MTC-ABAG May 15, 2013

Plan Bay Area Public Comment

101 Eighth St.

Oakland, California 94607

Re: Public Comment on Draft Plan Bay Area and Draft Bay Area Plan Draft Environmental Impact Report

To Whom This May Concern:

This letter shall serve as my comments on the Draft Plan Bay Area ("Plan"), Draft: March 22, 2013 and Draft Environment Impact Report ("DEIR"), Draft: March 29, 2013 (State Clearinghouse No. 2012062029) .

My name is Chris Engl. I have lived in the San Francisco Bay Area for the last 10 years, currently an Orinda resident for the last 5 years, 4 years prior to that in Oakland, and 1 year prior to that in San Francisco. I grew up in a working class neighborhood in New York City, the densest city in the United States. I have been working in institutional finance (which requires a quantitative, research-oriented, and investigative set of skills) for the last 14 years though I'm a family man before anything else, with a wife and 3 young children in Orinda's excellent public school system.

The Plan and DEIR have a number of troubling provisions, sadly many of which will not be challenged in the purview of this letter. The focus of this letter will be to show that while the Plan purports to protect the existing transportation assets of the region, that it does not adequately protect the most important of those

assets, namely roads. This letter shows, using the Plan's own data and words, that the Plan negligently allows roads, the lifeblood of mobility (I touch on this in detail below) and commerce, to fall into a state of disrepair. Not because there isn't enough money to keep our roads in a state of adequate repair—but because the Plan diverts vast quantities of funding to uses that have much less benefit to the Bay Area, and then it cries, "we don't have enough money for the roads, so we must raise sales taxes and charge you again for the roads you have already paid for," or "we must charge you a fee for driving on your roads."

This diversion of funds from necessary expenditures that the public needs, to massive wasteful projects with limited or no public benefit, then demanding that the public pay more to drive on the roads, is the signature and the story of this Plan's transportation elements.

As the joint plan between Metropolitan Transportation Commission ("MTC") and Association of Bay Area Governments ("ABAG") for the 9 counties and 101 cities of the San Francisco Bay Area with regard to transportation and land-use planning for the next ~30 years, not only does the Plan purposefully divert funding away from necessary road maintenance but it also does so inequitably towards transit and towards large capital improvement projects with minimal or no demonstrated public benefits and are assuredly not necessities in the face of underfunding existing assets like roads and bridges. The Plan should first ensure full funding for the entire transportation system as it stands <u>before</u> using funding for ancillary projects.

Particularly relevant to the DEIR, the Plan's intentional shifting of funding away from the key maintenance of roads towards expensive transit projects, especially

rail, will not actually appreciably reduce Greenhouse Gases (GHGs) relative to the "No Project" alternative—a major goal of this Plan and its DEIR.[1]

Additionally, major funding for this plan comes from road users via gasoline taxes at the state and federal levels. If gas tax revenue (which this in effect a 'user fee') is funding the Plan, those taxes should be used to maintain and improve the very activity these fees were collected from in the first place. Road users, by definition in this Plan, get a much smaller share of the benefits than transit users. Does Plan Bay Area authors ABAG, and MTC consider gas taxes a 'penalty' or 'sin' tax to be levied? Do MTC & ABAG consider driving a car to be 'immoral' and an act that must be dissuaded? The Plan's shifting of gas tax revenues away from their original source, dramatically underfunding necessary road improvements, and spending vast sums on transit projects with little or no environmental, social, economic, or public benefit compels one to at least ask this question.

Before delving into the issues of the Plan and DEIR, I make the following requests:

1) Due to the length of both of the documents (160 pages for the Plan and 1300+ pages for DEIR) and their supporting documents, I respectfully request that MTC and ABAG extend the deadline to make comments by at least 120 days to allow every citizen to opportunity to read, research and properly comment on these dense and (especially with regard to DEIR and its supporting documents) highly

1 Orinda Watch, Comments submitted to Orinda City Council on draft Plan Bay Area and its draft Environmental Impact Report, Friday, May 10, 2013

technical documents. These are hard enough for someone with an advanced or specialized degree to read, let alone the citizens that this plan seeks to help the most--the underserved, the undereducated, the disadvantaged.

2) During the suggested 120 day extension, I request that you set-up a wide scale, mass notification of the Plan and DEIR details and proactively cultivate dialogue with the public through mainstream online blogs, news media comment pages, televised news and talk show programs making every effort to ensure that every citizen has heard of and understands the ramifications of the Plan and DEIR in a transparent and unbiased way. I am unaware of the technicalities behind the laws governing proper public notice for a land-use and transportation plan of this magnitude but I can tell you that almost no one from the community of Orinda has heard about this—and in every other community I am aware of, the public is similarly in the dark on this Plan.

3) I request that the matter of whether to adopt the Plan be opened to a region-wide vote by every citizen within the Bay Area. Both MTC and ABAG are able to be swayed by monied interests. The original legislation creating MTC states that the agency can accept funding from practically any source[2]; which means that threats of losing said funding could sway what should otherwise be careful and objective decision-making for the benefit of the citizenry.

4) Whether this is opened up to an actual referendum by the region or not, I request that no vote on the Plan or its alternatives be allowed until 6 months after the final version of the Plan Bay Area and the final version of its Environmental Impact Report has been officially released. This will allow the citizens to have

2 GOVERNMENT CODE SECTION 66506

open dialogue with the voters from the MTC and ABAG boards and to allow the same citizens and officials enough time to read and decide which way to vote on this plan. No Plan in recent memory will have such a life-altering impact on the public as this one and so citizens should get the final vote on this.

Speaking of coverage of this issue and full disclosure, those of us who have researched this plan and are keenly aware of its ramifications have seen almost no dialogue online in major news sources or heard of this being discussed on mainstream news media on television. The greatest coverage of the aspects of the plan leading up to the release of the Plan and DEIR appears to be coming from small-scale local blogs, small community advocacy groups and small scale visioning sessions where stakeholders (not the public) who stand to benefit personally and financially were most active in these meetings. A NYTimes' article entitled "Why Chinese Moms are Superior" by Amy Chua in January of 2011 received over 8,800 comments from readers who debated the merits of the author's arguments about being a proper mother in an open, albeit 'heated', forum.[3] A search engine query on sfgate.com, the landing page for the San Francisco Chronicle, of "Plan Bay Area" yields an opinion posting entitled "A Vision for the Bay Area's Future" from Lois Kazakoff, San Francisco Chronicle's Deputy Editorial Page Editor, posted on April 26th. As of the writing of my comments here, there were exactly 2 comments from users, one of whom was named "OneBayArea" and who had created a profile for sfgate the same day of this article posting, has only ever posted a comment once, indicating this was individual was likely directly related to the Plan Bay Area team at either MTC or ABAG. Even the articles referenced by Ms. Kazakoff, with proponent and

3 http://tinyurl.com/tigermom1

opponent arguments for the plan had almost no comments. (I have attached all 3 articles with their ensuing comments in the Appendix for the record.)

In the end, MTC & ABAG staff and committee members have spent millions and millions of the public's money and years of time, in order to craft a plan that spends $289 billion, does not even reduce greenhouse gases by more than 1% by 2040[4] [5], does not reduce congestion, increases maintenance costs, does not consider all viable alternatives and devotes the majority of funding to the mode of travel that more than doubles the travel time for commuters[6].

I am requesting that the Plan be scrapped, determined as a failure, and MTC & ABAG go back to the drawing board.

Sincerely,

CHRIS ENGL
Chris Engl
26 Saint Stephens Drive
Orinda, CA 94563

Attachments

4 Plan Bay Area, Draft Environmental Impact Report, April 2013, Page 3.1-61, Table 3.1-29
5 Orinda Watch, Comments submitted to Orinda City Council on draft Plan Bay Area and its draft Environmental Impact Report, Friday, May 10, 2013
6 Plan Bay Area, Draft Environmental Impact Report, April 2013, Page 2.1-31, Table 2.1-14

> *If the United States is to reduce greenhouse gas emissions, it must do it in a cost-effective manner. McKinsey & Company estimates that the nation can cut its emissions in half by 2030 by spending no more than $50 per ton of reduced greenhouse emissions[7]. Traffic signal coordination and lighter automobiles will both reduce emissions and save consumers money. But rail transit and compact development, if they reduce emissions at all, would do so only at a cost of thousands or tens of thousands of dollars per ton. Spending $5,000 to reduce one ton of emissions means foregoing reducing 99 more tons at a cost of $50 a ton."[8]*

The above statement single-handedly dismantles the Plan's premise of supplanting the automobile as the main means for travel, and redistributing transportation funding from the automobile to fantastically expensive rail transit and forced increases in housing density as a premise of reducing greenhouse gases. Nowhere in the McKinsey Report does it suggest that densification of residential properties or increasing transit as a percentage of commuter travel is even remotely cost-effective (defined as <$50/ton)[9].The plan placed before us in Plan Bay Area is arguably the most expensive solution with the fewest possible public benefits that the authors of the Plan could have created in attempting to reduce greenhouse gases pursuant to California State Law AB32 (Global Warming Act) ("AB32") and California State Law SB375 (Sustainable Communities Strategy) ("SB375"). The above statement devastatingly discredits

7 Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost? (Washington: McKinsey, 2008), pp. ix, xiii
8 "The Citizens' Guide to Transportation Reauthorization", American Dream Coalition, August 2009, http://americandreamcoalition.org/pdfs/CitGuideB&W.pdf
9Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost? (Washington: McKinsey, 2008), p. xiii

behavioral modification and mass social engineering as a viable means of reducing greenhouse gases and shows that technological advances are the appropriate and effective means of limiting climate impact.

DRAFT PLAN BAY AREA ADMITTEDLY UNDERFUNDS ROADS IN FAVOR OF TRANSIT

> *"Though its fund sources are many and varied, Plan Bay Area's overriding priority in investing those funds can be stated quite simply: "Fix It First." First and foremost, this plan should help to maintain the Bay Area's transportation system in a state of good repair. Plan Bay Area's focus on "fix it first" ensures that we maintain existing transportation assets..."*[10]

The Plan asserts that MTCs priority is to maintain existing transportation first. In fact, this is clearly stated in the current Transportation 2035 Plan:

"• **Improve what we already have**. In polls and public meetings, people often embraced a "fix it first" approach to transportation priorities. Rather than funding new freeways and expanding transit services, investments should focus on making the Bay Area's existing freeways, local roads and transit operations run more efficiently."[11] [emphasis added].

In fact, the above statement shows that people did not ask for 'focus growth'; rather they asked for well functioning existing freeways, local roads, and transit operations. The Plan's redirection of necessary funds for road maintenance towards transit spending with little or no public benefit not only wastes public funds, but the Plan's priorities are the exact opposite of what the public has told MTC that is the overriding interest of the public—maintaining existing infrastructure, especially the roads.

10 Draft Plan Bay Area, March 22, 2013, page 12
11 Transportation 2035 Plan for the San Francisco Bay Area, Final, April 2009, page 19

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The Plan describes the highway system as 'essential', and lists the region's highways as having a value of at least $39million (6500 lane-miles divided by 50,000 state lane-miles times 'more than' $300 billion = $39 million) and carry
210 more than one-third of VMTs.

> *"California's 50,000 lane-mile state highway system is an essential contributor to California's economic vitality, linking people and goods with intermodal transportation facilities,*
> 215 *growing metropolitan centers, and major international airports and ports. The value of this important transportation resource is reckoned at more than $300 billion. Of the total mileage, 6,500 lane-miles are within the nine-county Bay Area, giving residents a network of interstate, freeway, highway, and arterial routes*
> 220 *maintained and managed by Caltrans. These lane-miles carry more than one-third of our region's vehicle miles traveled."* [12]

The Plan admits that although it is a 30 year plan, that the typical life cycle of pavement is 20 years—10 years less than the Plan itself. The Plan also
225 knowingly admits that, beyond a certain point, it costs 5 to 10 times more to rehabilitate a road surface than to keep it properly maintained during its normal life cycle of use.

12 Draft Plan Bay Area, 3-22-13, pp 72-73

"The typical life cycle of a pavement is about 20 years. Over the first three-quarters of its life, the pavement will deteriorate slowly, resulting in a 40 percent drop in condition. Past that point, pavement will begin to deteriorate rapidly. It costs five to ten times more to rehabilitate or reconstruct a roadway that has been allowed to deteriorate, than it costs to maintain that roadway in good condition."[13]

Despite significant funding from gas taxes, more than sufficient to maintain the Bay Area's vitally important road network, and despite empirical evidence that the automobile is superior from a cost per mile perspective, even after included social costs (like pollution)[14], the Plan's portion of funding towards roads is much less than other regions as a percentage of total funding and much less as a ratio of funding for transit. In fact, the Plan allocates 62% of its total funds, a significant portion of which comes from driver user fees (also known as gas taxes), towards transit and 38% of the funds towards roads, despite the fact that only 10% of commuter trips are taken via transit, and in the end Plan does not reduce Greenhouse Gases by more than and appallingly small 1% (once you include all of the vehicle. These facts demonstrate a stunning disregard for MTC's central and most important responsibility—to make sure the existing transit network is well maintained, and demonstrate a shocking disregard for the transportation needs of the Bay Area's seven million residents.

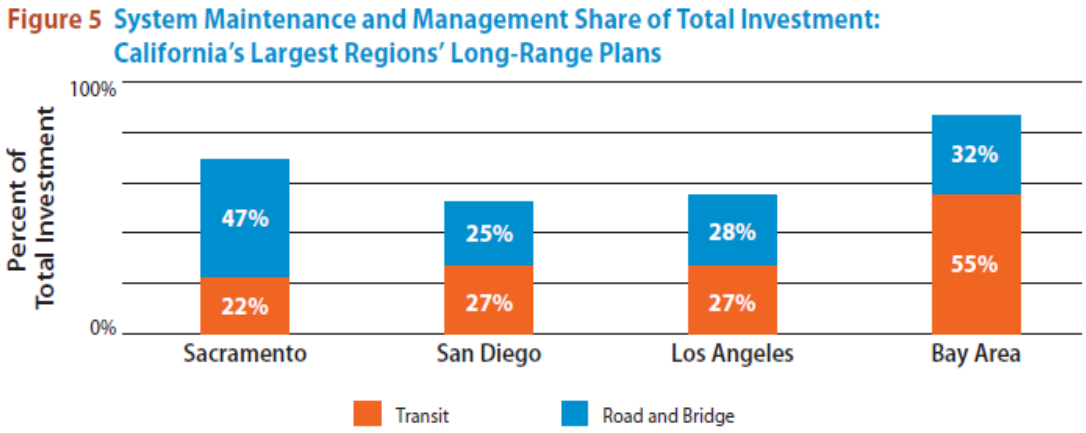
Regardless of the ideological views of autos as a commuter alternative, one thing remains constant: the need to move goods from place to place. By allowing the roads to deteriorate, as the Plan does, it increases the cost of delivering goods

13 Draft Plan Bay Area, 3-22-13, page 72

14 "Should We Get The Prices Right?" Mark Delucchi, Spring 2000 http://escholarship.org/uc/item/5zg735f1#page-2

form place to place. One of the benefits of automobiles is the ability of the user to easily carry freight. Imagine a trip to Home Depot, first riding your bicycle to the BART train, then getting off with your bike and riding over to the store pick up lumber for your new home project and then do the entire thing in reverse. In reality, the lumber must either be picked up by the owner or delivered by an intermediary...in either case, a well functioning roadway is tremendously important and cannot be overstated. Allowing the roads in need of serious repair to erode from around 25% to around 44% during the life of the Plan is not being honest and focused on the priorities and realities of the importance of roads, even if the automobile really was the worst of the transportation alternatives (and it is actually one of the best alternatives as you will see soon enough.) Deliveries must take place and maintaining the roads should be priority number one.

With regards to maintenance in the transit category, the Plan appropriates approximately double the amount of funding of San Diego and Los Angeles and approximately 2.5 times the amount of funding of Sacramento. As for the mix between transit and road and bridge maintenance within each region, San Diego and Los Angeles provide roughly equal percentages (25% transit vs 27% road and bridge in San Diego; 28% transit vs 27% road and bridge in Los Angeles), Sacramento provides more than double the amount towards road and bridge (47% vs 22%). In a demonstrate of disregard for the transportation needs of the Bay Area's seven million residents that is as disorienting to contemplate as it is inexplicable to understand, the Plan provides 72% more funding (55%/32% = ~72%) towards transit than it does towards road and bridge maintenance, again, despite the major funding coming from gas taxes (essentially, user taxes from automobile drivers.) See graph below.



So, while the intent here by the Plan appears to be to prove that more funding is provided to maintaining existing assets, the actual meaning of these disclosures by the Plan are an express admission that it dramatically and recklessly under-performs other metropolitan transit areas in the mix of transit versus road funding, and in meeting its primary responsibility to maintain the Bay Area's roads and bridges which account for the vast majority of passenger and freight miles traveled, despite a seemingly unending stream of massive subsidies that go to mass transit, especially to rail system—subsidies that never raise transit ridership, and in fact have lead to steady declines in transit ridership over the past 32 years.[15]

<u>Questions: Please explain:</u>

15"COMMENTS ON THE METROPOLITAN TRANSPORTATION COMMISSION'S TRANSPORTATION-AIR QUALITY CONFORMITY ANALYSIS FOR PLAN BAY AREA & 2013 TRANSPORTATION IMPROVEMENT PROGRAM", Thomas A. Rubin, May 3, 2013

295 (1) why the Plan dramatically under-funds local road and bridge maintenance despite its express admissions that maintaining existing transit infrastructure is its most important responsibility, and despite its express admission that roads and bridges are by far the most important part of the Bay Area transportation network,

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(2) How the Plan's dramatic over funding of transit and underfunding of roads and bridges (a) compared with other major California metropolitan areas, (b) relative to the passenger miles represented by automobiles versus mass transit, respectively, and (c) relative to the cost per passenger mile, accords with any
305 common sense whatsoever, let alone is in accord with sound public policy, let alone is accord with MTC's most important responsibilities as expressly admitted by MTC as outlined above.

(3) How, given the Plan's express admission of dramatic underfunding of road
310 and bridge maintenance needs for the next 30 years, the Plan still offers a seemingly innumerable list of massive capital improvement projects for the Bay Area's mass transit infrastructure, the funding of which is vastly greater than the funding shortfall of of road and bridge maintenance. How can the Plan possibly not "fix it first" by suspending all of these massive new capital improvement
315 projects until it (a) first fully funds local road and bridge maintenance, (b) provides honest and reliable estimates of the likely true cost of these projects (see Tom Rubin's analysis of MTC cost overruns for more information)[16], and (c) MTC provides peer-reviewed, objective assessments that its additional transit

45 16"COMMENTS ON THE METROPOLITAN TRANSPORTATION COMMISSION'S TRANSPORTATION-AIR QUALITY CONFORMITY ANALYSIS FOR PLAN BAY AREA & 2013 TRANSPORTATION IMPROVEMENT PROGRAM", Thomas A. Rubin, May 3, 2013

320 subsidies will actually lead to increased ridership and will do so at a cost per passenger mile that represents a significant cost savings over the use of automobiles.

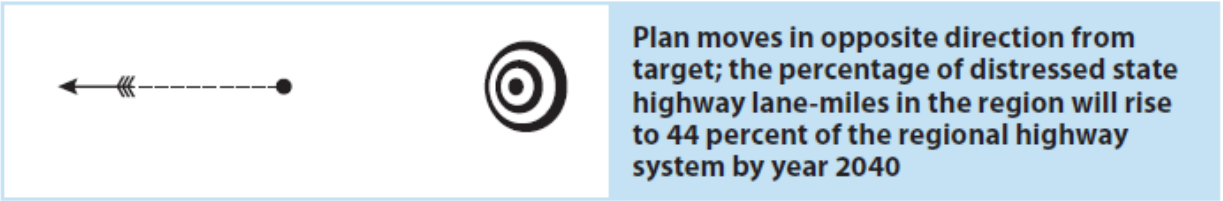
4) Also, please respond to Mr. Thomas A. Rubin's devastating indictment of
325 MTC's track record of funding vast fixed guideway transit systems (primarily rail) that seek to get upper middle income residents out of their late model autos that get high gas mileage and emit less GHG and pollutants than mass transit does—doing so at an astronomical cost to the public per passenger mile, while completely ignoring those simple and essential devices that are the only transit
330 subsidies that have been proven to increase ridership and help the personal mobility needs of lower income residents who are dependent on public transit: lowering fares and increasing service quality, especially of buses.

Furthermore, the Plan <u>knowingly</u> underfunds roads. The Plan's dereliction of its most important responsibilities is not negligent, it is intentional.

> *"If current budget constraints continue over the coming decades, the share of distressed lane-miles is expected to increase from 27 percent of the overall Bay Area highway network to 44 percent of the network."* [17]

> *"State law requires Caltrans to prepare a 10-year plan for the State Highway Operation and Protection Program (SHOPP). The SHOPP identifies the various needs for all state-owned highways and bridges. Bay Area highway maintenance needs over the 28-year life of this plan are forecasted to total about $22 billion. Projected revenues over the same period are expected to cover only $14 billion. Plan Bay Area has not yet identified any new funding sources for the $8 billion in unfunded needs despite its heavy emphasis on maintaining our current transportation system. The magnitude of the Bay Area's highway rehabilitation needs and lack of available funding suggests that maintenance will have to be delayed or deferred on some highways."*[18]

Target #10b: **Decrease distressed lane-miles of state highways to less than 10 percent of total lane-miles.**



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17 Draft Plan Bay Area, 3-22-13, page 105
18 Draft Plan Bay Area, 3-22-13, page 73
19 Draft Plan Bay Area, 3-22-13, page 105

...and yet, still chooses to fund over $20bb of massive transit capital improvement projects instead of adequately funding roads. And the Plan even suggests massive new capital projects to enable MTC to charge residents for using the roads that the residents already paid for, such as through its "Express Lane" program.

Excerpt:

"**Table 3: Ten Largest Plan Bay Area Investments**

Rank	Project	Investment
1 -	BART to Warm Springs, San Jose, and Santa Clara	$8.341B
2 -	MTC Regional Express Lane Network	$6.657B
3 -	Transbay Transit Center/Caltrain Downtown Extension	$4.185B
...		
6 -	Caltrain Electrification	$1.718B
...		
8 -	VTA Express Lane Network	$1.458B
	Total	$22.359B"[20]

"Our region's greater reliance on rail services results in higher costs to maintain these capital-intensive modes. Plan Bay Area includes nearly $3 billion for replacing BART's and Caltrain's aging fleets over the next decade."[21]

20 Draft Plan Bay Area, 3-22-13, page 13
21 Draft Plan Bay Area, 3-22-13, page 67

In the statement above, the Plan knowingly admits that the rail system is capital-intensive and results in higher costs. Despite the costs (both private and social) being cheaper per passenger mile for automobiles over other forms of transportation, the Plan continues to move forward with the logic of using 'discretionary' (this is not to say these funds are excess, because we have shown that the roads will be underfunded through the Plan) funds to build large capital-intensive projects which will have even greater maintenance costs down the road instead of funding roads. This is despite the fact that doing so will increase greenhouse gas emissions, rather than reduce them. "Unfortunately, despite what many people would like to believe, *transit in the U.S. does not use less energy, or produce fewer emissions, than current generation automobiles*, and the upcoming improvements in automotive technology will mean, by the end of the *Plan* period in 2040, the fleet of automobiles on the road will have a very significant advantage in these regards over transit."[22]

The Plan claims that MTC is unable to fully fund the roads and highways partially because it is the state's responsibility to maintain the highways, and this is true for the major state highways. But the Plan also admits that local streets and roads are the responsibility of local jurisdictions, but it does not go on to say that MTC's purpose for existence is to distribute state and federal funds, especially gas tax revenues, to maintain the Bay Area's existing transportation system, and its most important responsibility is to distribute those funds to local jurisdictions so that they use those funds to maintain their roads, streets and bridges. This is MTC's primary responsibility. And MTC has immense power. MTC has not been

22 COMMENTS ON THE METROPOLITAN TRANSPORTATION COMMISSION'S TRANSPORTATION-AIR QUALITY CONFORMITY ANALYSIS FOR PLAN BAY AREA & 2013 TRANSPORTATION IMPROVEMENT PROGRAM", Thomas A. Rubin, May 3, 2013

forthcoming in that MTC has the largest amount of power in the decision-making around transportation in the Bay Area. Here are several excerpts from the California state law that establishes and maintains MTC:

1) Government Code section 66500 establishes MTC as an entity: Government Code section 66510 shows that MTC's regional transportation plan must focus on roads and highways and was chosen as item "(a)" in the list below for a reason.

"Government Code section 66500. This title shall be known as the Metropolitan Transportation Commission Act."[23]

"Government Code section 66510. The regional transportation plan shall include, but not be limited to, the following segments of the regional transportation system:

(a) The national system of interstate and defense highways, the California freeway and expressway system, and other highways within the state highway system. [emphasis added]

(b) The transbay bridges.

(c) Mass transit systems.

The commission shall pay particular attention to the interfacing of the various modes of transportation."[24]

2) Government Code section 66516 shows that MTC has revenue sharing agreements with connecting systems and has the power to redirect revenues as it sees fit.

23 GOVERNMENT CODE SECTION 66500-66536.2
24 GOVERNMENT CODE SECTION 66500-66536.2

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"**Government Code section** 66516. The commission, in coordination with the regional transit coordinating council established by the commission pursuant to Section 29142.4 of the Public Utilities Code, shall adopt rules and regulations to promote the coordination of fares and schedules for all public transit systems
435 within its jurisdiction. The commission shall require every system to enter into a joint fare revenue sharing agreement with connecting systems consistent with the commission's rules and regulations."[25] [emphasis added]

3) Government Code section 66509 MTC establishes its "marriage" with
440 **ABAG right from the start.**

"**Government Code section** 66509. (c) The regional plans prepared and adopted by organizations concerned with policies and programs designed to meet the near- and long-term planning needs of the region. Such consideration
445 by the commission shall include, but not be limited to, plans prepared and adopted by the **Association of Bay Area Governments** [emphasis added], the San Francisco Bay Conservation and Development Commission, and the State Office of Planning."[26]

450 **4) Government Code section 66506 shows that MTC may be politicized in that it is not limited, like other government entities and political candidates, in the sources of funding it may receive.**

25 GOVERNMENT CODE SECTION 66500-66536.2
26 GOVERNMENT CODE SECTION 66500-66536.2

"**Government Code section** 66506. The commission may:

455 (a) Accept grants, contributions, and appropriations from any public agency, private foundation, or individual. [emphasis added]

(b) Appoint committees from its membership and appoint advisory committees from other interested public and private groups.

(c) Contract for or employ any professional services required by the

460 commission or for the performance of work and services which in its opinion cannot satisfactorily be performed by its officers and employees or by other federal, state, or local governmental agencies.

(d) Do any and all other things necessary to carry out the purposes of this title."[27][Emphasis added...this is about the broadest definition of power anyone

465 could ask for.]

5) Here the portion of the law explains the constraints and freedoms of MTC to deal with financing the regional transportation plan and that MTC may petition the state to secure this financing.

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"**Government Code section** 66512. In addition, the regional transportation plan shall include a financial plan for the regional transportation system. The financial plan shall include a proposal for each segment of the system, including the amount and sources of revenues necessary to construct and operate that

475 segment.

In developing the financial plan, the commission shall consider various sources of revenues, without regard to any constraints imposed by law on

75 27 GOVERNMENT CODE SECTION 66500-66536.2

expenditures from such sources, necessary to assure adequate financing of the system and, if necessary, recommend appropriate legislation to the Legislature to secure such financing."[28] [emphasis added]

6) This statement suggests that MTC's power to control the transportation usurps other entities and that other entities may, by MTC recommendation, be downsized/made redundant/combined etc giving massive amounts of control to MTC:

"**Government Code section** 66516.5. The commission may do the following:

(a) In consultation with the regional transit coordinating council, identify those functions performed by individual public transit systems that could be consolidated to improve the efficiency of regional transit service, and recommend that those functions be consolidated and performed through interoperator agreements or as services contracted to a single entity.

(b) Improve service coordination and effectiveness in those transit corridors identified as transit corridors of regional significance by the commission in consultation with the regional transit coordinating council by recommending improvements in those corridors, including, but not limited to, reduction of duplicative service and institution of coordinated service across public transit system boundaries."[29]

7) Here is proof in the law that the MTC (and not the cities/counties) has control over all transportation planning decisions:

28 GOVERNMENT CODE SECTION 66500-66536.2
29 GOVERNMENT CODE SECTION 66500-66536.2

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"**Government Code section** 66520. Any application to the federal or state government for any grant of money, whether an outright or a matching grant, by any county, city and county, city, or transportation district within the region shall, if it contains a transportation element, first be submitted to the commission for
510 review as to its compatibility with the regional transportation plan [emphasis added]. The commission shall approve and forward only those applications that are compatible with the plan. Review by the commission, however, is not required where revenues derived from the Motor Vehicle Fuel License Tax Law are subvented to local governmental entities in accordance with statutory
515 provisions."[30]

Here are more statements on MTC's power and reach:

"Our [Metropolitan Transportation Commission] job is to make sure the regional
520 transportation network functions smoothly and efficiently, and to plan responsibly to meet the future mobility needs of our growing population."
Source: *The ABCs of MTC, October 2007, page 2*
http://www.mtc.ca.gov/library/abcs_of_mtc/MTC-ABCs.pdf

525 "As the Bay Area Toll Authority, MTC is responsible for administering all revenues from the Bay Area's seven state-owned toll bridges."
Source: *The ABCs of MTC, October 2007, page 9*
http://www.mtc.ca.gov/library/abcs_of_mtc/MTC-ABCs.pdf

30GOVERNMENT CODE SECTION 66500-66536.2

530 "As the Bay Area grew, MTC's responsibilities increased, until today MTC is three agencies in one with a wide range of duties and a shared mission: to keep the Bay Area moving."
Source: *The ABCs of MTC, October 2007, page 8*
http://www.mtc.ca.gov/library/abcs_of_mtc/MTC-ABCs.pdf
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Therefore, knowing and understanding MTCs political, economic power over the Bay Area's transportation system, I request the following:

a) I request an answer on why the Plan doesn't use 'discretionary' funds to fully
540 fund the roads (both highways and local roads) before funding anything else, since roads are used by the greatest numbers of passenger-miles.

b) Absent some law that prevents the Plan from fully funding the highways and local roads and knowing now that automobiles have the lowest social cost of any
545 of the major sources of transportation, I request an answer on why the Plan doesn't simply rely on already-on-the-books California regulations such as California Air Resource's Board's Clean Car Standards, Advanced Clean Car Standards, Low Emission Vehicle standards (LEV, LEV II, LEV III) and Low Car Carbon Standards, which will lead to substantial reductions in CO2 emissions,
550 and particulate matter and other criteria pollutants—reductions that will dwarve by many orders of magnitude the tiny, and unlikely to materialize reductions that will come from the massively expensive transit subsidies in this Plan? Why does the Plan focus on reducing GHG through reducing VMT (which requires heavy handed, expensive policies that won't work), rather than acknowledging
555 that reducing GHG through reducing GHG per VMT will allow people to use the

cars that they prefer to use for personal mobility, and will accomplish environmental benefits many, many times over those that the Plan promises from its land use and transit elements—benefits that will actually never materialize.

560 c) I request an answer on why the Plan does not treat the large chunks of funding from gasoline taxes and bridge tolls as ‘user fees’ rather than ‘sin taxes’ (as it would seem giving the way the Plan is not fully funding roads and is penalizing auto usage and subsidizing transit usage) and return those fees to the source of their taxation so that the roads and bridges can be fully funded.

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MARGINAL SOCIAL COST ("MSC") PRICING TIPS THE SCALES TOWARDS AUTOMOBILES AS THE CHEAPEST FORM OF TRANSPORTATION, INCLUDING FACTORS SUCH AS BUT NOT LIMITED TO POLLUTION, CONGESTION, SUBSIDIES, ETC, ON A PER PASSENGER-MILE BASIS.

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If part of the goal of the Plan is to capture all of the costs of each form of transportation, at the very least, an honest and empirical analysis needs to be done to show the public where traditional theories of the 'best' or the 'most efficient' or the 'most socially conscious' form of transportation lies. After all, isn't
575 that the purpose of this Plan?

Scientific researcher Mark Delucchi in his piece from Spring 2000 entitled "Should We Try To Get The Prices Right?" defines that the 'right' transportation prices are *efficient* prices--"the prices that arise in a properly functioning
580 competitive market and result in an economically efficient use of transportation resources...Generally, the efficient price of a resource is its marginal social cost (MSC). The *social* cost is the cost to society as a whole, which may or may not be the same as the "private" cost that an individual pays. The *marginal* cost is the cost of an incremental unit of a resource, as distinguished from the average cost
585 of a great many units."[31]

This is not to say that is this author's opinion nor Mr. Delucchi's opinion necessarily (you'll have to ask Mr. Delucchi to be sure) that we should tax individuals for the social costs. But he does give us a hint of what he means. As
590 Mr. Delucchi points out "...when the actual cost of setting up and running the tax

31 "Should We Get The Prices Right?" Mark Delucchi, Spring 2000 http://escholarship.org/uc/item/5zg735f1#page-2

system is considered, we might be no better off than with no tax at all."[32] and "(Of course, it is possible to manipulate prices so that many people will switch to public transit, but the price differentials required to achieve this would far exceed what could be justified on the grounds of economic efficiency.)"[33]

"...the subsidies to public transit generally are much greater than the external costs of automobile use, per passenger mile; as a result, MSC pricing generally would favor auto use over transit use. Similarly, MSC pricing probably would favor conventional gasoline vehicles over new vehicle technologies." [34]

What are the main reasons that MSC pricing would favor gasoline vehicles? The biggest detractor from using automobiles typically comes from congestion [4 cents per passenger mile] and then air pollution [2 cents per passenger mile]. The biggest detractors from using transit come from the massive government subsidies [465 to 1177 cents per vehicle mile] (see below for reference table). Were the Plan to focus on decreasing congestion for automobiles, and thereby decreasing the direct MSCs for automobile driving using very low cost GHG mitigation techniques like traffic signal timing, this would further reduce the detraction and negative stigma from using automobiles as the dominant mode of transportation.

32 "Should We Get The Prices Right?" Mark Delucchi, Spring 2000 http://escholarship.org/uc/item/5zg735f1#page-2
33 "Should We Get The Prices Right?" Mark Delucchi, Spring 2000 http://escholarship.org/uc/item/5zg735f1#page-2
34 "Should We Get The Prices Right?" Mark Delucchi, Spring 2000 http://escholarship.org/uc/item/5zg735f1#page-2

External costs and subsidies for different passenger-transport modes (cents per vehicle mile, except last row is cents per passenger mile)
[Numbers in brackets are my best estimates]

COST ITEM	GASOLINE AUTO	ELECTRIC AUTO	TRANSIT BUS	LIGHT RAIL	HEAVY RAIL
Air pollution	0.8 to 13 [2.0]	1.5	5.4 to 123 [20.0]	5*	5*
Oil use, water pollution	0.3 to 1.5 [0.8]	0.4	1.5 to 8.7 [4.0]	1*	1*
Noise	0.01 to 2.0 [0.2]	0.15	0.5 to 10.0 [2.0]	1*	1*
Congestion	4.0	4.0	8.0	not estimated	not estimated
Accidents	2.5	2.6	3.5	2*	2*
Marginal highway and service costs	0.1	0.1	1.5	0	0
Unpriced parking	0 to 8 [0]	0 to 8 [0]	0	0	0
Inefficient highway user taxes and fees, meant to cover highway costs	–2.7	0	0 (exempt from fuel taxes)	0	0
Government subsidy:					
Operating costs minus fares	0	0	339	685	372
Operating + rolling-stock costs minus fares	0	0	[398]	1,137	797
Total operating + capital costs minus fares**	0	0	465	2,800	1,177
Extra private costs relative to gas auto	0	0 to 16 [8]	see subsidy	see subsidy	see subsidy
Total cents per vehicle-mile	5 to 28.4 [6.9]	8.8 to 24.8 [16.8]	359 to 620 [437]	694 to 2,809	381 to 1,186
Passengers per vehicle	assume 1.0	assume 1.0	10.9 (avg.)	25.7 (avg.)	22.3 (avg.)
Total cents per passenger-mile	5 to 28.4 [6.9]	8.8 to 24.8 [16.8]	33 to 57 [40]	27 to 109	17 to 53

* Data are not available for these numbers, which are estimated based on my studied judgment.
** Note that, because the official statistics do not report passenger fare payments by individual transit mode, it is not possible to calculate the actual government subsidy for each mode. I have assumed that ratio of fare payments to operating expenses is the same for all modes.

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According to Mr. Delucchi, the analysis shows the total cents per mile of external costs and subsidies run from 6.9 for gasoline auto, to 16.8 for electric auto, to 40 cents for transit bus, 27 to 109 for Light Rail, and 17 to 53 for heavy rail, showing that gasoline autos are more than 50% cheaper than electric auto in this analysis (using Mr. Delucchi's best estimate), 7 times cheaper than transit bus (using Mr. Delucchi's best estimate), anywhere from 4 to ~16 times cheaper than light rail, and anywhere from 1.6 to 7 times cheaper than heavy rail. This also doesn't included discussions of linked trips; that is, if someone takes a trip using heavy rail, they often need another intermediary form of transportation (transit bus, taxi, light rail, etc) to get them from their initial starting point to their final destination. This must get added to the total cost of the trip.

35 IBID

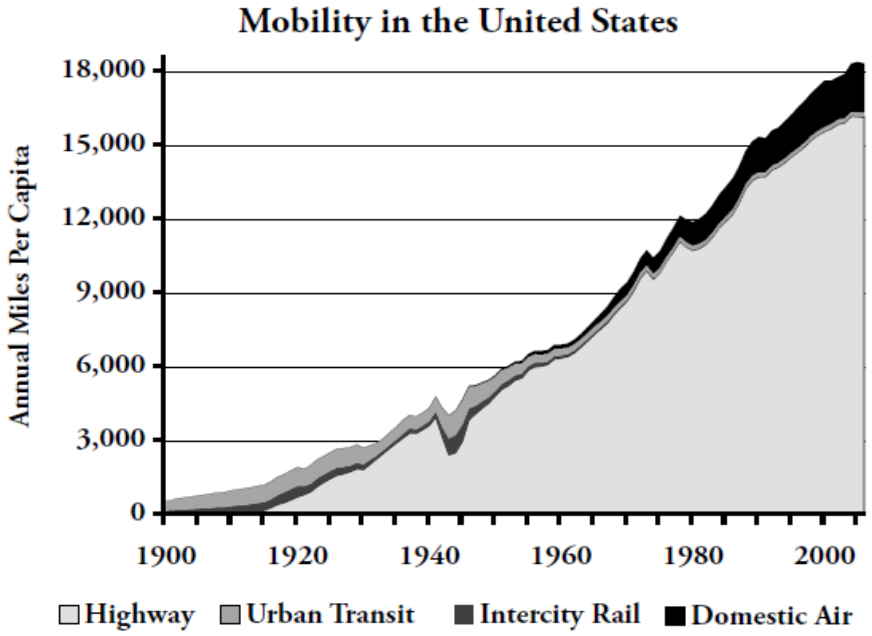
625 Also, note that one of the shortcomings of Mr. Delucchi's analysis is that the average number of passengers per vehicle is likely greater than one for both gasoline and electric auto. To create a more accurate analysis as it applies to the Bay Area, it would make sense to use Bay Area's statistics.

630 Request: This author requests that Plan Bay Area and the Environmental Impact Report include an accurate, unbiased, and audited analysis of Marginal Social Cost Pricing as defined in research scientist Mark DeLucchi's report entitled "Should We Try to Get The Prices Right?" from Spring 2000 (Attached in the Appendices for your convenience) to compare the options that make the most
635 economic and environmental sense. Furthermore, since the authors of Plan Bay Area have used alternative analysis to this MSC pricing, please explain why the approach that Plan Bay Area has used is empirically more effective. I request that Plan Bay Area list the subsidies required to each form of transportation on a per passenger-mile basis using fair and balanced metrics about the average
640 number of passengers, keeping in mind that previous estimates of passengers per vehicle have been overstated historically by MTC.[36]

100 36 "COMMENTS ON THE METROPOLITAN TRANSPORTATION COMMISSION'S TRANSPORTATION-AIR QUALITY CONFORMITY ANALYSIS FOR PLAN BAY AREA & 2013 TRANSPORTATION IMPROVEMENT PROGRAM", Thomas A. Rubin, May 3, 2013

THE IMPORTANCE OF THE AUTOMOBILE AS IT RELATES TO PHYSICAL, ECONOMIC AND SOCIAL MOBILITY.

Let's start with the importance of the automobile and, therefore, roads as it pertains and contributes to mobility (both literally and socially).



> *In the debate over the supposed need to "get drivers out of their cars," people often forget that automobiles and highways have provided Americans with enormous benefits. Since about 1925, they have provided more mobility than all other forms of transportation combined. Intercity passenger trains and urban transit at their peaks provided only a tiny fraction of the mobility that Americans get from the automobile today, and most of that mobility was enjoyed mainly by the wealthy.*[37]

37 "The Citizens' Guide to Transportation Reauthorization", American Dream Coalition, August 2009,

This graph and accompanying passage above suggest that nothing has allowed humans to increase mobility as the automobile, and even at it's height of use, urban transit was very expensive and moved only a small fraction of people around. (For further discussion of the importance of mobility historically, see Appendix 1.)

The merits of mobility, the importance of the automobile, both as one of the cleanest alternatives per passenger miles traveled and as it relates to mobility and income growth can be found in the excellent piece entitled "The Citizens' Guide to Transportation Reauthorization."[38]

Here are some key statistics from that report:

-"...the problems that exist are more due to misallocations of resources than to an actual shortage of funds. One of the biggest misallocations of funds has been to rail transit construction." In fact, not only is there a misallocation of resources, but MTC has history of massive transit project cost overruns and time-to-completion extensions on past projects, all while ridership has declined over the past 32 years[39].

-"The current federal funding process gives transit agencies perverse incentives to select high-cost solutions to transit problems. This is financially unsustainable because it requires

http://americandreamcoalition.org/pdfs/CitGuideB&W.pdf

38 "The Citizens' Guide to Transportation Reauthorization", American Dream Coalition, August 2009, http://americandreamcoalition.org/pdfs/CitGuideB&W.pdf

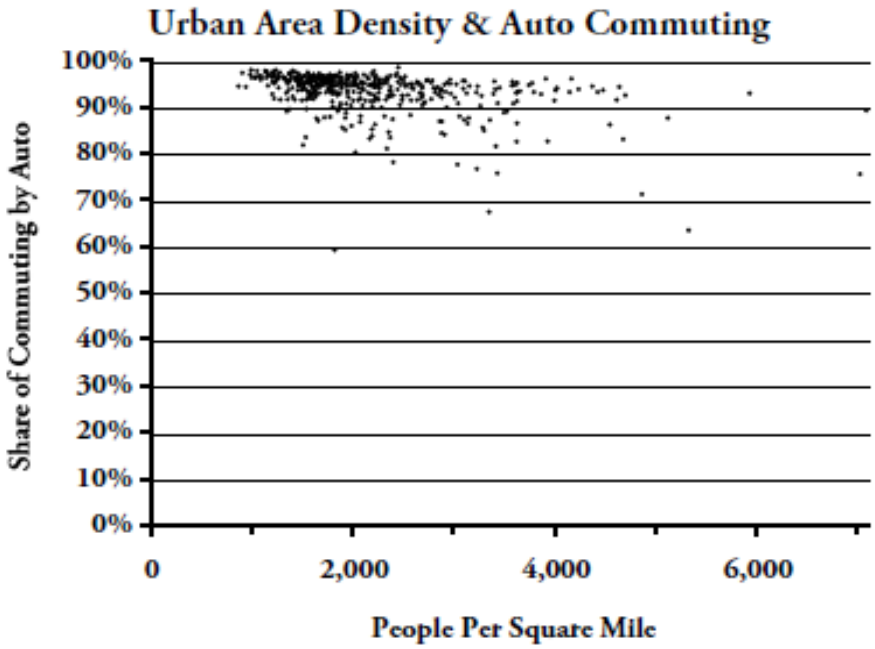
39"COMMENTS ON THE METROPOLITAN TRANSPORTATION COMMISSION'S TRANSPORTATION-AIR QUALITY CONFORMITY ANALYSIS FOR PLAN BAY AREA & 2013 TRANSPORTATION IMPROVEMENT PROGRAM", Thomas A. Rubin, May 3, 2013

more and more subsidies to move hardly any more people." This statement applies perfectly to the Plan in that instead of finding a solution that uses the lowest cost solutions to reducing greenhouse gases, as mentioned earlier in my comments, the Plan increases investments to the tune of $22 billion towards massive new capital improvement projects with the $57 billion of discretionary funds available to the Plan. Not only that but $14 billion of the funding for the plan is listed as "Anticipated/Unspecified" with absolutely no forecast for where this funding is expected to come from.[40] To use a phrase that often must appear in financial disclosures of all kinds, "past performance are not necessarily indicative of future results." The Plan makes some very troubling assumptions today about about the sources of funding some time in the future, even to assume that funding will grow at a 3% rate of inflation, only using the last 15 years of data, when MTC and ABAG have been around for decades longer than that. Even though the idea of spending money in the future from a fictional source makes little sense, if MTC and ABAG were going to embark on such a journey, they should have used data from all of those years ABAG and MTC have been in existence to get the clearest picture.

-"Since transit carries only about 1 percent of passenger travel, and virtually no freight, it seems unfair and inefficient that it receives more than 20 percent of federal transportation funds." The Plan shows that while roughly 80% of the transportation comes from automobiles as of 2010, and that transit's share has been a steady 10% for 2 decades, the Plan allocates just 38% of the transportation funding to automobiles and 62% to transit.

40 Financial Assumptions, Plan Bay Area (Draft), March 2013, p 14

-"Since 1970, federal, state, and local governments have spent well over $750 billion subsidizing transit, yet per-capita transit ridership has actually declined. In the past two decades, urban driving has increased by 75 percent and subsidies to transit have increased by nearly 70 percent. But total transit ridership has increased by less than 20 percent, so transit's share of urban travel has declined from 4.0 to 1.7 percent." Despite the current density and the density induced by the Plan, it is ludicrous to imagine the pace of growth of the share of transit



ridership as provided under this Plan between 2010 and 2040. In fact, according the DEIR, from 1990 to 2010, transit ridership didn't budge from around 10%[41]. Yet somehow, the Plan suggests spending billions more dollars will somehow increase ridership. At the end of it all, "data from the 2000 census show that the densest urban area in the US is 7 times denser than the least dense ares, yet the percentage of people who use autos to get to work in the densest area is only

41 DEIR, p 2.1-15, Table 2.1-6

about 8 percent less than the least-dense areas."[42]

-"The 2000 census found that nine out of ten households have access to at least one car." This suggests that automobiles are affordable and therefore both preferred and available to the greatest number of individuals. Why else would 80% of the transportation in the Bay Area come from automobiles?

-"People in households with incomes of more than $100,000 travel only about 75 percent more miles each year than people in households with incomes less than $20,000. Since wealthier households are five times more likely to fly on long trips than low-income households, the distribution of auto travel is more evenly spread than indicated in the above figure." The disconnect in the difference between higher-wealth and low-income households in terms of the number of miles traveled suggest that were airplane miles to be removed from the equation, the number of vehicle miles traveled would be much more evenly distributed despite differences in income levels, and that wealth does not have a great impact on everyday mobility.

-"Despite large subsidies to high-speed rail and urban transit, they don't make up for reduced driving by taking trains more. For example, the average American rides on urban rail transit 88 miles a year. Though Europe has far more cities with rail transit than the United States, the average western European rides urban rail transit only 96 miles a year. France and Japan have each spent many tens and even hundreds of billions of dollars on high-speed rail, yet the average

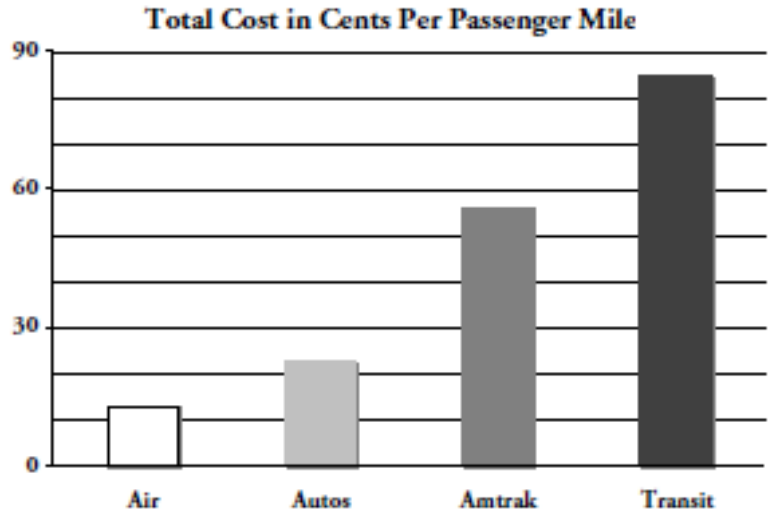
42 "The Citizens' Guide to Transportation Reauthorization", American Dream Coalition, August 2009, http://americandreamcoalition.org/pdfs/CitGuideB&W.pdf

residents of those countries ride high-speed rail less than 400 miles per year, and rail's share of travel has steadily declined while the auto's share has increased."

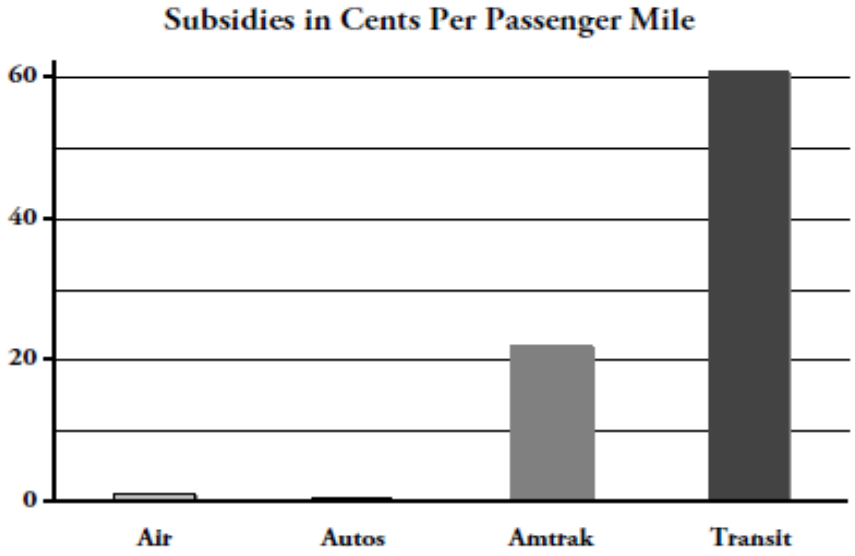
-"Studies show that increased mobility means higher worker productivities and incomes because employers have access to a larger pool of workers, and lower cost consumer goods because retailers know that unhappy customers can simply drive somewhere else." Case in point: Mobility = prosperity. Instead of encouraging mobility and focusing on reducing congestion, the Plan seeks to limit people's movement, encourages people to stay local, and encourages virtues that require humans to take up less space, shopping in close proximity to home (which provides significant advantage to retailers who can raise prices on consumers), and also limits people in the number of jobs they can access within a reasonable period of time devoted to travel.

-"Autos are far less expensive than other modes of travel. Counting costs to both users and taxpayers, Americans spend about 24 cents per passenger mile on driving compared with 56 cents on Amtrak and 85 cents on public transit." Again, this means accessibility and affordability. Despite having controlling the agencies responsible for collecting per passenger mile cost and energy data, the DEIR does not make any comparisons on this basis except to suggest that the reader would need to do his/her own calculations about per passenger mile information. "The energy efficiency of each of these modes may vary according to operating conditions and ridership." Why doesn't the Plan make a comparison of the various forms of private and public transportation on this basis? Could it be because automobile use would look more attractive under this comparison? I ask that the DEIR be modified to include this information and once included, the

merits of the Plan be reevaluated and revised or scrapped based on this new information.



Transit (as shown by this graph) is roughly 4 times more expensive as autos, and if the chart above didn't assume 1.6 people per car, but rather 2.4 people per car (the average for intercity auto trips), the cost per passenger mile would be comparable to air travel.[43]



43"The Citizens' Guide to Transportation Reauthorization", American Dream Coalition, August 2009, http://americandreamcoalition.org/pdfs/CitGuideB&W.pdf

-"Even counting social costs such as pollution, says University of California economist Mark DeLucchi, autos are far less expensive than transit." This ties back to the earlier discussion of MSC pricing.

So the question is now: is mobility a positive or a negative for society? One way to view whether this is positive or negative is to look the correlation of mobility (Vehicle Miles Traveled ("VMT") per capita versus both per capita gross domestic product (GDP) and per capita income growth:

We can see by this chart of VMT per capita versus real GDP per capita using data from 1946-2006, that with a 98% R-squared (the coefficient of determination), vehicle miles per capita does indeed correlate nearly one-for-one with GDP per capita. That suggests that as people become more mobile, the nation as a whole becomes more prosperous.

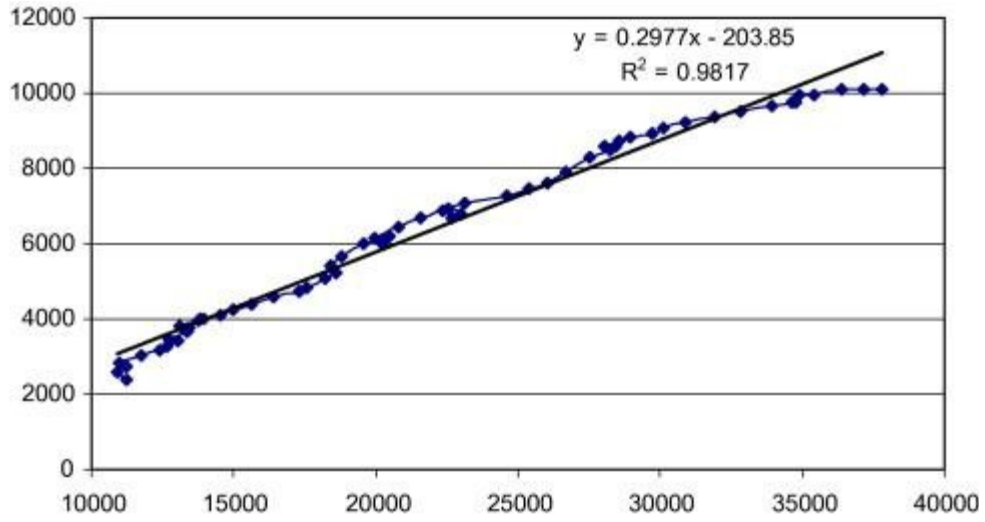
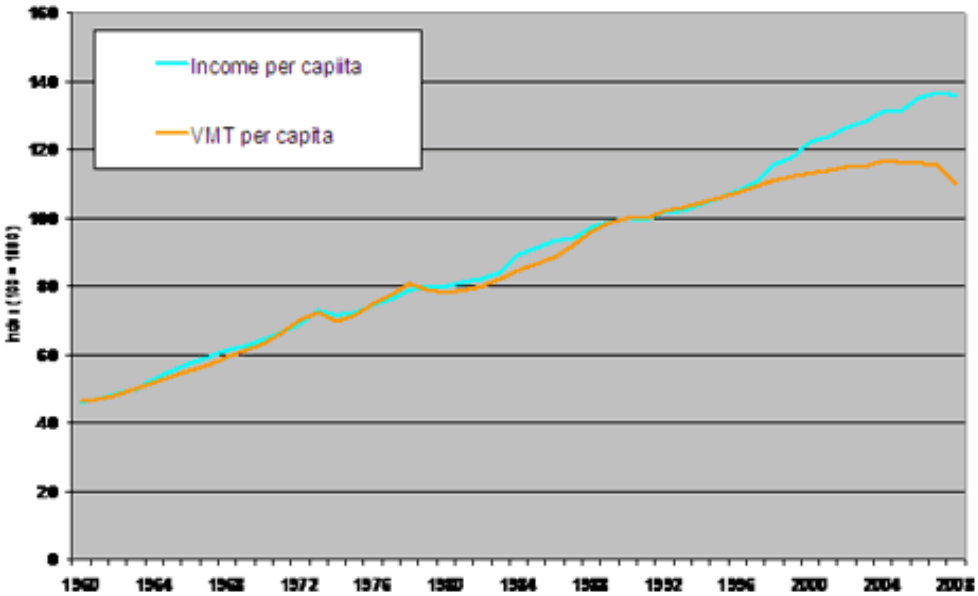


Fig. Vehicle-miles per capita and real GDP per capita (in 2000 US$), 1946–2006.

Sources: GDP data are from Johnston and Williamson (2008). Travel data are from the Federal Highway Administration.

We also can see that VMT per capita and Income per capita are linked nearly
805 one-for-one, suggesting a nearly perfect correlation between the two. See chart



Source:

http://transportation.nationaljournal.com/gr/winkelman4.gif

Note in the above chart that starting in the late 1990s, income per capita and VMT began to decouple from one another. This is likely due to VMT declines preceding the "Great Recession" that began in 2008. As we already know, the correlation between VMT and GDP are nearly one -for-one. It is also noted that VMT has a causal relationship on GDP.

Excerpt:

"The VMT-economy causality investigation finds that, indeed, VMT is a large and statistically significant driver of GDP. It finds also that, historically at least, the price of energy has not been an important driver of innovation in vehicle efficiency. If fuel efficiency could be improved, there would be positive economic effects, but limited, long-run effects on VMT. Specifically, the causality analysis reveals the following:

Although the causality between VMT and GDP is bidirectional, the ***primary one is for VMT to "cause" GDP growth. In the short run (2 years), an exogenous (an outside influence, such as regulation), downward shock to VMT results in a reduction of GDP of 90 percent of the size of the VMT shock****. In the long run (20 years) the link is weaker, at about 46 percent. In contrast, endogenous (an influence from within the model, research- or discovery-based) improvements in fuel efficiency appear to have a positive effect on GDP. A 10 percent increase in fuel efficiency yields only a 1 percent GDP increase in the short run, but a 6 percent effect in the long run."*[44] [emphasis added]

44 *Driving the Economy: Automotive Travel, Economic Growth, and the Risks of Global Warming Regulations*. Cascade Policy Institute, November 2009, p. i

835 …

"...if VMT strongly drives economic activity in a causal manner, then policies that are effective in reducing VMT also could reduce economic activity"[45]

…

840 *"VMT strongly influences GDP in the same direction, consistent with the pairwise causality finding. As illustrated in Figure 7, the response ("elasticity") of GDP per capita to a shock in VMT per capita is high, both in the long and short run.* ***Specifically, a one percent change in VMT/capita causes a 0.9 percent change in GDP in the short***
845 ***run (2 years) and a 0.46 percent in the long run (20 years). If accurate, this is a key finding, since it suggests there is a large penalty – even in the long run – associated with policies that use direct regulation to reduce VMT.****"*[46] [emphasis added]

…

850 *"...exogenously improving fuel efficiency has a positive effect on GDP. A 10 percent improvement increases GDP per capita by about 1.2 percent in the short run and 6.5 percent in the long run. This supports the notion that,* ***in contrast to expecting price stimulus mechanisms (such as carbon tax, cap-and-trade, subsidies, etc.)***
855 ***to indirectly encourage technological change, it may be better to support direct efforts to improve technology.****"*[47] [emphasis added]

…

45 *Driving the Economy: Automotive Travel, Economic Growth, and the Risks of Global Warming Regulations*. Cascade Policy Institute, November 2009, p. 5

46 *Driving the Economy: Automotive Travel, Economic Growth, and the Risks of Global Warming Regulations*. Cascade Policy Institute, November 2009, p. 7

47 *Driving the Economy: Automotive Travel, Economic Growth, and the Risks of Global Warming Regulations*. Cascade Policy Institute, November 2009, p. 7

> *"...this author's research suggests that the market responds in ways that make tax- or regulatory interventions unlikely to be dramatically effective in reducing VMT, but very dramatic in its effect on economic vigor."*[48]

What we have learned from this research piece is that the logic of using behavioral/regulatory changes has little effects on VMT but rather very dramatic negative effect on GDP. The idea to reduce VMT only serves to slow economic growth. We also now know that VMT has a direct causal relationship to positive GDP growth. Since VMT & income per capita are also closely aligned, we can make some very strong inferences that the the greater the VMT/capita (VMT = mobility) the greater the impact on economic prosperity. The very idea that a Metropolitan Transportation Organization ("MPO") would ideologically create a Plan that does not aim to increase the greatest mobility/capita (with the automobile being the most affordable, most flexible, fastest, and the least expensive transportation method on a Marginal Social Cost Pricing model) is at it's core a very flawed notion. Instead of behavioral modifications, MPOs should be focused on funding technological advances (like increased fuel efficiency) which have a very positive effect on VMT, GDP, and therefore income. Reducing VMT while dismissing the impact on the economy would be extremely foolish and further damage income/wealth fo an already diminished middle class.

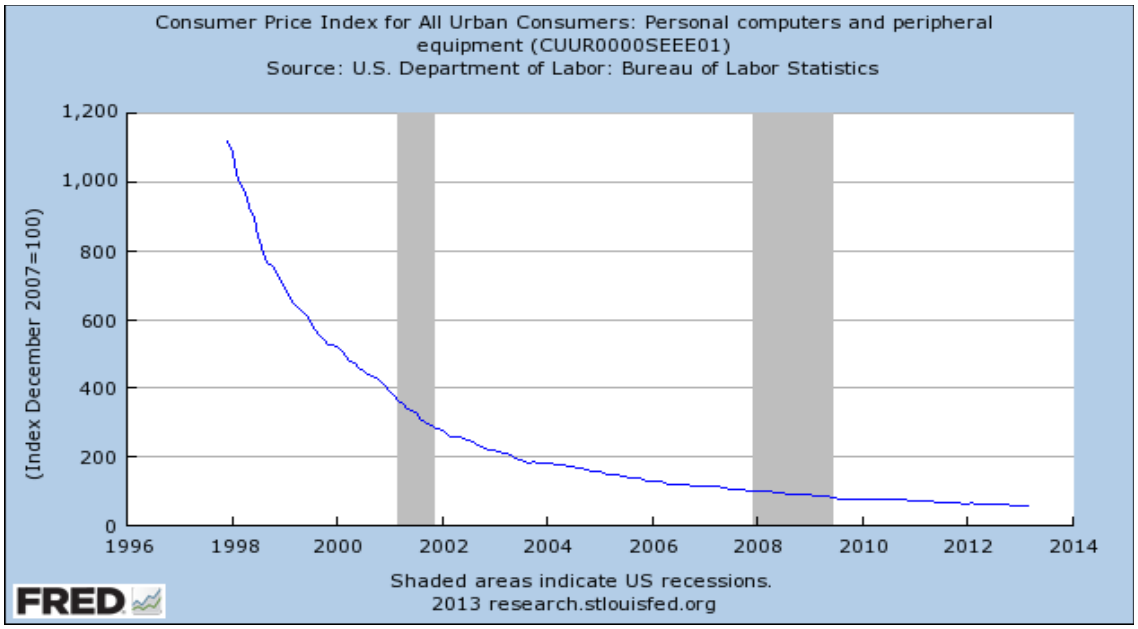
Another explanation for the diversion in VMT and GDP is perhaps that the increased efficiencies and wage-earning opportunities afforded from the proliferation of the personal computer and its peripherals, the expansion of the

48 *Driving the Economy: Automotive Travel, Economic Growth, and the Risks of Global Warming Regulations*. Cascade Policy Institute, November 2009, p. 8

internet, mobile devices and technologies, and the expansion of additional work-from-home opportunities.

We can see in this first chart that the price of the personal computer and peripheral equipment dropped precipitously from the end of 1997 (11 times more expensive as 2007) to today. This dramatic price drop allowed more individuals to be able to purchase a personal computer. The personal computer and the improvement of telephony and cable technologies created instantaneous access to practically unlimited amounts of information, opened opportunities for flexible schedules around education and higher levels of learning, increased the speed, frequency of communication via email, text messaging and instant messaging. Text messaging has fallen from about 6 cent to about 1 cent per message in the last 8 years.[49] The price of the mobile phone has fallen dramatically, not even including the cost of inflation or the increase in the number of features.[50]

49 http://assets.fiercemarkets.com/files/wireless/fierceimages/voice_chart_2_small.jpg
50 http://www.savings.com/blog/post/Infographic-The-Shrinking-Cost-of-Mobile.html



Source: http://research.stlouisfed.org/fred2/series/CUUR0000SEEE01

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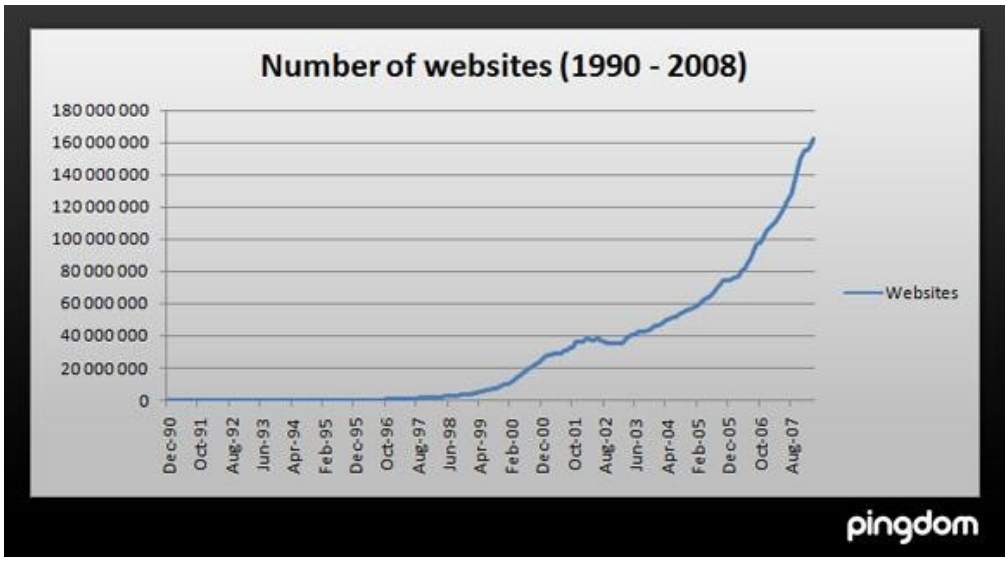
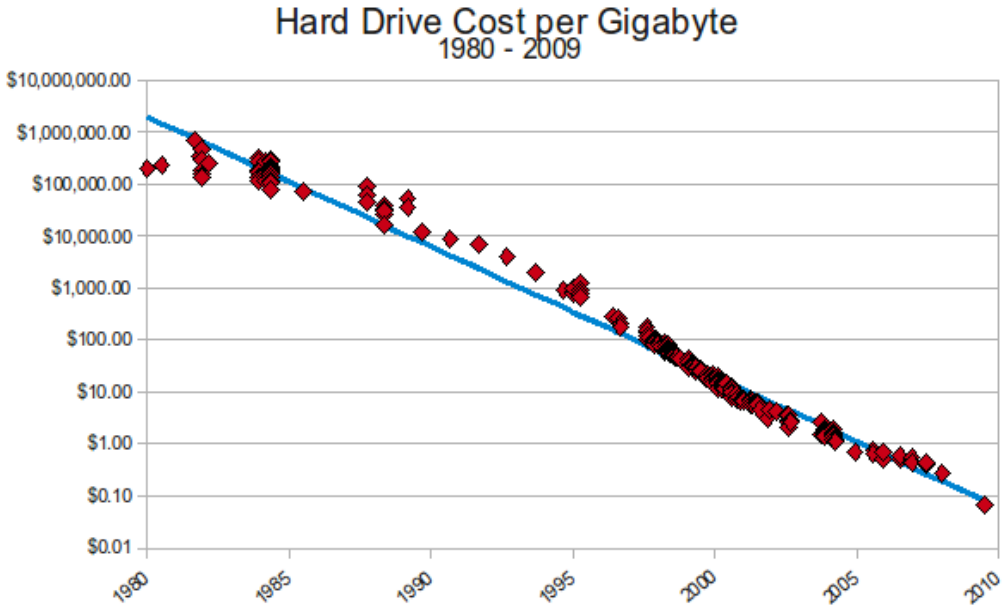
The number of websites has grown nearly exponentially starting in the late 1990s indicating the opportunity for increased e-commerce.



Source: http://royal.pingdom.com/2008/04/04/how-we-got-from-1-to-162-million-websites-on-the-internet/

The constant decline in costs of data storage, combined with the fall in the price of personal computers, and the increase in computer processor speeds has led to the handheld devices and currently smart-phones which are capable of very powerful calculations, instant connectivity to the world via telephone and internet, provide access to sources of entertainment, news, etc.



Source: http://www.mkomo.com/cost-per-gigabyte

All of these technological changes have also given rise for the ability of people to live where they want because companies can allow personnel to work anywhere they need to, as long this does not reduce efficiencies, and profits.

Despite the improvements/efficiencies in computing and mobile technologies (not even adjusted for inflation),the Plan fails to include ANY study of the use of and the rise in telecommuting in as it relates to environmental impacts over the life of the Plan in either the Plan or the DEIR. According to the survey of Income and Program Participation, the number of home-based workers increased by 35% between 1997 and 2010 nationally.[51] This number is well corroborated in the DEIR, adjusting for the differences between start dates of the just-mentioned survey and the DEIR. The DEIR mentions that "the percentage of Bay Area residents working from home has nearly doubled since 1990."[52] In the DEIR in Appendix D under Alternative Transportation Suggestions under "Telecommutes...All alternatives assume increases in telecommuting consistent with past trends."[53] The fact that it is mentioned in the DEIR means that the notion of growth in telecommuting was at least contemplated by the creators of the Plan.

A few questions:

While there has been a parabolic decline in the price of computer, computer peripherals and the price of mobile devices, the plan assumes "increases in

51 "Working at Home is on the Rise", US Census, http://www.census.gov/hhes/commuting/files/2012/Home-based%20Workers%20in%20the%20United%20States%20Infographic.pdf

52 DEIR, 2.1-15

53 DEIR, Appendix D, D-13

telecommuting consistent with past trends." Why was telecommuting trend 'assumed' to stay consistent, while assumptions about future transit trends and future living preferences changed dramatically within the Plan?

If the idea here is to reduce VMT from cars and increase the VMT from other forms of transportation and land-use changes, why isn't there a greater discussion of incentives to increasing telecommuting as a way of reducing energy-use and greenhouse gas production?

A simple, well-promoted focused campaign to employees or employers to suggest more work from home opportunities, in the tech-heavy region of the Bay Area, would potentially reduce the number of trips needed by auto or transit. Since the Plan is very heavy on behavioral modification vs technological modification, why wasn't there even a suggestion of convincing employees and employers to use telecommuting as a way to reduce greenhouse gases?

The Plan requires massive subsidies to transit and to developers for increased densities through OBAG and Priority Development Areas. Why aren't their subsidies for companies who increase the number of work from home opportunities or flexible work schedules, which would arguably reduce congestion, particularly at peak travel hours? Those workers that would still need to commute to work would arguably have less stress, less delays, shorter commutes, room for stretch their feet on transit and better quality of life. The Plan would also have less justification to spend massive amounts of public money on exhorbitantly expensive capital improvement projects to expand the system were more people encouraged to stay and work from home.

Telecommuting also means that a larger percentage of the population could choose to live where it was most economical, provide for almost no burden on the environment (especially if those individuals were allowed to buy land and build properties outside of the urban growth boundaries where they could self-mitigate their own impact on the environment through green technologies like rainwater collection, organic farming, composting, solar power generation, graywater collection and reuse, algae-power production, etc—technologies which are not readily available to those living in higher and higher densities. Research shows that artificial supply constraints due to urban growth boundaries and actions by urban planners have contributed massively to the housing bubble in California and unaffordable home prices, yet we add more regulation on top of bad regulation to fix this problem.[54] To that end, why doesn't the Plan consider the notion of expanding or completely doing away with the urban growth boundaries as it applies to housing affordability and greenhouse gas reduction?

54 *How Urban Planners Caused the Housing Bubble, Randal O'Toole, Oct 1, 2009*

QUESTIONS IN DIRE NEED OF ANSWERS BEFORE VOTING ON A PLAN OF THIS MAGNITUDE

1) Who are the stakeholders here? Who wins and who loses? Are we robbing user fees, taxpayers and property owners to pay developers and monopolized public transit operators? If we are resigned to robbing one group to pay another, is this at least the most cost-effective way of committing the theft?

2) What is the cost per passenger mile, vehicle-mile, hour of reduced congestion, ton of reduced greenhouse gas emissions compared with the cost of alternative projects, especially the “No Project” alternative? Why does the Financial Assumptions document only show the cost and revenue projects for the preferred project and not also for all of the alternatives? Even if it might fit the statutory requirements, isn't it disingenuous to ask appointed, unelected, unaccountable officials to vote on a Plan without knowing the costs of the alternatives?

3) What share of the total cost is paid by users of each form of transportation, and what benefits do other taxpayers get from their share of the costs? In the case where low-income users need subsidies, why wasn't a vouchers program chosen (on a trial basis, at least to get a more accurate data sample) so that an accurate representation of travel preferences could be produced for Plan's selection process?

4) Are MTC & ABAG using actual realistic values or best-possible-situation estimates as it applies to each of the alternatives? And were each of the alternatives treated objectively and fairly in such an analysis? What are MTC's &

ABAG's track records on the cost/use estimates for past projects of large magnitude?

5) Is the public sector doing something that the private sector could or should be doing? Along that vein, why didn't the Plan consider the idea of a fair market process to allowing private entities to compete against BART, CALTRAIN, BATA to limit risks of the aforementioned public entities of having a monopoly on prices and the quality of service. Research shows a strong economic and social case for privatizing Amtrak[55]. When services compete, the public wins.

6) Does the building of additional transit assets create larger problems/costs down the line? Since transit maintenance for rail is at least as expensive as buses and rail has an average life of 30yrs, how does the Plan expect to pay for the maintenance of these new assets when the Plan is already underfunded by $14 billion?

7) Why doesn't the Plan fund all of the maintenance <u>BEFORE</u> funding the new nice-to-have projects that total over $22 billion? This would be akin to buying a Maserati instead of ensuring there is enough cash to pay for one's home mortgage.

8) Are MTC and ABAG staffers sure the preferred alternative (alternative 2) is the most efficient based on a full and unbiased analysis versus alternatives 1, 3, 4, and 5? Is it the responsibility of MTC to ideologically penalize drivers by reallocating gasoline taxes in favor of transit? Is that part of MTC's governing purpose or has MTC overreached on its powers here?

55 Stopping the Runaway Train – The Case For Privatizing Amtrak – O'Toole – Nov 13, 2012

9) What share of available resources are being used to address what share of our problem? Does this Plan depend on forcing large segments of the population to accept an exorbitantly costly change in behavior? Is this rational if there is very little in the way of compensating benefits? Would a technological solution (self driving cars, improved vehicle emissions standards such as Pavley 1 and Pavley 2, traffic signal coordination, green technology at the single-family property, etc) solve the problem at a lower cost than the behavioral solutions posited by the Plan? Seeing that the savings of just 3,0000 MTCO2E per day[56] between the "No Project" alternative and the "Preferred" alternative comes at an enormous expense of 10s of billions of dollars according to the Plan, does it make any sense to spend this kind of money when a single volcanic eruption can easily put out 150,000 to 300,000 MMTCO2E per day (that is, 50 times the savings per day that the preferred alternative will provide!) This is not an argument that suggests that volcanoes emit more GHGs than humans; there are already estimates that suggest humans emit 29 billion MTCO2E per day (according to 2007 EIA estimates) while volcanoes emit 65 to 319 million MTCO2E per day.[57] If we endeavor to reduce our greenhouse gas emissions, does a cost of $6,666,666 per ton[58] make any sense when we have already discussed so many alternatives that cost less than $50 per ton in the aforementioned McKinsey Survey and when a single week of emissions from a single uncontrollable volcanic eruption, outdoes all of our efforts for an entire

56 This is according to the Plan's model but really does not include Pavley 1 and Pavley 2 standards which reduce the savings even further. See Letter to Orinda City Council by Orinda Watch in the Appendices attached.

57 http://www.skepticalscience.com/volcanoes-and-global-warming.htm

58 This is estimated as ~$20 billion of new transit projects as defined in the preferred alternative in Plan Bay Area divided by 3,000MTCO2E per day; it is assumed by me that the rest of the funds are purposed for maintenance regardless of the alternative chosen

year?

1055 The simple overriding question to everything I've discussed in this entire comment letter is this:

At what cost?

List of Appendices submitted as electronic files (by file name) with this comment letter:

Appendix A - Tom Rubin - ABAG MTC Compliance Comments 05 02 13.pdf

Appendix B - Should We Try to Get The Prices Right – Delucchi.pdf

Appendix C - Orinda Watch comment on Plan Bay Area 05-13-13.pdf

Appendix D - McKinsey Report - Reducing US Greenhouse Gas Emissions.pdf

Appendix E - O'Toole - The Planning Tax- The Case against Regional Growth-Management Planning.pdf

Appendix F - Citizens' Guide to Transportation Reauthorization - Black and White.pdf

Appendix G - Cascade - Driving the Economy.pdf

Appendix H - O'Toole - Roadmap to Gridlock.pdf

Appendix I - O'Toole - Myth of Compact Cities.pdf

Appendix J - O'Toole - Does Rail Transit Save Energy.pdf

Appendix K - vision for the Bay Area's future _ Opinion Shop _ an SFGate.pdf

Appendix L - Housing plan may hurt economy, climate - San Francisco Chronicle.pdf

Appendix M - Profile Page - OneBayArea SFGate.pdf

Appendix N - Plan Bay Area offers a solid vision - San Francisco Chronicle.pdf

Appendix O - How Urban Planners Caused the Housing Bubble, Randall O'Toole, Oct 1, 2009.pdf

Appendix P - GOVERNMENT CODE SECTION 66500-66536.2.doc

Appendix Q - Financial_Assumptions - Draft Plan Bay Area.pdf

Appendix R - Transportation 2035 Plan-Final – MTC.pdf

Appendix S - The Greatest Invention - How Automobiles Made America Great – O'Toole.pdf

Appendix T - Stopping the Runaway Train – The Case For Privatizing Amtrak – O'Toole – Nov 13, 2012.pdf

Appendix U - Ending Congestion by Refinancing Highways - O'Toole - May 15, 2012.pdf