard to Ruff Street and Pruneridge Avenue from Pomeroy Street to Winchester Boulevard): Could be part of another important east-west bike corridor, and it is already in some parts. The eastern part of Pruneridge and the western part of Hedding are sorely missing, as are bike lanes on Berryessa over I-680. I hope that VTA can facilitate some form of cooperation between Santa Clara and San Jose when it comes to bike corridors crossing the city border.<sup>2</sup>
- **Project B139** (San Tomas Aquino Creek Trail, El Camino Real to Homestead): Would make the presently southernmost segment between Cabrillo and El Camino Real much more useful. The intersection San Tomas Expressway and El Camino Real is not where I prefer to bike, so I always choose to leave the trail at Cabrillo instead.<sup>2</sup>  
The trail is however still listed as "park", and thus officially closed after sunset, which devalues the whole trail. I hope there is still work done on getting it more usable for commuters.
- **Project B149** (San Tomas Aquino Creek Trail & Agnew Street): I'm glad that you are looking at redoing that intersection!<sup>2</sup>
- **Project "Unlisted"**: Favor "Bike Share" bikes in Santa Clara: at Santa Clara Caltrain Station, the Amtrak station at Tasman, Santa Clara University.<sup>2</sup>
- **Project unlisted** (Brokaw Road): If the tunnel under the Caltrain tracks are to appear at the end of Brokaw, as I've understood the plans, there would be a need for bike and pedestrian access along Brokaw as well, at least as far as Coleman.<sup>2</sup>
- **Project T25** (Mineta San Jose International Airport APM connector): Ten stops running way before the last flights to the airport lands in the evening. Could the operating hours be extended so as to cover the last flights as well?
- Adjust bus schedules so as to make it easier to transfer, and so that one can be at least somewhat certain that, extraordinary circumstances aside, it will be possible to reliably get to the other bus or train before that departs. This is important for anyone who needs to do a transfer as part of his or her commute. This would also include cases where the two buses stops at "different" stops in

- the same intersection (e.g. if one runs east-west and the other north-south).<sup>1</sup>
- Coordinate arrival times to train stations to fit Caltrain. Arrive early enough for transfers to the train, depart late enough to facilitate transfers from the train.<sup>1</sup>
  - Extend bus coverage. I would likely be better served, for example, by one bus every 20 minutes on one street, plus one bus every 20 minutes on a parallel street, than by one bus every 10 minutes on the first street and nothing on the parallel street.<sup>1</sup>
  - The route that I would see benefit from would be a new bus route on Homestead Road, in particular from the Santa Clara Caltrain station/Benton Street via Santa Clara Central Library (and park), Kaiser Hospital, and the new Apple campus, to Grant Road/Foothill Expressway, and possibly even along Foothill Expressway to Palo Alto, as an alternative to bus route 22/522.<sup>1</sup>
  - **Project T6 (Express Bus Highway Stations):** I am intrigued by this project and hope that we will get to see such a system in use one day.

#### **Saratoga Senior Center, 11/4/15**

Attendance: 28

- Improve bus and LTR transportation for seniors.
- Prefer to see buses on SR 85 instead of express lanes or LTR.
- Increase bus service in Saratoga, including transportation for seniors to grocery stores and shopping.
- Improve coordination of transportation services regionally and across counties (i.e., San Benito and San Mateo counties).
- Fix choke points along SR85, such as at I-280 (2).
- Add crosstown community shuttles for seniors. This will help with senior mobility/quality of life and will also relieve congestion on the roadways.
- Provide more funding/grants for senior transit/transportation services. This would be helpful to communities that are more spread out and where seniors have difficulty accessing VTA public transit along the main arteries.
- Work with the City of Cupertino to ease the congestion that will be caused when the new Apple campus opens.

#### **Envision SV Community Open House, Town of Los Gatos Council Chambers, 11/4/15**

Attendance: approximately 30

- Reduce the noise on SR 85. I live next to the sound wall near Saratoga Creek and the highway noise is unbearable. Please investigate a variety of affordable noise mitigation solutions, including installation of a canopy, solar panels stacked up along the sound walls, noise absorbing materials, or raising the sound wall height.<sup>1</sup>

- Do not add any lanes to SR 85. Mass transit is needed on the corridor and want to see an EIR first.
- Will actively oppose express lanes on SR 85. A better use of money would be extending the Winchester LTR down the SR 85 median.
- The West Valley does not want express lanes or any additional lanes on SR85. This breaches the Performance agreements with Los Gatos and several West Valley cities. Remove the project from the long-range planning document if you want residents in the West Valley to vote for a sales tax measure. (approximately 5)
- Add mass transit on SR 85 through the West Valley.
- 85% of sales tax receipts are funding projects in the City of San Jose. West Valley votes for sales tax measures but doesn't see enough benefit coming to projects we want. Wants to see EIRs on all projects placed on the ballot measure.
- Businesses are being destroyed by BRT, which is not attractive to businesses wishing to locate here.
- Express lanes on SR 85 will increase noise and pollution without alleviating long-term traffic congestion. It also violates the performance agreement that VTA signed with the Town of Los Gatos. The SR 85 median should be preserved for LTR. (several)
- Express lanes are environmentally irresponsible because they will add to the noise and pollution. It is financially irresponsible to spend \$181M on a project that VTA admits will be obsolete in 8-12 years. This proposal also breaches the performance agreement signed with the Town of Los Gatos and other West Valley cities. (Resident also provided copies of signed petitions against express lanes consisting of approximately 61 names collected in 2015.)
- If sales tax measure is too vague, West Valley residents won't vote for it and will be difficult for you to achieve the required two-thirds vote.
- Buses need to run later in the evening. It's too difficult for people who are coming home late to find a connecting bus from the Winchester LTR line into Los Gatos.<sup>1</sup>
- Use a drone equipped with a camera to get a true picture of traffic congestion and traffic-use patterns.

### **Almaden Valley Rotary Club, 11/5/15**

Attendance: 16

- SR85 at Cottle Road will be a traffic nightmare when the high-density housing is completed. There needs to be a plan to handle the increased traffic on SR 85.
- Extend LTR to Mineta San Jose Airport.
- Why does LTR often run empty except just before and after sporting events? Isn't LTR one of the most heavily subsidized transit systems in the country? Why does VTA operate it at such a loss (fare box return)?

**Morgan Hill Senior Center, 11/6/15**

Attendance: 80

- Improve bus service to senior mobile home parks in Morgan Hill, 850 W Middle Ave., and Hacienda Valley Mobile Estates, 275 Burnett Ave. It is impossible for non-driving residents to access VTA buses because the closest bus stop is too far away. Many seniors have limited mobility and cannot walk more than 1-2 blocks. (2)<sup>1</sup>

**Cupertino Chamber of Commerce, Legislative Affairs Committee, 11/6/15**

Attendance: 15

**Milpitas Community Breakfast, 11/7/15**

Attendance: 9

- Re-install the bike path along the north side of SR 237 from Milpitas to Sunnyvale between Zanker Road and Great America Parkway to make it continuous. The break in the bike path forces cyclists to the south side and into automobile traffic between Zanker and First Street, where a south side bike path can be accessed.
- VTA should provide factual counter-arguments regarding a personal rapid transit system, rather than being dismissive of the project.
- I will vote against any tax measure that extends the current failed system. The current system demands that future business/residential development be controlled to make it work. This will result in ineffective expenditures just to make it work. VTA is ignoring the future of technology, which will be driverless cars. VTA will need to be able to pick up people at their homes or businesses by driverless electric vehicles. Street parking will not be needed, which will free up street area and require no additional infrastructure. No expensive busses that are driven around empty or nearly empty would be needed. The vehicles could be purchased by investors and rented on an as-needed basis.
- Use creativity in finding alternative taxing options to fund transportation (e.g., gas tax, pollution fees charged to corporate polluters, county surcharge on foods that are “unhealthy”).
- Build a PRT, which will be more cost-effective than BART. (2)

**The Fountains, Mt. View (senior apartments/Mid-Peninsula Housing), 11/9/15**

Attendance: 8

- No long-range planning comments given.

**Shorebreeze Apartments, Mt. View (seniors/ Mid-Peninsula Housing), 11/9/15**

Attendance: 6

- Transportation service (e.g., to hospitals, shopping) for seniors is inadequate.
- Need to coordinate senior transit services with San Mateo County because some seniors travel to Redwood City for appointments.
- Santa Clara County's Outreach services are insufficient: It takes too long to request a ride and one cannot always be provided. Please provide ride service for seniors.

**Seniors in Retirement (SIRS), San Jose (Branch 94), 11/12/15**

Attendance: 85

- No long-range planning comments given.

**Envision SV Community Open House, Grace Lutheran Church, 2650 Aborn Rd., 11/12/15**

Attendance: 10

- The long-range plan does not list any projects for the Evergreen area, but this neighborhood needs better transit connections! We have over 18,000 students that live in this area that need transit connections to their colleges.
- LTR to the Eastridge Transit Center is an essential project for the east side of San Jose. It is crucial to restoring the business community and providing service to low-income residents along the corridor.
- Limited transit service (LTR, bus, train) to the Evergreen area is a huge problem.

**Gilroy Chamber of Commerce, Government Review Committee, 11/13/15**

Attendance: 15

- The Envision Silicon Valley goal to "enhance safety" seems so obvious as to be a given. Why would you actually call this out as a goal? Shouldn't safety be assumed?

### **Paulson Park Apartments (senior apartments/Mid-Peninsula Housing), 11/19/15**

Attendance: 21

- Make transit free for seniors. Some won't ride now because they don't want to spend the money, but it's healthy for them to be active. Consider having a "free day" every week for seniors if you can't eliminate fares.
- More transit needed for seniors.
- Consider adding weekend bus service to high-density senior residential areas (e.g., bus route 34) because many want to do their shopping during this time.<sup>1</sup>

### **Jewish Community Group, The Villages, 11/20/15**

Attendance: approximately 35

- Fix/improve the I-880/U.S. 101 interchange.
- Consider adding a bus route from The Villages (Evergreen area) that goes directly to the closest LTR stop (Capitol), rather than requiring a bus transfer (2).<sup>1</sup>
- Increase frequency of bus service to The Villages.<sup>1</sup>
- Encourage private employers to provide bus transportation for their employees.

### **Oshman Jewish Community Center (senior programming), 11/24/15**

Attendance: 17

- Provide bus service directly to Oshman JCC via bus route 35, rather than requiring a transfer to bus route 88. Transfer waiting times are too long and most people choose to walk, rather than wait, leading to a situation where students and elderly are crossing a dangerous intersection at E. Charleston and Middlefield roads. Oshman has expanded in the past few years and draws a lot of people. A secondary issue: Bus route 88 that has a stop in front of Oshman does not run on the weekends when many people use the facility.<sup>1</sup>
- Make a direct and convenient bus connection from Oshman JCC to downtown Palo Alto and to San Antonio Road in Mountain View to improve access to shopping.<sup>1</sup>
- Bring LTR or BART directly to the Mineta San Jose International Airport.

### **San Jose Downtown Kiwanis, 11/30/15**

Attendance: 24

- BART is long overdue.
- Establish reverse commute lanes using movable barriers to relieve congestion during peak use times.

- Impose a bicycle registration fee. Bike lanes sometimes restrict the number of car lanes, and thus cyclists should be required to pay for usage. (2)

**Wheeler Manor, Gilroy (senior assisted living), 12/3/15**

Attendance: 25

- Need public transit (both buses and shuttles) that can accommodate scooters being used by seniors.<sup>1</sup>
- Residents would like to see more frequent bus service (every 30 minutes) on weekends and holidays.<sup>1</sup>

**South County Collaborative, 12/10/15**

Attendance: 30

- Bus service needed to businesses, Gilroy Unified School District and Kaiser, all located on Arroyo Circle. Nearest bus service requires a 1.3-mile walk from Monterey Road near Martin Street.<sup>1</sup>
- Bus service needed along Lucretia Avenue. The distance from the last bus stop at Tully and Sherlock to Work2future offices at 2072 Lucretia is a long half-mile walk through a high-crime area with gang activity, and is unsafe for walking.<sup>1</sup>

**Seniors in Retirement (SIRS), San Jose/Westgate (Branch 125), 1/19/16**

Attendance: 120

- Institute a bicycle license fee to help offset the cost of on- and off-road bike network improvements (several).
- Bicycle lanes take too much space away from vehicle lanes.
- Express lanes are unfair from socio-economic perspective. They favor higher-income individuals who can afford to pay.
- Against dedicated bus lanes for El Camino BRT. Removing a car lane in each direction is too much.
- Consider a street approach similar to Copenhagen, Denmark. There is no parking on city streets to accommodate bikes and public transportation.

**Seniors in Retirement (SIRS), Peninsula (Branch 5), 1/27/16**

Attendance: 48

- Against El Camino BRT. If dedicated bus lanes are established, there do not seem to be many alternative routes that parallel El Camino through Palo Alto and Mountain View. Alma Street/Central Expressway are already heavily traveled.<sup>1</sup>

- Why should north county voters support a sales tax measure when the area only received 5.3% (according to Rep. Simitian) of the proceeds from the 2000 tax measure?<sup>1</sup>
- Light rail from Mt. View to downtown San Jose has too many stops. VTA should consider adding express trains with limited stops.<sup>1</sup>
- Digital signs at light rail stations show anticipated, rather than actual arrival times. The technology should be upgraded to show real-time information. People without mobile devices or who wish not to use their data allowance will not be able to access mobile apps with this information. VTA Customer Service provides scheduled, not real-time arrival information, and if one calls after business hours, there is no way to obtain the information. VTA should consider adding Wi-Fi access at stations.<sup>1</sup>
- VTA should be ashamed of its farebox return. It is unacceptable and needs to be addressed.
- There seems to be no coordination between buses and light rail (e.g., Caltrain Mt. View station). The connection waiting times are too long. VTA needs to develop a more efficient system.
- VTA should consider introducing door-to-door shuttles in its long-range plan.

#### **Seniors in Retirement (SIRS), San Jose (Branch 39), 3/14/16**

Attendance: 44

- I use VTA Outreach, which is an excellent service, and am very appreciative of it. I can't drive and have trouble walking.
- VTA should consider a UBER-type on-demand transportation system, rather than invest in BART, more buses and LRT. Likes the FLEX concept.

#### **Seniors in Retirement (SIRS), Los Gatos (Branch 141), 4/18/16**

Attendance: 55

- Sales tax is regressive, affecting low-income individuals the most. Prop 13 should be reformed so that businesses pay for their fair share, and some of these monies should be used for transportation improvements. Business and industry are the major beneficiaries of transportation improvements, which help their employees get to work. They should rightfully carry a larger share of the costs.
- The transit system, especially light rail, takes too long. It's better to eliminate light rail altogether and invest more resources in bus transit, which is inherently more flexible and can meet changing commute patterns and development.
- Question about transit subsidies/fare box return.
- The Metropolitan Transportation Commission should have "teeth" that enable it to enforce sensible land use policies that complement transit.

- Question asked about the status of SR 85 Express Lanes and mass transit options
- Doubts that 1,200 parking spaces at the Milpitas BART station will be enough. Where are people supposed to park if the spaces are all taken?

### **South Bay Engineers, 4/1/16**

Attendance: 34

- No Envision-related comments submitted. Several general questions about BART asked.

### **Silicon Valley Independent Living Center (SVILC), 4/7/2016**

Attendance: 20

- Accessibility to and from transit extremely important for disabled. Sidewalks in disrepair or with overgrown vegetation create obstacles that limit mobility. (4)<sup>1</sup>
- Are there areas prioritized for funding for sidewalk repair? Complete Streets are of high importance to disabled. We understand that sidewalks are each city's responsibility, but what can VTA do to address these issues? (2)
- Some bus drivers start driving before a disabled person has completely sat down or secured their seat belt restraints.<sup>1</sup>
- VTA should use locking mechanisms that people in wheelchairs can back into to secure their chairs, rather than belt restraints, which can be difficult to use.<sup>1</sup>
- Please provide free transportation for people with disabilities, as many don't have extra money to spend on it.<sup>1</sup>
- Provide first- and last-mile transportation to riders who have mobility issues getting from their homes to a bus station.<sup>1</sup>
- Transportation and housing are inextricably linked. Future transit-oriented developments should include a significant proportion of affordable housing.
- VTA needs more Rapid or Express buses and greater frequency between Gilroy and San Jose, with stops in San Martin and Morgan Hill.<sup>1</sup>

### **Let's Get Moving Summit/TRANSFORM, 5/7/15**

Attendance: 12

- For BART Phase II, eliminate Diridon BART station and use the money saved on station construction, operations and maintenance on Caltrain service improvements.
- There needs to be affordable, high-density housing built along transit lines to encourage mode shift from cars to transit and to optimize the investment.
- Bus network should consider coverage as an important component. All residents have to be served. This will be a critical as the population ages.<sup>1</sup>

**Stanford University (Students for a Sustainable Stanford), 5/19/16**

Attendance: 13

- Support projects that seek to provide more affordable transportation to low-income people and improve safety.
- Like VTA's efforts to make much-needed investments in transit reliability and frequency, first-and-last mile connections, and bike/ped improvements. However, the inclusion of highway and expressway funding is baffling. VTA's own analysis shows these projects have the lowest technical scores, and increase both VMT and pollution. We can't build ourselves out of congestion and road projects disproportionately benefit those who are economically privileged. Please divert some of the highway and expressway funding to areas that will most benefit the environment and help our most vulnerable citizens. Increase spending on transit operations, mobility improvements, senior/disabled/low income programs, first and last mile connections and bike/ped.
- Supports more funding for prioritizing core bus networks and programs to improve accessibility for seniors, students, disabled, and low-income. Funding should help put the Bay Area back on track to aggressively cut carbon emissions to reach climate action goals. <sup>1</sup>
- Please increase investment in fare subsidies for low-income, seniors and students. There should also be transit-oriented development funding that provides incentive for affordable housing construction.
- Excited about the potential measure. Would like to see better pricing policies for Caltrain and BART to make them more affordable for low-income people, along with a category of student pricing extended to college students. We really struggle to pay since we don't earn incomes.
- Need more complete, frequent and affordable coverage for low-income workers. It is absurd to have people forced into long commutes to travel between affordable housing and low-paying jobs in the county. This perpetuates the cycle of poverty, especially when people have to spend 25% of their income on transportation.

**Santa Clara County Public Health Department, Traffic Safe Communities Network, 5/20/16**

Attendance: 14

- The Envision process with stakeholders was commendable and thorough. I didn't realize everything that went into transportation planning until I became a stakeholder.
- Complete Streets programming needs to get at the mindset of drivers and encourage them to be more mindful.

- If the sales tax measure were not to pass, would we be able to fund BART Phase II?

### Next Door (online posts)

- Four anti-tax comments.
- Before you ask me for more of anything, including my opinion, can you please provide an overview of your plan with an interlock with the City of San Jose and their "transit" community plan? I see lots of projects here: <http://www.vta.org/transparency/capital>, but no strategy as to how you will be increasing capacity, improving performance and providing the services needed for the planned growth in employment in the area. The fact that it takes over an hour to go from home to a light rail station in Santa Teresa to travel to a building in N. San Jose (a non-rush hour drive of 22 minutes) is a failure in design and execution. Have any of you tried to take Amtrak or Caltrain and attempt coordinate with light rail or the buses? Major failure. Getting aggregate information from local employers as to the number of employees and where they live (street name/city), looking at sig alert data and planned high-density developments, you can use basic (open source) analytic tools to analyze where we have serious traffic and capacity issues today and plan for the future. How about creating a multi-agency plan with a hub-and-spoke model where schedules are coordinated and people have efficient options for mass transit? Bring that to a meeting and I'll be happy to prioritize and give up my time with my family to attend. (Los Paseos)
- I want high speed rail (with Wi-Fi) that is either above or below ground, so it doesn't hit a car or pedestrian every other week, and it needs to run from Almaden to SF. (Kooser)
- Caltrain already routinely turns away cyclists during rush hour because it's overcapacity. Caltrain is packed and is just going to get worse. Even the electrification won't be enough with how much growth we're experiencing. I don't dispute that mass transit alongside Stevens Creek/280 would also be good, I don't see how BRT would interfere with that though. El Camino still desperately needs options other than driving. BRT seems like a good intermediate option since it doesn't sound like separated grade rail (or any rail, really) is realistic in the near future.
- There is a "lack of trust" between the public and VTA over issues such as express lanes.
- I would build rapid transit where people actually go, such as down freeways, instead of zigzagging through areas where no one rides. I have never seen VTA rail cars with more than a couple of riders on board. As long as we are talking "stupid", how about the four lanes off I-880 to go to Stevens Creek and only one lane going to both north and south I-280? How much was someone bribed by

the retailers at Santana Row and Valley Fair to do all that work and not alleviate any back up to I-280?

- Governor Schwarzenegger signed into law a massive \$6 billion construction project to extend a full four-lane freeway from U.S. 101 south past Casa De Fruita. About 30,000 cars make this commute twice a day, every weekday. I'd like to see this project completed. It would do wonders to relieve congestion in and around Gilroy and Morgan Hill. It would also provide numerous jobs and would make that cut-off much safer for travelers.
- We pay our taxes with full earnestly, but use 0% of transportation service. Just because it is not easily accessible where we live. The ultimate goal should be to help all in an efficient and intelligent manner. Maybe create some on demand service. I have been to other countries where the bus service is so wonderful. Here, the land is large and the accessibility is poor. Really appreciate you hearing our concerns. (Inspiration Heights neighborhood)
- Expand the light rail down to Gilroy. This would greatly help reduce the currently excessive traffic on 101 between Gilroy and 85 Also, extend the light rail into the Cupertino area. Preferably under Apple's new complex. That would reduce traffic in this area as well. (Country Estates, Gilroy)
- I believe changing times bring varied needs. The most traveled routes already have good transportation, but the question is how we can help provide good transportation to needy people in remote areas. Not everyone can live near El Camino Real. Can we come up with novel concept to help elderly people and kids get help commuting around to activities? They are helpless and unfortunately depend on the driving family members to take them around. How can we provide good, safe, affordable transportation to those in need on a regular basis is the question. This will help reduce cars on road constantly used for dropping kids and elders around. (Inspiration Heights neighborhood)
- The proposed 30-year tax to pay for transportation improvement programs in the Santa Clara County looks great. This program is divided into 3 sections, (1) roads repave, (2) new construction and (3) public transportation. Resurfacing Hwy 156 between Santa Teresa Blvd and Monterey Rd in Gilroy should be the top priority. This section of Santa Teresa Blvd does not have a public transportation to serve new home owners from a large home construction projects (200 townhomes, 1500 homes, 100 homes). (Eagle Ridge, Gilroy)
- Vote NO on this tax increase proposal.
  1. Our taxes are already one of the highest in the nation.
  2. We should be limiting the number of people by city to match resources (including water, electricity, roads and public transportation)
  3. Our current usage of public transport like buses and VTA is already underutilized. An incentive to use the systems currently in place should be created. For example, a tax credit for using public transportation. (North Los Altos)

- Everyone is currently contributing to transit and would be chipping in even more. There are many thousands of people who live outside of main VTA route corridors who depend on transit, who don't live in areas that would retain transit access under your 90-10 and 80-20 Next Network proposals. It would be wrong to strip them of lifeline transit services, isolating them completely from the outside world, at the same time that you are receiving more tax dollars than ever from them.<sup>1</sup>
- Fix the potholed roads. If you have 6 billion dollars to spend, how about fixing the broken down cow paths that are mistakenly called "roads?" Especially the freeways which are absolutely horrible. (Sepulvada/Pedro Loop)
- Bus routes should work for the local communities they serve. Design what locals would like to use. Coordinate with BART and Caltrain for the longer commutes and link in the local solution. I really like Mt. View's Google bus approach- wish it connected to Los Altos and Palo Alto and Sunnyvale. It could then be used for going to exercise, doctor appointments, grocery shopping, the movies, etc. Then have a hub for connecting to other community hubs. (North Los Altos)

**Total Audience: Approximately 1,764 people (includes 365 from joint meetings with TJ and excludes Next Door)**

**Total comments: Approximately 345 (includes Next Door)**

**Legend:**

(#) Number of comments submitted on topic.

<sup>1</sup> Forwarded to Customer Service or appropriate VTA staff

<sup>2</sup> Provided to Lauren Ledbetter, VTA, for Countywide Bicycle Plan Update

**DAVE CORTESE**  
**PRESIDENT, BOARD OF SUPERVISORS**  
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June 1, 2016

Nuria Fernandez, General Manager  
VTA Board of Directors  
VTA River Oaks Campus  
3331 N 1st St, San Jose 95134

Re: Measure A Project Funding

Dear General Manager Fernandez and VTA Directors,

During the VTA Board meeting on June 2, you will be asked to consider an appropriation for Eastridge Light Rail. The purpose of this correspondence is to urge you to support the item as well as consider performing a funding study to determine final appropriations for this project. This item will take an initial step toward fulfilling a promise that was made during two previous ballot measures. The residents in this area have been waiting patiently for the VTA Board to fulfill its long-standing promise to bring light rail to the area, and connectivity to the rest of the region.

The corridor that will be served by this project holds the largest and densest set of Communities of Concern in Santa Clara County. A large proportion of the people who live here are transit dependent. This project will better support their ability to remain self-sufficient by providing opportunities to get to work, expanded educational opportunities through access to schools, and improve their health through access to healthcare, healthy foods, and parks.

VTA touts that "Where transit goes, communities grow." Few areas in Santa Clara County are in such need of the economic push accompanying transit and the region the will be served by the Eastridge Light Rail Project. I urge you to support the staff recommendation to put \$50,000,000 into land acquisition and utility relocation to support the Eastridge Light Rail Project. As a member of the VTA DTEV PAB I was advised earlier this week that a full funding decision could be entertained at the end of the calendar year subject to the final project budget for the Berryessa BART extension. I would respectfully request BART project accounting be agendized (today) for the December 2016 VTA board meeting for the board's consideration as it relates to remaining funding capacity for Eastridge LRT.

Sincerely,

Dave Cortese,  
President, Board of Supervisors  
Santa Clara County

Roland Lebrun

May 31<sup>st</sup> 2016

VTA June 2<sup>nd</sup> Governance and Audit Committee Meeting  
 Agenda item 5 Caltrain PCEP 7-party MOU

Dear Honorable Chair Chavez and members of the VTA Board of Directors,

The intent of this letter is to alert the VTA & SFCTA Boards and the Metropolitan Transportation Commission to potential budget and funding issues with the Peninsula Corridor Electrification Program (PCPEP) as well as significant conflicts with major capital projects including BART and High Speed Rail.

## 1 Budget Issues

The PCEP consists of three components:

### Budget was revised in 2016

- ▶ **New Budget of \$2.221 billion**
  - Results of 2014 cost estimate study
  - Bids received for both Electrification and Vehicles contracts

Early Investment Program Costs (in \$ millions)	2012 MOU	2016 MOU
CBOSS/Positive Train Control	\$231	\$231
Electrification	\$785	\$1,253
Vehicles - Electric Multiple Units	\$440	\$727
<b>TOTAL</b>	<b>\$1,456</b>	<b>\$2,211</b>



1.1 Communications-Based Overlay Signaling System (CBOSS) \$231M.

Caltrain’s latest Quarterly Capital Project Report shows that this system is currently:

- **\$14.3M over budget** (as of March 31 2016)
- **Over 3 years behind schedule** (FRA safety certification rescheduled from September 2015 to December 2018)

[http://www.caltrain.com/Assets/ Finance/Quarterly+Capital+Program+Status+Report/JPB/FY16+Q3+JPB+Quarterly+Report.pdf](http://www.caltrain.com/Assets/Finance/Quarterly+Capital+Program+Status+Report/JPB/FY16+Q3+JPB+Quarterly+Report.pdf) pages 10-11

1.2 Electrification of 51 route miles \$1,253M (**\$24.5M/route mile**)

**It is unclear why electrifying Caltrain between San Jose and San Francisco should cost 5-10 times as much as electrification between Boston and New Haven:**

*“Cost to design and install high speed rail electrification system from Boston, MA to New Haven, CT (primarily two track mainline railroad) was approximately **\$2 million per mile** (contract cost) but nearly \$4 million per mile (according to the federal auditor’s review)”*  
<http://www.reconnectingamerica.org/assets/Uploads/bestpractice101.pdf> (page 4: average costs).

1.3 Procurement of 96 vehicles – Electric Multiple Units (EMUs) \$821.1M (**\$8.5M/vehicle**)

There is a \$94.1M discrepancy between the May 25 presentation to the SFCTA CAC and the FY17 Capital Budget which will be presented to the Caltrain Board on June 2<sup>nd</sup>.

- The cost of electrification dropped by \$93.5M (\$1,253M - \$1,159.5M)
- **The cost of the 96 EMUs increased by \$94.1M (\$821.1M - \$727M)**

ii. CALTRAIN MODERNIZATION						
18	Electrification	12 - 13	Raja Viswanathan	1,159,500,000	99,142,587	139,512,533
19	EMU Procurement	12 - 15	Raja Viswanathan	821,100,000	44,828,000	67,684,548
				207,197,081		

- **The average cost of Caltrain EMU railcars is nearly triple that of recent contract awards (\$3.0M/railcar vs. \$8.5M for Caltrain).**

Client	Manufacturer/Model	Year	Contract (\$M)	#units	Unit cost	
SNCF Lux	Stadler KISS	2010	\$84	24	3.49	<a href="http://www.railway-t">http://www.railway-t</a>
Deutsche Bahn	Bombardier Twindexx	2011	\$483	137	3.53	<a href="http://www.railway-t">http://www.railway-t</a>
Deutsche Bahn	Bombardier Twindexx	2012	\$210	64	3.28	<a href="http://www.railway-t">http://www.railway-t</a>
STIF & SNCF	Bombardier Omneo	2015	\$442	168	2.63	<a href="http://www.railway-technol">http://www.railway-technol</a>
AeroExpress	Stadler KISS	2016	\$205	62	3.31	<a href="http://www.railway-technol">http://www.railway-technol</a>
SNCF	Bombardier Omneo	2016	\$38	16	2.38	<a href="http://www.railway-technology.co">http://www.railway-technology.co</a>
<b>Caltrain</b>	<b>???</b>	<b>2016</b>	<b>\$821</b>	<b>96</b>	<b>8.55</b>	

## 2 Funding Issues

### Supplemental MOU Funding Plan

Program Funding by Source ( <i>in \$ millions</i> )	2012 MOU	2016 MOU
PCJPB Member Agency Contributions	\$180	\$240.0
JPB Local (San Mateo County Transportation Authority)	\$11.0	\$20.0
Caltrain PTC	\$4.0	\$4.0
<i>Subtotal Local</i>	<i>\$195.0</i>	<i>\$264.0</i>
Prop 1A Connectivity	\$106.0	\$106.0
Prop 1A High Speed Rail Authority	\$600.0	\$600.0
CHSRA Cap & Trade/Other		\$113.0
Cap & Trade TIRCP		\$20.0
Prop 1B Caltrain	\$24.0	\$24.0
<i>Subtotal State</i>	<i>\$730.0</i>	<i>\$863.0</i>
Federal Rail Administration (FRA)	\$17.0	\$17.0
FTA/FHWA prior/current obligations	\$45.8	\$45.8
FTA future obligations	\$440.0	\$315.0
FTA Core Capacity		\$647.0
<i>Subtotal Federal</i>	<i>\$502.8</i>	<i>\$1,024.8</i>
MTC Bridge Tolls	\$11.0	\$39.4
BAAQMD Carl Moyer*	\$20.0	\$20.0
<i>Subtotal Regional</i>	<i>\$31.0</i>	<i>\$59.4</i>
<b>TOTAL</b>	<b>\$1,458.8</b>	<b>\$2,211.2</b>



#### 2.1 PCJPB Member Agency Contributions \$240M

These contributions can be eliminated by bringing electrification and EMU procurement in line with more realistic cost estimates (total savings in excess of \$1B)

#### 2.2 Prop 1A High Speed Rail Authority \$600M

##### The PCEP as envisaged by Caltrain does not qualify for Prop 1A Bonds

- The PCEP terminates at 4<sup>th</sup> & King instead of Transbay (Streets & Highways Codes Section 2704.04 (b) (2)).
- 79 MPH speed limit makes it impossible to achieve a travel time of 30 minutes or less between Diridon and Transbay (Streets & Highways Codes Section 2704.09 (b) (3)).
- The PCEP does not support 12 trains/hour (Streets & Highways Codes Section 2704.09 (c)) (<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=shc&group=02001-03000&file=2704.04-2704.095>).

## 2.3 CHSRA Cap & Trade/Other \$113M

Risk: Cap & Trade revenues are “uncertain” at best and could be declared illegal by the Courts.

## 2.4 FTA Future obligations \$440M

**This is currently the only guaranteed source of funding for the EMUs.** SamTrans plans to “borrow” \$125M of this funding on the assumption that they can “make good” if/when they succeed in securing a \$647M FTA Core Capacity grant in the fall.

**Q1: What is the backup plan if the grant does not come through?**

**Q2: Why is Caltrain “borrowing” \$125M for SOGR when there is less than \$25M SOGR in the FY17 Capital Budget?**

i. SOGR						
<b>Right of Way / Signal &amp; Communications</b>						
1	Grade Crossing SOGR - Design - FY17	13	Robert Tam	380,000	0	76,000
2	Grade Crossing SOGR - Phase II - FY16	13, 16	Robert Tam	2,499,000	360,000	669,466
3	Los Gatos Creek Bridge Replacement	14, 15, 16	Parand Maleki	33,847,800	23,302,000	7,295,800
4	Marin St. Bridge Rehabilitation and Napoleon St. Bridge Replacement	13 - 16	Bin Zhang	3,000,000	1,364,000	1,000,000
5	Track SOGR - FY17	16	Pedro Gutierrez	9,663,000	0	3,000,000
6	PA Upgrades	13 - 16	Robert Tam	1,073,000	0	488,000
7	Railroad Communication System SOGR - FY17	13	Uhila Makoni	1,075,000	0	442,000
8	Signal Rehab - FY17	16	Hubert Chan	1,210,000	0	900,000
						<b>13,871,266</b>
<b>Rolling Stock</b>						
9	F-40 Mid Life Overhaul	16	David Bennett	6,300,000	4,000,000	2,300,000
10	Bombardier Technical Spec. Mid Life Overhaul	11	David Bennett	183,642	0	183,642
11	Gallery Spec Mid Life Overhaul	12	David Bennett	183,642	0	183,642
12	F-40 SEP-HEP Replacement - FY17	16	David Bennett	2,745,000	223,865	2,130,000
13	F-40 Locomotive SOGR project - FY17	16	David Bennett	1,254,199	0	1,254,199
14	Main Engine Rebuild (F40 Inframe Overhaul)	16	David Bennett	1,350,000	0	945,592
						<b>6,997,075</b>
<b>Station &amp; Intermodal Access</b>						
15	Station Enhancements and Renovations	13 - 19	Rob Scorpino	780,000	0	600,000
16	Sunnyvale Station Platform Rehabilitation	16	Rob Scorpino	1,300,000	650,000	550,000
17	Systemwide SOGR Stations - FY17	13 - 19	Rob Scorpino	950,000	0	300,000
						<b>1,450,000</b>

### 3 Conflicts with major Capital Projects

It is unclear how Caltrain proposes to operate an electrified system during construction of the following projects:

- Caltrain Downtown Extension (DTX) to Transbay
- Reconstruction of Diridon station throats and platforms, including BART interface
- South San Francisco station expansion (4 tracks)
- Bayshore station relocation (6 tracks)
- Hillsdale station expansion (4 tracks)
- High Speed Rail track realignments (smoother curves, 80 MPH turnouts)
- High Speed Rail capacity improvements (passing tracks)

### Recommendation

Delay Caltrain electrification until all capital projects affecting the right of way have been completed

Sincerely,

Roland Lebrun

CC

VTA Board of Directors

SFCTA Board of Directors

MTC Commissioners

Caltrain Board of Directors

TJPA Board of Directors

High Speed Rail Authority Board of Directors

SFCTA CAC

Caltrain CAC

Caltrain BPAC

TJPA CAC

**From:** Board.Secretary  
**Sent:** Tuesday, May 31, 2016 10:49 AM  
**To:** VTA Board of Directors  
**Subject:** VTA Correspondence: Making a Successful LRT-Based Regional Transit System

**VTA Board of Directors:**

We are forwarding you the following at the request of the State Route 85 Corridor Policy Advisory Board:

<b>From</b>	<b>Topic</b>
VTA	Making a Successful LRT-Based Regional Transit System

Thank you,

VTA Office of the Board Secretary  
Santa Clara Valley Transportation Authority  
3331 N. First Street  
San Jose, CA 95134  
[board.secretary@vta.org](mailto:board.secretary@vta.org) (e-mail)  
(408) 321.5680 (telephone)  
(408) 955.0891 (fax)



SANTA CLARA

**Valley Transportation Authority**

3331 North First Street • San Jose, California 95134-1906

## MEMORANDUM

**Date:** May 25, 2016

**To:** VTA Board of Directors

**From:** Steven Fisher, Senior Transportation Planner

**Subject:** State Route 85 – Portland Experience with LRT

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The State Route 85 Corridor Policy Advisory Board, at the May 23, 2016 meeting requested the attached article regarding the Portland, Oregon experience with LRT be transmitted to the VTA Board of Directors for information. The context of the PAB's discussion were reasons why the Portland LRT system has achieved more success than other newly completed LRT systems.

The article written by two researchers from Florida State University uses metrics to compare Portland to Dallas, Sacramento, San Diego and Salt Lake City and concludes Portland has been a more successful new LRT system than the others. The success is attributed to three factors:

- A supporting bus network that serves a wide variety of origins and destinations
- LRT as a backbone of the transit system providing high speed service
- Free transfers between bus and LRT

# **Making a Successful LRT-Based Regional Transit System: Lessons from Five New Start Cities**

*Gregory L. Thompson and Jeffrey R. Brown  
Florida State University*

## **Abstract**

*This paper examines five metropolitan areas where light rail transit (LRT) lines serve as regional transit backbones. The paper defines a successful LRT-based regional transit system as one with high riding habit and productivity for all combined modes in each metropolitan area, and as also having high LRT ridership and productivity. Based on these criteria, Portland emerges as a successful LRT-based regional transit system. Our analysis reveals three characteristics that explain the Portland transit system's strong performance: the network's dispersed nature, the overlay of a higher-speed, high-frequency regional LRT network atop the local bus system, and the use of transfers to provide passengers easy access to a diverse array of destinations. We examine the performance of all five metropolitan areas with respect to these characteristics using a combination of agency data and insights from interviews with key informants.*

## **Introduction**

A new era of transit development began in 1981 when San Diego, a city whose transit system contained only buses, opened its first regional light rail transit (LRT) line. Since then, 11 other U.S., previously bus-only metropolitan areas opened their own LRT lines. Several of these new LRT lines have become the backbones of

metropolitan transit systems, carrying a large share of the metropolitan area's total transit ridership. In this paper, we examine transit performance in five such metropolitan areas, with the objective of identifying whether system design characteristics influence performance. Using Portland as the model of a successful transit system, we identify three characteristics that are associated with Portland's success. These characteristics are the transit network's dispersed nature, the overlay of a higher-speed, high-frequency regional LRT network atop the local bus system, and the use of transfers to provide passengers easy access to a diverse array of destinations. We examine the degree to which the incidence of these characteristics is correlated with positive transit performance in the other four systems: Dallas, Sacramento, Salt Lake City, and San Diego. We find that better metropolitan transit performance is associated with a greater incidence of the three characteristics. We conclude by discussing the implications for planners in designing successful metropolitan transit networks.

## **Literature Review**

Scholars examining the performance of LRT have typically looked at the mode as a stand-alone entity rather than as a component of an integrated transit system and/or have tended to emphasize the role of non-transit factors such as urban structure and land use policy as important contributors to ridership and performance. Scholars writing on the first subject tend to compare LRT to bus in terms of ridership, cost, and productivity and usually find LRT deficient (Kain 1998; Moore 1993). Scholars writing on the second subject tend to emphasize the role that strong CBDs and transit-oriented development (TOD) land use strategies play in leading to higher ridership or larger transit commute mode shares (Bernick and Cervero 1997; Cervero 2007; IURD et al. 2004). These two literatures tend to be quite distinct, with little connection between them. However, one characteristic they largely have in common is a tendency to ignore the role that LRT might play in the context of a regional transit system.

There is, however, a small but growing literature that emphasizes the role that rail transit, either LRT or heavy rail, can play as a trunk line (or backbone) in an integrated bus-rail regional system. Vuchic (2005) discusses the use of LRT as the backbone of a regional system that embraces a family of interconnected modes. Brown and Thompson (2009) found that successful rail metropolises use rail as the backbone of a multi-destination network that is structured to provide access to important destinations throughout the region. They insist that comparisons of bus

versus rail performance have been clouded by a failure to consider the variety of roles these two modes actually play. They find that rail is a stronger performer in terms of ridership and productivity, both for itself and the regional transit system as a whole, because it serves as the backbone of an integrated system whereas express bus-based services tend to be isolated due to the desire to provide one-seat rides. Thompson and Matoff (2003) found similar results in their study of multi-destination versus radial transit systems in nine metropolitan areas. Bruun's work provides additional support for all these findings (2007). This paper extends this line of inquiry by seeking to understand the causes of variation in transit performance in five metropolitan areas in which LRT serves as the regional transit backbone.

## **Data and Methodology**

We examined the performance of LRT-based regional transit systems in five U.S. metropolitan areas in 2006 where LRT accounts for 30 percent or more of total metropolitan area transit ridership (measured on a passenger miles basis): Dallas, Portland, Sacramento, Salt Lake City, and San Diego. Each of these metropolitan areas is centered on a city that implemented LRT as part of a previously bus-only transit system since 1981. The five metropolitan areas have populations between two million and six million (U.S. Census Bureau 2008).

Our method involves documenting the performance of each metropolitan area's transit system in order to identify the most successful system. We then examine that system to determine which characteristics account for its success. We use the identified characteristics as transit network design criteria and evaluate how well each metropolitan area scores on these criteria. This scoring system serves as a hypothetical explanation for the variation in regional transit performance among the five metropolitan areas. We hypothesize that higher total scores on the set of design criteria will be associated with higher overall transit performance.

A metropolitan area's transit system consists of the aggregation of all fixed-route services in the metropolitan area. We measure system performance 1) by examining riding habit (passenger miles per capita) and productivity (passenger miles per revenue mile) at a metropolitan scale for all fixed-route modes and 2) by examining LRT ridership (passenger miles) and productivity (passenger miles per revenue mile). We construct metropolitan scale measures of riding habit and productivity by identifying all transit agencies in each metropolitan area that provide fixed-

route service and aggregating the fixed-route ridership and service statistics to produce metropolitan totals. We do not consider vanpool or demand responsive services in this analysis.

Our analysis uses a combination of quantitative and qualitative data. We obtained ridership (passenger miles) and service (revenue miles) data from the National Transit Database using the Florida Department of Transportation's (FDOT) web-based data extraction tool (FDOT 2008). We obtained population data from the U.S. Census Bureau (2006). Using these data, we calculated riding habit (passenger miles per capita) and productivity (passenger miles per revenue mile) for the combination of all transit agencies providing fixed route service in each metropolitan area. We also obtained mode-specific ridership (passenger miles) and service (revenue miles) for LRT and for the total of all fixed-route bus service in each metropolitan area (FDOT 2008). We used these data to construct mode-based productivity measures (passenger miles per revenue mile) and to calculate the percent of all ridership and service provided by each mode. For Dallas and San Diego, we obtained commuter rail statistics, which we report for completeness.

We also obtained data from individual agencies about passenger activity (by mode, by station/stop, and in some cases, by time of day and direction) for some study areas. We obtained geographic information system (GIS) shapefile data that we used to construct maps of the regional transit systems in each metropolitan.

We provided context for these data by drawing on information gained in interviews with key informants in each metropolitan area. The key informants are individuals with a long-range perspective on bus and light rail transit development. These interviews provide information about the regional transit vision, the role the agency hoped that light rail and bus transit would play within this vision, the present-day operation and passenger use of the transit system, and other insights about systems planning.

## **Transit Performance in Five LRT New Start Cities**

In evaluating the performance of each metropolitan area's LRT-based regional transit system, we considered both individual mode and total regional performance. We judged a regional transit system to be successful if it met four criteria: high metropolitan area riding habit, high metropolitan area service productivity, high LRT ridership, and high LRT productivity. Metropolitan area riding habit refers to the total number of passenger miles consumed on all fixed-route transit modes in

the metropolitan area expressed on a per-person basis (passenger miles per capita). Metropolitan area service productivity refers to the number of passenger miles per revenue mile for all fixed-route modes in each metropolitan area. LRT ridership refers to the number of passenger miles traveled by LRT patrons. LRT service productivity refers to the number of passenger miles per revenue mile for LRT service.

Table 1 provides mode-based and metropolitan area ridership and productivity statistics. The top panel reports LRT ridership, service, and productivity information and expresses LRT ridership and service as percentages of all fixed-route service in each metropolitan area. The panel shows that LRT ridership and service are highest in Portland and San Diego, followed by Dallas. Sacramento and Salt Lake City have much lower LRT ridership and provide much less bus and LRT service than the other three metropolitan areas. In each of the five metropolitan areas, LRT ridership accounts for 30 percent or more of the entire metropolitan area's transit ridership. The LRT ridership shares range from a low of 30 percent in Dallas to a high of 54 percent in Salt Lake City. LRT service accounts for a much smaller percent of the metropolitan area total than LRT contributes to ridership. LRT accounts for between 13 percent (Dallas) and 27 percent (Sacramento) of metropolitan area transit service. Thus, LRT is carrying a disproportionate share of metropolitan transit ridership, as one would hope. The far right column of the top panel reports LRT productivity. The most productive LRT service is in Salt Lake City, followed by Portland. Sacramento's LRT system has the lowest productivity.

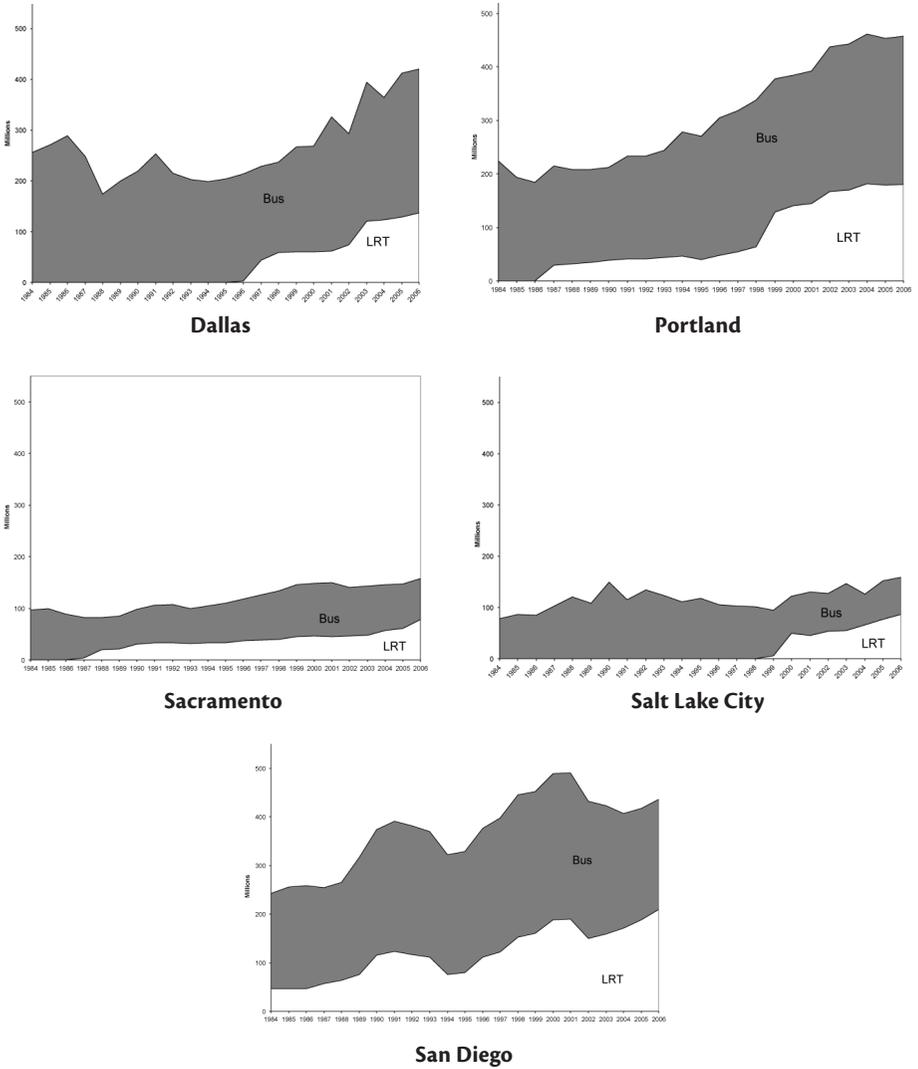
The middle panels provide the same information about commuter rail services (where applicable) and fixed-route bus service. Particularly striking are the differences in bus route productivity in the five metropolitan areas. Portland has much higher bus productivity (10.32 passenger miles per revenue mile) than the other metropolitan areas. Dallas ranks second, and San Diego is not too far behind. Salt Lake City has the lowest bus productivity (4.34 passenger miles per vehicle mile) of the five metropolitan areas.

Figure 1 provides a capsule history of bus and LRT ridership over the two decades preceding the data shown in Table 1. Each metropolitan area is shown as a graph panel. The panels all feature the same scale (expressed as millions of passenger miles) and cover the same time period (1984–2006). Bus ridership is shown on top of LRT ridership in each graph.

**Table 1. Tranist Agency Performance in Five LRT New Start Cities (2006)**

Metropolitan Area	Agency	Ridership		Service		Productivity
		Passenger Miles	% of Metro Area Fixed-Route Total	Revenue Miles	% of Metro Area Fixed-Route Total	Passenger Miles per Revenue Mile
<b>Light Rail Transit</b>						
Dallas	DART	136,797,106	30%	5,096,186	13%	26.84
Portland	Tri-Met	179,875,394	39%	6,377,513	19%	28.20
Sacramento	RT	78,181,014	50%	3,888,222	27%	20.11
Salt Lake City	UTA	86,039,042	54%	2,827,710	14%	30.43
San Diego	SDTI	208,875,499	44%	8,180,189	22%	25.53
<b>Commuter Rail</b>						
Dallas	TRE	33,023,714	7%	1,087,437	3%	30.37
San Diego	NCTD	42,970,414	9%	1,298,922	3%	33.08
<b>Fixed-Route Bus Service</b>						
Dallas	DART, The T, DCTA	283,748,664	63%	32,591,274	84%	8.71
Portland	CC, Tri-Met	276,834,579	61%	26,821,806	81%	10.32
Sacramento	Unitrans, RT, Yolo, Roseville	79,388,437	50%	10,758,943	73%	7.38
Salt Lake City	UTA	72,567,090	46%	16,732,379	86%	4.34
San Diego	CVT, MTS, NCT, NCTD	226,843,780	47%	27,846,175	75%	8.15
<b>Metropolitan Area Fixed-Route Transit (Total)</b>						
Dallas	All	453,569,484		38,774,897		11.70
Portland	All	456,709,973		33,199,319		13.76
Sacramento	All	157,569,451		14,647,165		10.76
Salt Lake City	All	158,606,132		19,560,089		8.11
San Diego	All	478,689,693		37,325,286		12.82
<b>Metropolitan Area Riding Habit</b>			<b>Population</b>	<b>Passenger Miles per capita</b>		
Dallas			6,003,967	75.54		
Portland			2,137,565	213.66		
Sacramento			2,067,117	76.23		
Salt Lake City			2,039,542	77.77		
San Diego			2,941,454	162.74		

Source: FDOT (2008), U.S. Census Bureau (2008).



**Figure 1. Bus and LRT ridership in five metropolitan areas (1984–2006)**

Two things stand out in these graphs. First, there is a sizeable difference in the magnitude of ridership among the five metropolitan areas. Ridership in Dallas, Portland, and San Diego is large and roughly comparable, although the metropolitan areas are different in terms of their total populations, leading to different riding habits, as discussed below. Ridership is much lower in Sacramento and Salt Lake City, although their populations are not very different from that of Portland. These two metropolitan areas historically have provided much less service per capita

than the others. This fact can also be seen in the service statistics (revenue miles) for both metropolitan areas' LRT and fixed-route transit total reported in Table 1.

Second, the recent ridership increases experienced in all the cities appears to be due almost entirely to increased LRT ridership. LRT ridership has increased steadily in Dallas, Portland, Sacramento, and Salt Lake City. San Diego has also experienced a general increase in LRT ridership, although it has experienced two periods of retrenchment. Bus ridership is flat or declining in all five cities.

The other gauges of transit performance are metropolitan area service productivity and riding habit. The far right column in the fourth panel of Table 1 reports overall transit productivity for the five metropolitan areas. In 2004, fixed-route service productivity for the U.S. (excluding New York City, which alone accounts for 40 percent of all U.S. transit ridership) was 11.1 passenger miles per revenue mile (FDOT 2008). All the metropolitan areas except Sacramento and Salt Lake City had productivity above this number in 2006. Among the five metropolitan areas, Portland stands out with the highest productivity, followed by San Diego and Dallas.

The bottom table panel reports metropolitan area population and riding habit (passenger miles per capita). Riding habit adjusts ridership for population differences among the metropolitan areas. In 2004, riding habit for the U.S. (excluding New York City) was 99 passenger miles per capita (FDOT 2008). Two of the five metropolitan areas have 2006 riding habit higher than this number: Portland and San Diego. Portland stands out with significantly higher riding habit (213.66 passenger miles per capita) than second-ranked San Diego (162.74 passenger miles per capita). Dallas and Sacramento ranked at the bottom in metropolitan area riding habit and near the bottom in productivity.

Despite its high LRT productivity noted earlier, Salt Lake City falls at or near the bottom both in terms of overall riding habit and productivity. Salt Lake City's LRT line performs well by itself, but the bus service has very low productivity (4.34 passenger miles per bus mile), partly because the LRT line pulls so many riders away from the buses, as discussed later in the paper.

Based on the transit performance statistics shown in Table 1, Portland emerges as the most successful of the five metropolitan areas. It ranks first in metropolitan area riding habit and service productivity, which are the gauges of overall transit performance. Its LRT system ranks second to San Diego in ridership and second to Salt Lake City in productivity. Portland thus emerges at or near the top in the four measures we proposed to evaluate the performance of LRT-based regional transit systems.

## **Three Characteristics of Successful LRT-Based Regional Transit Systems**

So why is Portland so successful? Many scholars would point to the importance of land use policies in Portland that encourage more compact development and the proliferation of transit-oriented developments as fundamental to the success of the metropolitan area's transit system. While these factors undoubtedly contribute to Portland's transit ridership on the margin, the fact is that Portland's regional employment is decentralized like that in the other regions studied here. In 1970, employment in Portland's CBD stood at 30,000 jobs and represented 7.0 percent of the metropolitan area's total employment. Twenty years later, and four years after the first light rail line opened, CBD employment stood at 95,734 jobs, or 10.9 percent of the metropolitan total. From then until now, CBD employment has remained flat, while total metropolitan employment has continued to grow. In 2005, CBD employment stood at 96,877 jobs, or 7.8 percent of the metropolitan total. Despite the decline in relative CBD importance between 1990 and 2005, Portland's transit system has increased its ridership and improved its productivity.

Our previous research identifies three important characteristics of Portland's transit system associated with its success (Brown and Thompson 2008). First, Portland has a dispersed transit network. A dispersed transit network is one structured to serve an array of major destinations throughout the entire metropolitan area, as opposed to one in which service is concentrated on a single major destination (usually the CBD) and/or constrained to serve merely a portion of the metropolitan area. Portland's dispersed transit network predates LRT development, which has been able to tap into its existence.

Second, Portland uses LRT to provide a high-speed regional service overlay atop the local bus system. A high-speed regional overlay is higher-speed, high frequency service that lies atop the local network and works with it to allow travelers to quickly reach the wide array of major destinations throughout the metropolitan area. Portland's combined bus-rail network provides relatively quick travel between the metropolitan area's activity centers, and this makes transit more attractive to prospective riders.

Third, Portland relies on easy transfers between its bus and rail systems, as well as bus-to-bus transfers, to connect more destinations than would be possible with a system based on one-seat rides. Transfers are important evidence that passengers are taking advantage of integrated regional bus-rail transit systems to reach a wide array of regional destinations. Portland's transit system exhibits a significant amount of transfer activity.

As a result of having these three design characteristics, Portland’s transit system attracts a large number of non-CBD riders. This is important given the emergence of many other activity centers in the Portland area. Collectively, the three system design characteristics and the evidence of large non-CBD ridership are hallmarks of a regional, LRT-based multideestination transit system.

We hypothesize that variation in transit performance discussed earlier can be explained by variation in the extent to which the three design characteristics are present in each metropolitan area’s transit system. We suspect that deficiencies with respect to these key characteristics as preventing the transit agencies in each metropolitan area from achieving higher ridership and productivity from their LRT-based regional transit systems.

We developed a five-point scoring system to measure the degree to which each of the three system design characteristics is present in each metropolitan area, including Portland. A score of 5 indicates that a design characteristic is fully present, while a score of 1 indicates that a characteristic is not present. Scores in between are assigned when a characteristic is largely (4), partially (3), or minimally (2) present. Table 2 provides the results of our scoring system. Portland and San Diego have the highest overall scores. Dallas and Sacramento have significantly lower overall scores. Salt Lake City has the lowest overall score. No metropolitan area receives a score of 5 on any characteristic, indicating that all metropolitan areas are deficient to one degree or another. These scores roughly correspond to the rankings of the metropolitan areas on the riding habit and service productivity measures reported at the bottom of Table 1.

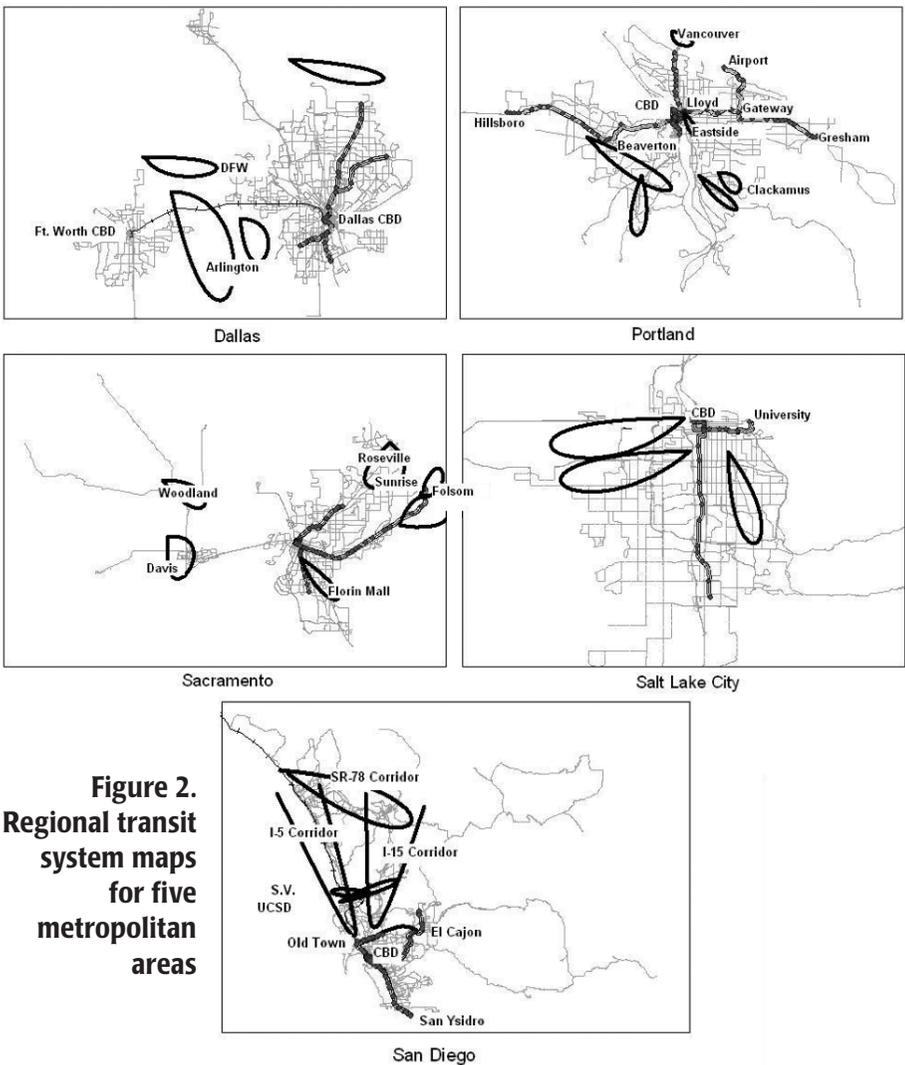
**Table 2. Evaluation Matrix: Four Characteristics of Successful LRT Systems**

Characteristic	Portland	San Diego	Dallas	Sacramento	Salt Lake City
Dispersed transit network	4	4	2	2	1
High-speed regional service overlay	4	4	3	3	2
Utilizes transfers to reach many destinations	4	4	2	2	1
<b>Score</b>	<b>12</b>	<b>12</b>	<b>7</b>	<b>7</b>	<b>4</b>

- Evaluation Scores:
- 5 Characteristic is fully present
  - 4 Characteristic is largely present
  - 3 Characteristic is partially present
  - 2 Characteristic is minimally present
  - 1 Characteristic is not present

In the text below, we explain how we arrived at the scoring assigned to each metropolitan area. We discuss each metropolitan area in the order presented in Table 2, beginning with Portland. Our discussion relies heavily on insights gained from

analyses of agency data and interviews with key informants in each metropolitan area. We also rely on Figure 2 as an important aid in our discussion of the system design characteristics. The figure provides maps of the metropolitan transit systems in each of the five metropolitan areas. The maps show local bus routes in a medium-gray color. The regional light rail transit routes are shown as a thick line atop the local bus routes on which circles (representing rail stations) are overlaid. The stops are generally spaced at one-mile intervals and often are designed to facilitate transfers between buses and trains and buses and buses as well as to provide auto access. Some stops provide planned pedestrian access to nearby destinations.



**Figure 2.**  
Regional transit  
system maps  
for five  
metropolitan  
areas

The regional light rail lines operate at scheduled speeds of 20 to almost 30 miles per hour compared to less than 12 miles per hour for local buses. Their headways generally are 15-minute or better. They thus represent a higher-speed, high-frequency type of service. In San Diego and Dallas, less frequent commuter rail services are shown as a narrow line with periodic cross lines. Figure 2 uses heavy black circles or arcs to indicate major regional employment centers not served by regional transit routes or not connected to them very well or at all by local bus routes.

### **Portland**

We identified Portland as possessing a successful metropolitan transit system with all three design characteristics. But even Portland is deficient to a minor degree with respect to each characteristic, and hence we assigned it a score of 4 (characteristic is largely present) on each, for a total score of 12.

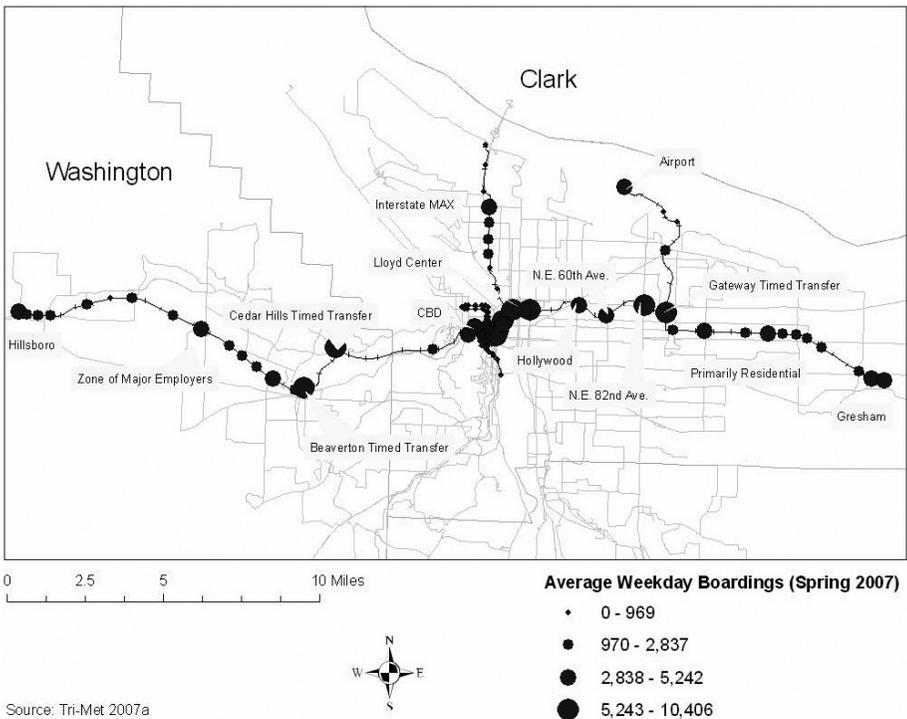
Portland largely possesses a dispersed transit network. The map panel at the upper right in Figure 2 indicates that Portland possesses a local bus network that covers the entire metropolitan area and thus attempts to serve all the major activity centers. While nearly half Portland's bus routes serve the CBD, these routes serve many other destinations as well, and its most heavily patronized routes do not serve the CBD. They operate on major arterial roads characterized by strip commercial development. Portland's bus and rail routes are integrated with each other by design, either by functioning in a grid, or through the use of timed-transfer centers. This service structure has prevailed since the late 1970s, several years before the introduction of the first LRT service in the region, but the bus restructuring was done with light rail in mind.

Portland's light rail lines function as the higher-speed regional transit overlay and are evident in Figure 2. From the time the first line opened in 1986, the regional light rail lines provided the CBD link for many of the previously restructured bus routes in each light rail corridor. The light rail lines operate at a scheduled speed of about twice as fast as local buses and serve not only the CBD but major and growing employment centers to both the east and west. There still are many major employment centers not served by regional transit in Portland, as indicated by the circles in Figure 2. For this reason, Portland does not get a perfect score on this characteristic. However, all these employment clusters and corridors are served by local buses that connect with regional transit service.

As noted earlier, transfers are important evidence that passengers are taking advantage of integrated regional bus-rail transit systems to reach a wide array of

regional destinations. If transfer activity merely indicated forced shifting from one mode to another, we would expect to find high levels of transfer activity to be associated with stagnant or declining patronage transit systems. However, we find that high levels of transfer activity tend to be associated with strong and growing patronage systems.

Portland's transit system illustrates the importance of transfers for successful regional transit system performance. Figure 3 shows average weekday LRT boardings by station in spring 2007. The stations with the highest numbers of boardings are major transfer centers, including the Cedar Hills, Beaverton, and Gateway timed transfer centers, Hollywood, Northeast 82nd Avenue, and Northeast 60th Avenue.



Source: Tri-Met 2007a

**Figure 3. Average weekday boardings at Portland LRT stations (Spring 2007)**

### ***San Diego***

We also identified San Diego as having a successful transit system (based on the discussion around Table 1). Like Portland, San Diego possesses all three design char-

acteristics. Also like Portland, it is deficient to at least a minor degree on each of the characteristics, and hence we also assigned it scores of 4 for an overall score of 12.

The bottom map panel in Figure 2 shows that San Diego's transit coverage resembles Portland's but it is even more decentralized. San Diego's local bus network blankets the entire urbanized area. Although it is operated by numerous agencies, it and the various rail services are integrated by a centralized board into a cohesive network. A large percentage of bus routes terminate at light rail stations rather than continuing to the CBD as they did before the various light rail lines opened.

San Diego's LRT system functions as the region's high-speed service overlay. The light rail lines operate at much higher scheduled speeds than local buses and cover the major employment corridors in the south county. The west-east line running from Old Town to El Cajon (see Figure 2) does not serve the CBD but instead runs through the linear edge city area known as Mission Valley. As in Portland, San Diego's regional transit overlay is not perfect. Several corridors containing heavy and growing employment extend north of the Mission Valley, indicated as the I-15, I-5, S.R. 78, and Sorrento Valley (S.R.) corridors in Figure 2. The I-15 corridor is served by a complex network of express buses that extend from Escondido to the San Diego CBD. Some of these buses provide non-stop service from northern neighborhoods to the San Diego CBD. Others leave the freeway to stop at intermediate stops, including a major transfer station with the Mission Valley light rail line. The I-5 corridor has a similar pattern of express buses plus a commuter rail service that extends from Oceanside to the San Diego CBD, while also stopping at large employment concentrations and transfer connections at Sorrento Valley (S.R. on Figure 2), and Old Town. Service is fast but infrequent.

The service quality in these corridors is far lower than that in the light rail corridors. The bus and commuter rail services reach fewer intermediate destinations, have (in the case of bus) slower speeds to intermediate destinations, and offer much less frequent service. Whereas light rail corridors carry 25,000 to 50,000 daily passengers, the northern express bus and commuter rail corridors carry less than 6,000 daily passengers. (A regional light rail line opened in the State Route 78 corridor in March 2008, too late to affect the data in this paper.)

Like Portland, San Diego's transit system relies heavily on transfers to allow patrons to reach widely dispersed destinations. Figure 4 displays passenger activity prior to the opening of the non-CBD-serving Mission Valley LRT line. The most heavily-patronized stops are those characterized by high transfer activity, including the region's two most heavily-patronized stops (Old Town Transit Center and 12th and

Imperial Station). Half the top 20 transit stops in the region are major transfer centers, and nearly all these stops saw passenger activity increase between 2005 and 2006 (see Table 3). Most stops listed in the table with declining patronage between 2005 and 2006 are stops in the CBD. In January 2008, San Diego abolished free transfers as part of a budget balancing strategy. This poses serious challenges to a transit system whose structure is predicated on easy passenger transfer activity below Portland. The effects of this policy change on patronage will bear watching.

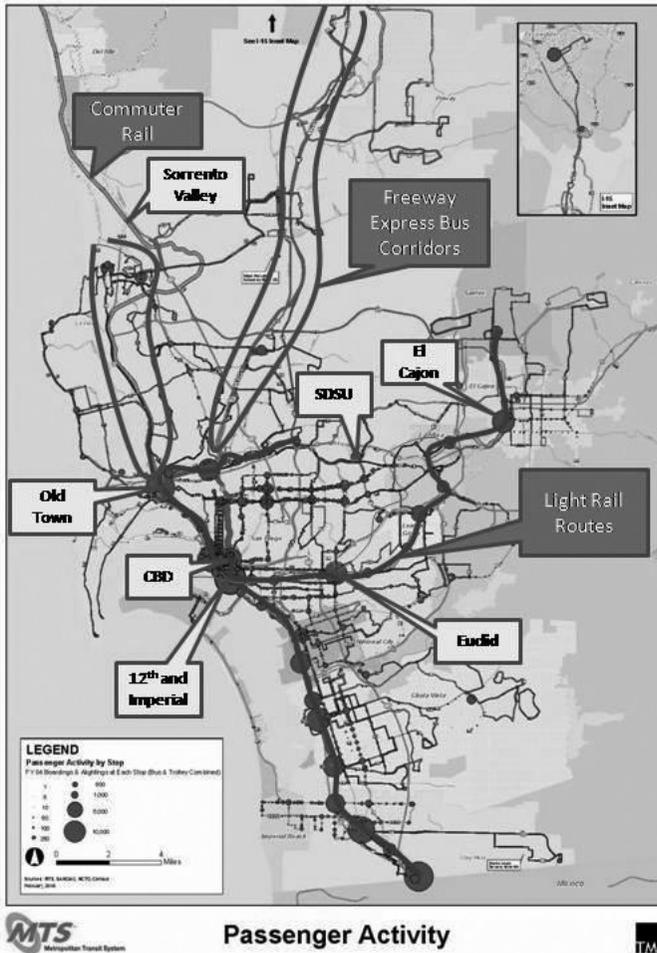


Figure 4. Passenger activity at San Diego rail stations and bus stops (2005)

**Table 3. San Diego Top 20 Transit Stops in Fiscal Year 2005 and 2006**

Stop	FY 2005 Rank	FY 2006 Rank	FY 2005 Trip Ends	FY 2006 Trip Ends	% Change 2005-2006
Old Town Transit Center	2	1	20,574	31,958	55.33%
12th and Imperial Station	1	2	20,639	21,858	5.91%
International Border Station	3	3	19,849	20,949	5.54%
Iris Avenue Trolley Station	4	4	14,977	15,431	3.03%
H Street Trolley Station	5	5	11,972	12,210	1.99%
5th Avenue Station - C Street	6	6	11,034	11,182	1.34%
El Cajon Transit Center	11	7	8,799	10,935	24.28%
Euclid Trolley Station	7	8	10,381	10,622	2.32%
City College Station	8	9	10,243	10,565	3.14%
Fashion Valley Trolley Station	10	10	9,347	10,072	7.76%
Palomar Street Trolley Station	9	11	9,988	9,483	-5.06%
Civic Center Station	12	12	8,351	7,644	-8.47%
24th Street Trolley Station	14	13	7,656	7,583	-0.95%
American Plaza	13	14	7,938	7,170	-9.67%
Escondido Transit Center	16	15	6,629	7,157	7.97%
San Diego State University	36	16	2,281	6,968	205.48%
Vista Transit center	15	17	6,747	6,794	0.70%
Park and Market Station	21	18	5,618	6,106	8.69%
E Street Bayfront Trolley Station	17	19	6,397	5,959	-6.85%
Oceanside Transit Center	18	20	6,162	5,546	-10.00%

Source: SANDAG (2007)

**Dallas**

As noted earlier, Dallas’s transit system has not experienced the high ridership and high productivity enjoyed by either Portland or San Diego. Dallas’s regional transit system is more deficient with respect to each of the system design characteristics than either of the two metropolitan areas just discussed, with each of these characteristics being only either minimally or partially present.

As the map panel in Figure 2 indicates, the Dallas metropolitan area features a well-integrated, dispersed network of bus and regional light rail lines in its eastern third. In this area, a comprehensive network of local bus routes gradually has been restructured around two regional light rail lines that serve employment concentrations not only in the CBD but also to the north. The western third of the metropolitan area contains a traditional CBD-radial local and express bus system centered on the Fort Worth CBD. In the middle third of the metropolitan area, however, as well as to the north, lie major employment centers not served by any type of transit, as shown by circles in Figure 2.

In the eastern half of the Dallas metropolitan area, LRT functions as a high-speed service overlay. A commuter rail line connects the Dallas and Fort Worth CBDs. It connects with the hub of the Fort Worth bus system and with the Dallas light rail lines on the edge of the Dallas CBD but is not effectively connected to employment concentrations in between. Its low service frequencies also serve to prevent it from functioning as a high-speed, high-frequency service backbone. Because local buses do not blanket many of the important destinations in the Dallas metropolitan area, because the regional overlay is less developed than in either Portland or San Diego, and because not even hybrid express buses serve employment corridors not served by regional transit routes, we rank Dallas behind Portland and San Diego in its performance on both the dispersed transit networks and regional transit overlay characteristics.

Also in the eastern half of the Dallas metropolitan area, transfers between buses or bus and rail are used to extend the array of destinations that patrons can access. Transfers are also used to a much lesser degree in the Fort Worth area. However, the two parts of the regions are not well connected, potential transfer activity is thus reduced, and patrons are able to reach far fewer of the metropolitan area's widely dispersed destinations.

### **Sacramento**

Sacramento's transit system has also not experienced the high ridership and high productivity enjoyed by either Portland or San Diego. Sacramento's regional transit system is more deficient with respect to each of the system design characteristics than either of the two metropolitan areas just discussed, with each of these characteristics being only either minimally or partially present.

Sacramento is a metropolitan area that once possessed a transit system characterized by the design features seen in Portland and San Diego, but has retrogressed in recent years. Until 2000, Sacramento possessed a dispersed regional network in which bus and rail lines worked together to serve a wide array of major destinations within the metropolitan core county. But light rail extensions built since 2000 have been less well integrated into the regional transit system. The extension of a light rail line to the south was similar to San Diego's first light rail line to San Ysidro in that it ran well to the west of the previously established spine of transit service. Unlike in San Diego, however, Sacramento failed to move bus transfer centers (one of which is serving a dying mall) from the old spine to the regional light rail line (see map panel in Figure 2). Unlike the spectacular patronage growth that San Diego

experienced on both its rail and bus services in its first light rail corridor, Sacramento has experienced only lackluster success for its south corridor.

Figure 2 also shows that the more recent extension of light rail to Folsom is similar to the Dallas commuter rail line running near areas of high employment without connections to the employment. Finally, employment clusters in Davis, Woodland, and Roseville are served by express bus service that is designed to take residents of those places to the Sacramento CBD but not to take residents from the rest of the region to employment in those centers. It should do both. Thus, there now exists in the Sacramento area significant destination concentrations that are unconnected to the transit network. We conclude that the Sacramento metropolitan area has only pieces of both a dispersed transit network and a high-speed regional overlay.

We see evidence of the importance of transfer activity in the part of the Sacramento areas where local bus services are integrated with regional rail services. In Sacramento the most heavily patronized LRT station is the 16th Street Transfer Station where patrons transfer between two LRT lines. Unfortunately, the lack of a truly dispersed regional network has served to reduce the amount of transfer activity that might otherwise take place if riders could reach the presently unserved major destinations.

### ***Salt Lake City***

Earlier, we noted that the LRT portion of the Salt Lake City transit system is performing very well, but that the transit system as a whole is not doing well due to the very poor performance of the bus system. Overall, Salt Lake City was the worst performing of the five metropolitan areas. Salt Lake City also came out ranked worse on the scoring matrix used in Table 2. It is important to note that our data depict transit in Salt Lake City before 2007 when it was organized closer to the radial archetype than the other four metropolitan areas in this paper. Beginning with a local bus route restructuring in 2007 and with the more recent inauguration of regional commuter rail service oriented to travel in both in-bound and out-bound directions, the transit system now appears to be decentralizing. What we describe is the period before 2007.

Then as now, the Salt Lake City metropolitan area contained three distinct sub areas: Ogden to the north, Salt Lake City in the middle, and Provo to the south. The Utah Transit Authority served the entire area, but before 2007 operated distinct CBD-focused transit systems in each of Ogden, Salt Lake City, and Provo. Freeway express buses connected Ogden and Provo to the Salt Lake CBD.

The map panel in Figure 2 focuses only on the Salt Lake City part of the region as it was before 2007, when the transit routes functioned as a CBD-radial system characterized by little integration between its bus services or between its rail and bus services. After the 19-mile light rail system opened in three phases between 1999 and 2003, about 70 percent of the bus routes in the Salt Lake area continued to serve the CBD. For these routes, bus and rail service competed with one another in providing patrons with service to the CBD. The rail line had a much higher scheduled speed than the local bus routes, though it may have had little advantage with express buses going to the CBD. Unlike express buses, however, it served employment centers located at several stations in the southern part of its route. When the north-south LRT line opened, some CBD express buses were discontinued or truncated into outer light rail stations. Some new east-west service was added to serve light rail stations. . In general, though, these east-west services were underdeveloped, being afflicted by gaps in coverage, significant route deviations, and/or low frequency service.

In many respects the Salt Lake City system resembled Portland's east side bus network prior to its restructuring. At one time, Portland had numerous parallel east-west bus routes that provided low-frequency service to the Portland CBD from the eastern suburbs. About 1983, Portland eliminated some east-west routes, added service to others, and added high-frequency north-south bus routes. When the LRT began operation in 1986, Tri-Met plugged it into this network as another east-west line. The recently added north-south bus lines became major feeders and distributors from light rail stations. At about its midway point, the light rail line served a major transfer stations where all of the parallel east-west bus lines bunched up to provide transfers between each other and with the light rail line.

If the 1983 and 1986 restructurings had not happened, LRT would have been a competitor with the CBD-focused, poor quality parallel bus routes that already were there, and there would have been no high quality bus routes intersecting the LRT at right angles. Portland would have enjoyed much less patronage than it has since experienced on both its LRT and bus routes. This undesirable situation resembles the pre-2007 condition in Salt Lake City. As a consequence, major employment centers to the east and west of the light rail line were inaccessible to it (see Figure 2). To reach these employment centers by bus, residents from most of the region had to ride into the CBD, transfer, and ride out again.

We rank Salt Lake City below Dallas and Sacramento on the dispersed transit network criterion, lower as well on the extensiveness of its regional route overlay

(given the presence of at-best hybrid express bus service on the Ogden and Provo links, as well as the poor integration of the regional light rail line with buses), and lower for the minimal attention paid to transfer facilities. These deficiencies appear to be changing now but were present at the time of the study.

## **Comparison of Scoring Matrix with Transit Performance**

Earlier, we defined a regional transit system as being successful if it met four criteria: high metropolitan area riding habit, high metropolitan area service productivity, high LRT ridership, and high LRT productivity. We hypothesized that the relative presence of the three system design characteristics found in Portland might explain the variation in overall transit performance among the five metropolitan areas. To evaluate this hypothesis, we compared the four performance measures reported in Table 1 with the total score for each metropolitan area reported in Table 2. We relied on a combination of visual inspection and the calculation of correlation coefficients to evaluate the hypotheses.

We found strong positive relationships between a metropolitan area's score and its metropolitan area riding habit (0.89), metropolitan service productivity (0.94), and LRT ridership (0.90). These three findings serve as evidence in support of our hypothesis. The only unexpected finding was the weak negative correlation (-0.11) between LRT service productivity and metropolitan area score, which is due to Salt Lake City's very high LRT service productivity. It is likely that even this high LRT productivity would be even higher were the system design characteristics we discuss in the paper more evident in the Salt Lake City metropolitan area, as we discuss in the text. Thus, on balance, we conclude that there is a relationship between these key system design characteristics and metropolitan transit performance in these five new-start LRT metropolitan areas.

## **One Result: High Non-CBD Ridership**

An important indication that transit patrons are relying on transfers to use dispersed transit networks with high-speed regional overlays to reach dispersed destinations is the size and/or share of riders travelling to destinations outside the CBD. CBDs are in relative decline as employment centers and major transit destinations, so successful transit systems need to tap the non-CBD ridership market. Successful systems will thus have a high percentage of non-CBD-bound riders. We find evidence for this supposition among our study metropolitan areas.

Evidence on the importance of the non-CBD market in Portland can be found in individual bus route ridership statistics, as well as the transfer activity data shown in Figure 3 earlier. The north-south bus routes intersecting the LRT at the 82nd Avenue and Hollywood stations are respectively the most and second most heavily patronized bus routes in the Portland metropolitan area, far surpassing patronage on routes that serve the CBD. These two routes run along arterial roads and serve strip commercial development.

In San Diego, about 80 percent of all bus routes do not serve the CBD, and we can assume that most of their patrons are not headed to the CBD. This fact suggests that the very strong performance of transit in the San Diego region results to a large extent from non-CBD passengers who make use of the system. This conclusion is reinforced by noting that for the 20 percent of bus routes that do serve the CBD, most of their passengers are going to non-CBD destinations, as well (see Table 4). Two-thirds of LRT riders, 3/4 of local bus riders, 85 percent of express bus riders, and 2/3 of commuter rail riders on CBD-bound service in San Diego are not traveling to the CBD.

**Table 4. Destinations of Weekday AM Peak Transit Riders in Sacramento and San Diego**

<i>Destination</i>	<i>Number of Alightings</i>	<i>Percent of All Alightings</i>
<b>Sacramento LRT Riders</b>		
Downtown Sacramento LRT stations	4,813	37.44%
16th Street Transfer Station	1,453	11.30%
Other LRT Stations	6,590	51.26%
<b>Total</b>	<b>12,856</b>	<b>100.00%</b>
<b>San Diego LRT Riders</b>		
Inside San Diego CBD	6,687	33.97%
Outside San Diego CBD	13,000	66.03%
<b>Total</b>	<b>19,687</b>	<b>100.00%</b>
<b>San Diego Commuter Rail Riders</b>		
Inside San Diego CBD	670	31.65%
Outside San Diego CBD	1,447	68.35%
<b>Total</b>	<b>2,117</b>	<b>100.00%</b>
<b>San Diego Bus Riders Using CBD-serving Express Routes</b>		
Inside San Diego CBD	400	14.55%
Outside San Diego CBD	2,349	85.45%
<b>Total</b>	<b>2,749</b>	<b>100.00%</b>
<b>San Diego Bus Riders using CBD-serving Local Routes</b>		
Inside San Diego CBD	2,517	23.37%
Outside San Diego CBD	8,254	76.63%
<b>Total</b>	<b>10,771</b>	<b>100.00%</b>

Note: Sacramento data refer to 2007 and San Diego data to fiscal year 2006.

Sources: RT (2007), SANDAG (2007)

We see this phenomenon in Sacramento and Dallas, as well, but to a lower extent. This is perhaps to be expected given their lower performance in Table 1 and lower scores in Table 2. In Sacramento, more than 60 percent of LRT patrons use it to reach non-CBD destinations (see Table 4). It is only on Sacramento's Folsom LRT extension that there is little indication of ridership destined to suburban destinations. There are only a total of 225 morning peak passenger alightings per day at the last four stations on the Folsom extension, despite their being located near major employment centers. The lack of connecting bus service likely suppresses patronage at these stations. If such bus service existed, the Folsom light rail line likely would experience heavy ridership destined to employment at its outer end, similar to ridership that Portland enjoys on the outer ends of its light rail lines. Sacramento's LRT productivity would improve as a result.

In Dallas, 45 percent of afternoon boardings on the CBD-focused LRT system are made by passengers boarding in non-CBD locations. Clearly even the two limited networks in Sacramento and Dallas are being used heavily by non-traditional (i.e. non-CBD) riders. We have no data on passenger destinations for Salt Lake City, although the hybrid nature of its system suggests that it too carries sizeable non-CBD traffic to the university on its east-west LRT line and activity centers on its north-south LRT line.

## **Conclusion**

This paper identified three characteristics of the transit system in Portland that appear to explain its success in terms of high riding habit and productivity, and measured the extent to which these same characteristics are also present in four other new start cities where LRT carries 30 percent or more of all metropolitan area transit riders. In general, we find an association between metropolitan area transit performance, shown in Table 1, and the presence of these characteristics, as recorded in Table 2 and discussed in the text.

This work suggests a possible method for better planning regional transit services by setting forth attributes that these services need to possess in order to attract substantial ridership and thus obtain satisfactory riding habit and productivity. Future research should apply this framework to other metropolitan areas of different sizes or whose LRT systems are of different lineage to test the whether these propositions can be generalized.

## **Acknowledgments**

We thank the Mineta Transportation Institute at San Jose State University for its generous financial support of this research. We thank Douglas Allen, Mick Crandall, Jim Howell, Gary Hufstедler, William Lieberman, Anthony Palmere, Michael Wiley, and Ken Zatarain for agreeing to be interviewed for the project from which this paper is drawn. Finally, we thank the transit agencies and metropolitan planning organizations in each of the metropolitan areas for providing the data used in this analysis.

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