

Analysis of DEIS/R for East Bay BRT July 3, 2007

Vincent Casalaina
2619 Benvenue Ave. Berkeley

I'm the president of the Willard Neighborhood Association, but I'm commenting on the Draft Environmental Impact Statement / Report on my own behalf. I have borrowed liberally from a number of other comment documents to formulate my list of deficiencies in the DEIS/R.

The Willard neighborhood is very pro-transit. That has been one of the strongest points of consensus throughout our discussions about Bus Rapid Transit – discussions that have been on going now for several years and included a neighborhood forum last year that drew over 100 people from the Willard neighborhood and surrounding neighborhoods. At that forum, we raised a number of points that were not even listed in the section on community concerns (7.2.1.1).

After reading the Draft Environmental Impact Statement/Report, I still have a lot of reservations about BRT's impact on our neighborhood. I might feel differently about the adequacy of the DEIR/S in addressing those impacts in the final EIS/R if I saw in the current document an analysis of how the concerns raised in the community meetings (7.2.1.1) had been specifically addressed. In particular what changes to the proposal had been implemented to address those concerns. That analysis simply was not there.

Table of Concerns

Cumulative Impact – Other Significant Projects

As an example of the failure to have a wide enough scope, S.5.2, the section of the document that summarizes the Cumulative Impact of projects considered is deficient because it does not the effect that UC Berkeley's Long Range Development Plan will have on increased employment and hence increased commuting. The document is likewise silent on LBL's LRDP and what effect the completion of the Caldecott Tunnel 4th Bore will have on reverse commute congestion along Telegraph and especially at the intersections of Ashby with College / Telegraph & Adeline. Even Ray Nakagawa, former President of the Inst. For Transportation and BART Director acknowledges that there will increase local traffic in the BRT corridor in Berkeley (Berkeley Daily Planet, 6/26/07) due to the completion of the Caldecott Tunnel 4th Bore.

Rapid Bus + as an Alternative

As another example of the failure to have a wide enough scope, the DEIS/R is deficient in not considering as an alternative a more fully featured version of Rapid Bus (roughly equivalent to Enhanced Bus which was not studied 2.4.1) that could have many of the features currently considered only with the BRT alternative. The Rapid Bus + alternative, as others have called it, would start with two features of BRT that are currently planned, but not fully implemented, for Rapid Bus – traffic signal priority and real time bus arrival information at every stop. The Rapid Bus + alternative could easily have the proof of fare, reduced headway and raised curbside platforms advantages of BRT without the permanent loss of traffic lanes along Telegraph Ave.

The difference in projected trip times for Rapid Bus versus BRT between downtown Oakland and downtown Berkeley are only 7 minutes or approximately a 26% savings (Tables S.3.1 & S.3-2a). This reduction in time looks only at the time spent on the bus. It does not take into account the additional walk time to reach the more widely spaced BRT stops and likewise the additional walk time to reach the destination from the more widely spaced BRT stops.

The DEIS/R is deficient because it does not compare actual total trip times when calculating the effect of BRT on mode shift.

Actual Trip Time Comparison

Jim Cunradi, AC Transit project manager for BRT, stated at the June 6 City of Berkeley joint Planning and Transportation Commission meeting that the BRT system was not designed as a long haul carrier to compete with the parallel running BART system. His vision of ridership is for the average trip to be a fraction of the full 17 mile BRT route, in the range of 3 miles or less. When you consider that alongside the projected end to end time savings, the effective time savings on an average BRT trip is about 4 minutes when compared to a Rapid Bus trip.

The extra walk time required to reach a BRT stop (since they are considerably further apart than the Rapid Bus stops) from an average riders house can be calculated if we assume an average of an extra 2 blocks at a reasonable walk speed of 1 min. per block to be approximately 2 min. Similarly the extra walk time from a BRT stop to the desired destination (allowing that AC Transit located the stops at the most used destinations) can be assumed to be half the extra walk time calculated to arrive at the BRT stop, or approximately 1 min.

When you compare the predicted total trip times on BRT to a similar analysis for Rapid Bus +, the average Berkeley resident using BRT is going to save approximately 1 minute per trip. I can understand why the DEIS/R shows such a low mode shift rate between the Build and No Build options since the average person is not going to look at a 1 minute differential as a compelling reason to mode shift to BRT if they had not already mode shifted to Rapid Bus, when Rapid Bus showed essentially the same time savings over the previous 40L line (Table S.3.1).

The DEIS/R is deficient because in calculating timesavings per trip on each of the various alternatives, the document does not look at the entire trip time for the most likely trips taken the system. It looks only at the time on the bus for trips well longer than those depicted by Mr. Cunradi as the most likely trips.

Elements for Rapid Bus + Taken from BRT

In addition, at the June 6 City of Berkeley joint Planning and Transportation Commission meeting, Mr. Cunradi stated that since BRT is meant primarily for shorter trips along the corridor and that **the key to further improvement in bus speed is proof of payment.** (emphasis added)

It would be relatively straightforward to add the local vendor/unique punch proof of payment system that is successfully used in much of Europe to gain that next big jump in speed described by Mr. Cunradi. The implementation of such a system is quite low tech featuring the widespread sale of tickets in many local merchants along the entire corridor and especially grouped around the

transit stops. This could well be a plus for local merchants, as it would bring additional patrons into their stores who would not otherwise have bought anything there.

The on board portion of the low tech solution is when riders board their bus, they punch their ticket with a hole punch located near each of the doors. The punch validates their ticket for that trip. That's their proof of payment. Each bus and date has a different physical punch pattern, to prevent fare beating.

The proof of payment system would greatly decrease the time needed to board and discharge passengers at the stops by eliminating the bottleneck at the fare box and allowing all bus doors to be used for ingress and egress. This decrease in wait time at each stop would cut the total trip time for Rapid Bus significantly when compared to the projected total trip time for BRT.

A further step in increasing the effectiveness of Rapid Bus + would be the decreasing of headway from the projected 12 minute headway (Table S.3-1) to something approaching the BRT headway of less than 5 minutes. One of the biggest time factors in overall trip time is the wait time for the next bus to arrive (headway). If it was possible to shorten that time, essentially making it equal between BRT and Rapid Bus +, then the actual overall trip times calculating for walk time to the bus stop, wait time at the bus stop and travel time on the bus would look very similar.

The final step in increasing the effectiveness of Rapid Bus + could be the use of raised curbside platforms at the major transit stops. The curbside platforms are already envisioned in several of the Berkeley alternate alignment routings (2.2.3.2). The major transit stops are already identified in 30+ stops on the Separate BRT & Local Service Alternatives 1 & 2 (Table 2.2-3). The raised platforms make the boarding process much easier for the handicapped, the elderly and those pushing carts and strollers. This will greatly speed up loading and unloading at the highest usage transit stops thereby greatly increasing the overall speed on the line.

If all these additional steps were implemented in the creation of Rapid Bus + it seems likely that the differential of actual total trip time between Rapid Bus + and BRT could be essentially eliminated at a fraction of the cost projected for the implementation of BRT.

The DEIS/R is deficient because in calculating timesavings per trip on each of the various alternatives, the document does not look at including all the time savings possible by adding BRT elements to Rapid Bus. It must include the entire trip time, including walk time, from leaving one's house to arrival at the destination factoring in Proof of Payment, headway reduction and curbside platforms at major stops. The DEIS/R currently looks only at the time on the bus.

HOV Alternate

The DEIS/R is deficient in not considering as an alternative another low cost, lower impact alternate, which is the implementation of HOV lanes with "no left turn" during rush hour. This simple procedure would allow the Rapid Bus + to travel at much faster speeds along much of the route and only needing to join the mixed use lanes near its stops and returning to the HOV lane. A further advantage to this alternative would be to add incentives to car pooling (3 or more per car) during rush hour without unduly clogging the lanes for bus travel. In this alternative traffic would be free to travel as it currently does along Telegraph for much of the day and all evening rather than restricting traffic from lanes that will have 1 bus every 10-20 minutes (Table 3.2-2a & 2c).

Installing HOV lanes is a solution that could be implemented whether or not BRT is implemented. With some simple painted lines and signage, it would be possible to limit traffic to 3 person HOV vehicles and buses, only during rush hours. Turning Telegraph into HOV lanes with increased law enforcement will be more effective, less disruptive, and a lot cheaper than the implementation of bus only lanes.

Increase Patronage Through Fare Reduction Alternate

Patronage levels could likely be improved by merely lowering fares whether on Rapid Bus +, or on BRT. If the effect on ridership of lowering fares is less expensive than the proposed capital improvements, this could be quite cost effective alternative. Such an alternative would particularly help serve minority and low-income populations concentrated along the corridor. (See EIR section 4.4.4. re Environmental Justice.) The EIR should analyze a reduced-fare no-build alternative. (CEQA Guideline 15126.6(a), (c), and (f).)

The EIR does not indicate if AC Transit intends to raise fares or not, but only identifies existing fare levels. An increase in fares would reduce, if not eliminate, the already questionable benefits of the project, and would cast doubt upon all of the EIR's patronage estimates. The cost-effectiveness of the project cannot be analyzed absent a discussion of fare levels, or better yet, a guarantee of no fare increase.

The DEIS/R is deficient in not considering as an alternative the reduction of fares as it applies to increased ridership.

CO² Reduction

The DEIS/R is deficient because it does not consider the effects of CO² as a pollutant. It's true that when BRT was first proposed the EPA did not consider CO₂ a pollutant. Recent court cases have changed that definition and I believe that any analysis of the effect of BRT implementation on the environment should contain a description on the reduction of CO², if any.

An analysis that looks at CO² reduction is vital from the City of Berkeley's standpoint because of our Measure G goal of reducing greenhouse gasses by 80%. If BRT does not aid us in achieving this goal, or if in fact it makes it worse, then we really need to think hard about other alternative solutions that will aid us.

Any such analysis should look into the impact of having the BRT buses be electrically powered. The commitment to the current generation of Van Hool, or similar, diesel busses will lock BRT into producing significant CO₂ emissions for the foreseeable future. Many transit agencies are currently running much cleaner LNG busses including Valley Metro Transit in Phoenix and Pierce Transit in Seattle/Tacoma. More than 75% of their busses run on LNG. Other transit agencies such as Municipal Railway in San Francisco run electric trolley busses. Still others are making the commitment to self-contained battery powered engines or hybrid technology.

If AC Transit does not commit to CO² reductions in the initial purchase of busses for BRT, we will not have another opportunity to do so for the expected useful life of those busses, approximately 12

years (based on AC TRANSIT GM Memo No. 07-095), essentially to the 2020 deadline for Measure G compliance.

Further, in evaluating the relative cost-effectiveness of alternatives and before AC Transit decides to deploy a fleet of fossil-fueled buses, rather than electric-powered buses, electric-powered light rail or some form of hybrid technology, AC Transit must consider the costs of a carbon tax or a carbon cap-and-trade system in the reasonably foreseeable future. When this analysis is performed using current information and forecasts, electric powered vehicles becomes more cost effective than it was in 2001.

In addition, the DEIS/R does not reflect the requirements of AB 32 (Health and Safety Code sections 38500 et. seq.) which went into effect September 27, 2006 and addresses global warming and limits on carbon emissions. Again, if this were taken into consideration, it would make electric powered vehicles more attractive than the addition of 46-51 peak fossil fuel buses. (EIR, section 3.1.4.2, pp. 3-17, 3-22 and 23.)

The DEIS/R's exclusion of light rail as an alternative is unreasonable, and inconsistent with CEQA Guideline 15126.6(a) through (c) and (f). AC Transit should consider light rail alternatives to the BRT proposal.

The DEIS/R is deficient because it does not apply AB 32's strictures in its analysis of the preferred alternative for transit along the corridor. If it had considered AB 32 and the foreseeable imposition of a carbon tax in its analysis, then light rail should have been one of the alternatives considered in detail. As the DEIS/R stands, it is improper because of its piecemeal approach to a problem that AC Transit has said will have further iterations.

Other Pollutants

In general, AC Transits own analysis of pollutants other than CO² (Table 4.12.7) shows virtually no difference between the Build and no-Build alternatives. The DEIS/R also shows a negligible decrease in the use of fuel in the Build and No /Build options (Table 14-1). This is not a good showing for public transit. Is this the outcome because we get a few buses to speed up but we get a much larger number of cars to slow down?

I believe that the method that was used to calculate pollutants is also deficient. An analysis of vehicle miles traveled and related fuel consumption is not a satisfactory technique for measuring CO² and other pollutant levels. A much better technique would look at the total vehicle travel time (the amount of time that engines are running) determines the total pollution generated.

Finally, the commitment to the current generation of Van Hool, or similar, diesel busses will lock BRT into producing significant CO₂ emissions for the foreseeable future. Many transit agencies are currently running much cleaner LNG busses including Valley Metro Transit in Phoenix and Pierce Transit in Seattle/Tacoma. More than 75% of their busses run on LNG. Other transit agencies such as Municipal Railway in San Francisco run electric trolley busses.

Parking and Deliveries

With limited dollars available to address congestion problems, it is important that any analysis that is done goes beyond simply estimating how vehicles, both autos and buses, are affected by the

proposed improvement. It is also necessary to estimate how neighborhoods, households and businesses will be affected. This document gives short shrift to what impacts are expected from the implementation of BRT on neighborhoods and business. This is clear when looking at the lack of analysis regarding the removal of 75% of the current parking along the northern section of Telegraph Ave. (page 3-112), which is “mitigated” by putting meters in residential neighborhoods (page 3-127) with the approval of the City of Berkeley. This mitigation affects both the residents whose already limited parking is decreased and the businesses whose customers must park further away (3.4.1.1).

We have seen the results of a reduction in parking along Telegraph Ave. in the past two years. A restriping of Telegraph Ave. to accommodate the center raised islands and the full width bike lanes caused the removal of a significant number of parking spots.

The effects on local businesses sales were emphatic and immediate. Businesses such as the Looking Glass photographic store complained immediately that many of their clients needed a convenient parking spot to run into the store and drop off film for processing. With the removal of parking due to the restriping, they saw an immediate drop in sales and an increase in client complaints.

There was also a definite impact on the deliveries to the businesses along the Avenue. Businesses such as Le Bateau Ivre restaurant no longer could have their deliveries take place from curbside. They found that double parking became the only way to get deliveries done in a reasonable amount of time. They too saw an immediate drop in sales and an increase in client complaints from the reduction in parking.

The reduction in the number of parking spots on Telegraph that is proposed for the BRT system is much more significant than the reduction that took place during the restriping. The impact to small businesses that depend currently on convenient on-street parking spaces, even with parking added down the blocks into the residential neighborhoods, will likely be even greater.

The DEIS/R is deficient by not analyzing the effects of the removal of parking on small businesses and how the limited mitigation proposed will actually solve the problem posed to small business in both client and delivery issues.

Analysis of Reduction in Auto Trips

Finally, the traffic model used seems to be deficient because its results fly in the face of both common sense, and also empirical evidence. We are asked to believe that the traffic model is correct when it says that there will be a net decrease in auto traffic of over 509 car trips/hr in the peak pm traffic along Telegraph and other North/South streets in the corridor. (Table 3.2-3a). This decrease of 611 person trips by auto per hour is not mirrored in a concomitant increase in transit ridership.

The DEIS/R analysis does not discuss the discrepancy of how these 611 person trips/hr that were not taken by auto were accomplished other than shifting to already clogged streets such as College Ave., or deciding to make the destination outside the corridor. Mode shift cannot be the primary means since they are not nearly accounted for by an equal increase in transit ridership (Table 3.2-3a) or if not accomplished then why they were not undertaken.

This reduction in peak pm travel is for a period where the growth in Berkeley housing is projected to be over 160 units per year, based on ABAG goals, DAPAC planning and new residential construction over the past five years. That's a projected increase of over 6,400 new residents through 2025. I cannot see where the traffic model that shows a significant decrease in peak pm travel factors in a growth in Berkeley population of 6% and hence the need for 6% more travel – whether that travel is by bus or by auto.

Mr. Cunradi at a meeting with Friends of BRT on June 4th that the decrease in traffic could be accounted for in large part by mode shift. In fact, the traffic model (Table 3.2.3a) showed a net decrease of 239 people traversing the "screenline" in 2025. How is this possible given the increase in employment at UCB and LBL and the projected increase in Berkeley's population noted above? This decrease in travel across the "screenline" is especially troubling since one of the biggest claims for BRT implementation is that it will inspire Transit Oriented Development and those new residents will need to reach their jobs/school somehow let alone buy groceries and do other shopping.

A net decrease in people coming and going to Berkeley is not what one would expect from all of the increases in employment and population growth. The net decrease of trips to and from Berkeley does not bode well for merchants along Telegraph who cater to customers outside of walking distance to their businesses.

The DEIS/R is deficient in not analyzing the effect of the lowered overall travel to and from Berkeley on the merchants located along the corridor.

Neighborhood Cut Through Traffic

When Mr. Cunradi attended a small meeting organized by the Friends of BRT (Hank Resnik & Len Conly) on June 4th at this office in downtown Oakland, specifically to discuss traffic in the Willard neighborhood. Only one Willard neighbor was invited to that meeting and he could not attend. The meeting was not rescheduled so as to allow any Willard neighbors to attend and no one with actual knowledge of current traffic conditions in the neighborhood was present.

Mr. Cunradi showed the attendees at that meeting Section 5 of the AC Transit traffic report detailing the findings of the computer generated traffic analysis on "cut through" traffic in the Willard, Bateman, Halcyon and LeConte neighborhoods. That report is not a part of the DEIS/R and it is not available from the AC Transit website for public analysis. Mr. Cunradi was asked to make a copy of Section 5 available for public analysis. He agreed to do that but no copy was made available.

Not having direct access to that report makes comment on its findings very difficult to do in detail. What we do know is that at the AC Transit Public Hearing on June 14 Mr. Cunradi stated that only the traffic flow on the major streets and an extremely few local streets was considered in the computer analysis.

The DEIS/R does not specifically address cut through traffic in the neighborhoods. The finding that the overall auto traffic in the corridor will decrease significantly plus the best path findings of the

Traffic Report (not included in the DEIS/R) lead to Mr. Cunradi stating that “cut through” traffic would not be a significant factor.

“We do not mean to say that no drivers would ever divert using residential streets. However, the auto travel times on all alternate routes using residential streets are worse than the times for drivers that stay on Telegraph even with the BRT in place.”

Mr. Cunradi stated that the computer model showed traffic did divert off Telegraph would end up on the major parallel streets (3.2.3.1). He based that on the analysis that any route through neighborhood streets would be slower than remaining on Telegraph, or diverting to a parallel street using a major cross street to access that parallel street. AC Transit gathered existing auto travel times for the streets under analysis and the computer model forecast the 2025 “best path”.

Empirical evidence says that during rush hour the model’s results for current “best path” is not correct.

In Section 5, the Traffic Report specifically looks at the “best path” from south Berkeley (Woolsey/Telegraph) and the east side of the UC campus and the downtown side of the campus (either Piedmont/Bancroft or Shattuck/Bancroft). These two sections of the analysis cover the neighborhoods on both the east (LeConte) and west (Willard) sides of Telegraph.

The six routes studied for access to the UC campus are: (A) Woolsey to Telegraph to Dwight to Piedmont; (B) Woolsey to Telegraph to Durant to Piedmont; (C) Woolsey to Ashby to College to Dwight to Piedmont; (D) Woolsey to Telegraph to Derby to College to Dwight to Piedmont; (E) Woolsey to Telegraph to Russell to Benvenue to Dwight to Piedmont.

For current conditions, the Traffic Report states that Route A is the fastest by 10 sec.

Empirical evidence shows that during rush hour, Route A (the fastest identified path) involves a turn right at Telegraph & Dwight is virtually never bumper to bumper up Dwight followed by a turn left onto Piedmont and the drive across Piedmont is slow but never as slow as Telegraph ending at Piedmont and Bancroft. On the other hand, Route B's drive down Telegraph from Dwight to Durant (identified as the second fastest alternative) is almost always bumper to bumper and is especially congested at the intersection of Haste & Telegraph where pedestrian crossings often keep those turning left on Haste blocking the throughway down Telegraph before turning up Durant and joining Route A at Durant and Piedmont.

It is very difficult to understand how the model turn the overly congested Telegraph Ave. retail section into only a 10 sec. disadvantage of Route B compared to Path A.

Those of us who live in the neighborhood know from our own “least path analysis” that a much better alternative is to turn right at Telegraph & Dwight and the drive up Dwight in very light traffic followed by a left turn onto Bowditch which is also lightly traveled completing the route with a turn up Durant which has light traffic at that point. This relatively car free path has been shown in practice to be considerably faster than either Route A or B and was not studied in Sec. 5 of the Traffic Report.

The six routes for access to downtown Berkeley are: (A) Woolsey to Telegraph to Bancroft to Shattuck; (B) Woolsey to Telegraph to Haste to Shattuck; (C) Woolsey to Telegraph to Ashby to Shattuck; (D) Woolsey to Telegraph to Derby to Shattuck; (E) Woolsey to Telegraph to Stuart to

Shattuck; (F) Woolsey to Telegraph to Russell to Ellsworth to Parker to Shattuck.

The Traffic Report found that for current conditions, Route A is the fastest by 16 sec.

Empirical evidence shows that during rush hour, Route A (the fastest identified path) has the same problems with Telegraph that it did in the UC campus analysis. Route C (the second fastest identified path) has severe problems with its left turn onto Ashby going West from Telegraph, which is in most cases limited to 2 cars per light. Once you make the turn, the traffic on Ashby going West from Telegraph is almost always bumper-to-bumper and it can take 5-6 min. just to go between Ashby and Shattuck. A right turn on Shattuck then puts you into the congestion at Russell and Oregon streets caused by Berkeley Bowl.

Again, those of us who live in the neighborhood know it is considerably faster to go straight through Ashby and turn down Carlton or Parker which are never busy followed by a right turn onto Shattuck after it becomes 4 lanes. This path misses both the congestion along Ashby/Berkeley Bowl and the Telegraph Ave. retail section.

If the traffic model is wrong on such basic issues because it did not exploring enough alternate paths, why should it be any more correct in its prediction of a reduction in the number of trips that will be generated when Berkeley's population and employment has grown significantly?

Analysis of Potential riders vs. Actual trip Origination/Destination

The DEIS/R is deficient because it does not analyze the potential BRT ridership / reduction in auto trips along the corridor by looking at the current plot of trip origination and trip destination and then estimating the impact of BRT on the existing trip matrix.

It does not appear that a survey was undertaken to identify the location of jobs currently held by residents along the corridor. The DEIS/R makes blanket assertions that there are 250,000 resident in the corridor and that there are two primary employment centers in downtown Oakland and downtown Berkeley/University of California. There is no supporting data that a significant number of the people who work in those two employment centers are residents of the BRT corridor and would be aided by its implementation.

New DEIR/S to Implement Phased Build

The DEIS/R states (S.10) that there is no need to do any additional EIR review if there is a shortfall in funding and a phased build of BRT is needed. This is based on the assumption that all negative impacts of BRT are covered in the DEIS/R and that a phased build therefore will not create any different impacts that the full build would create.

It is unreasonable to assume that no additional adverse impacts can be anticipated by creating only a part of the BRT system. A system that may well not yield the ridership goals of the full BRT system but will cause all the auto congestion that the DEIS/R predicts.

Further, it is unreasonable to assume that there would be no collateral impact to other lines and operating schedules by a partial build of BRT. If there is an operating shortfall in AC Transit, it is

reasonable to assume that cuts will need to be made somewhere. The cuts will either degrade BRT service or they will degrade service on other lines.

From that it is fair to ask whether a priority would be given to BRT at the expense of other lines and how that degradation of service would affect riders system wide.

Conclusion

Not stated as one of the goals of BRT, but certainly one that should have been considered, is the need for any new transit system and its infrastructure to be integrated with, rather than imposed upon, the urban context. This omission in the DEIS/R has significantly skewed the range of urban design alternatives under consideration. I believe that the BRT infrastructure alternatives, as proposed in the DEIS/R, are an imposition of transit engineering systems on Berkeley's densely built environment, rather than a careful integration into and enhancement of that environment. The lack of consideration and analysis of more integrated alternatives has led to many significant negative impacts that are not adequately mitigated.

The DEIS/R information as presented is insufficient to evaluate the full range of alignments, station configurations, and impact mitigations available for a successful BRT system in Berkeley. Important negative impacts of some of the options that are presented are missing from the evaluation.

There are projections of bus frequency in the DEIS/R, but can they be fulfilled over five years, ten years, the long-term future? If it turns out AC Transit ultimately ends up under funded or with an operating deficit and must cut back on BRT service, can the communities that have supplied the on-street bus lanes get them back for other uses? Should the City of Berkeley require a binding and enforceable commitment on specific levels and types of service, in exchange for providing exclusive use of certain parts of the streets?

For all these reasons, I urge that the DEIS/R be withdrawn and a new draft be submitted once the alternatives suggested and the deficiencies are analyzed. It would be unwise to go forward with a final EIS/R based on the current alternatives, as they do not cover a realistic set of choices that could be implemented to achieve the transit goals put forth by AC Transit.

Acknowledgment of Sources

Peter Allen, George Beier, Doug Buchwald, John Caner, David Cottle, Steve Finacom, Chris Ganson, Sharon Hudson, Michael Katz, Greg Murphy, George Oram, Hank Resnik and others.

Austin Commuter Survey, Dr. Chandra Bhat
Downtown Berkeley Association
Oregon Transportation Update, Brian Gregor