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## INTRODUCTION

San Francisco

Sacramento

As California's population continues to expand and the state's economy is making adjacent regions ever more reliant on one another, the artificial

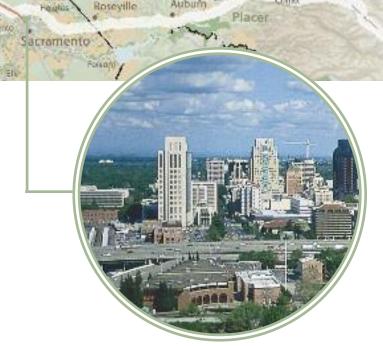
boundaries that divide traditional regions from one

another are proving to be increasingly irrelevant. The

"real world" of housing markets, employers, goods
movement — and even environmental realities
such as air pollution — pay little attention to
where one region stops and another starts as the
boundaries have been traditionally defined. More

recently the growing interdependence of neighboring

regions has led to the emergence of so-called "megaregions" — super-regions that encompass multiple metropolitan areas.



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As the organization America 2050 explains:

"...the forces of sprawl and lengthening commutes between the coast and central valley in Northern California — with negative impacts in both regions — highlight the fact that growth in California has outgrown the "metropolitan" approach. However resistant the regions may be to a shared identity, the need for a planning process that includes a much larger area is underscored by the spillover growth that is threatening the quality of life and the environment in Northern California."



The growing economic relationship between the San Francisco Bay Area and the Sacramento region has started to suggest the emergence of just such a "megaregion" over the last two decades. Yet as this interdependence between the two regions has grown, the ability of governmental agencies in each region to understand, predict and coordinate planning efforts related to transportation, air quality and growth has been woefully inadequate. Planning agencies responsible for growth and transportation currently have very little ability to "see" beyond their traditional regional boundaries. There are numerous problems associated with this inability to plan and

coordinate at a megaregional scale, including:

 lack of understanding or agreement on how land use decisions in one region will effect travel patterns in the other,

minimal capacity to accurately forecast
— and thus plan for — future
interregional travel and goods movement
demand,

a diminished ability to forecast greenhouse gas impacts from different growth patterns that may show a greater "benefit" from minimizing development without accounting for the potential for spillover growth in surrounding regions, and

missed opportunities to secure new funding for transportation corridors that provide important interregional travel benefits

In 2006, a group of planning agencies along the I-80/Capitol Corridor launched a new interregional study focused on both the freeway and rail corridor. The study encompassed Solano, Yolo, Sacramento and Placer counties — and as such took an important "megaregional" perspective on land use and transportation. The goals of the study were:

- To promote a better understanding of transportation and air quality impacts of smart growth planning for a heavily traveled corridor;
- To build a stronger link between local plans, interregional forecasts and smart growth planning;
- To coordinate future transportation investments and land use planning;
- To improve and coordinate growth forecasts for both regions; and
- To develop a model for interregional cooperation that could assist similar efforts statewide.

The study was guided by an interregional steering committee comprised of staff from the regional agencies, Caltrans, regional air districts, and local governments along the corridor, along with representatives from economic, equity and environmental interests. This report documents the study findings and makes important recommendations for improving interregional planning and coordination that are relevant for the many interregional corridors that connect metropolitan areas throughout the state of California. The findings and recommendations from this study take on even greater significance given the passage of AB32 (the California Global Warming Solutions Act of 2006) and SB375, the latter of which will require regions to work together to develop more accurate interregional travel forecasts.

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## EXISTING CONDITIONS AND FUTURE FORECASTS

## 1.1 Demographic Forecasts

In the Sacramento region, demographic projections are developed by the Sacramento Area Council of Governments (SACOG). While SACOG had developed "trends-based" demographic projections — like most other regional planning agencies — up until the early 2000s, officials in the region were growing increasingly dissatisfied with the implications of "business as usual" growth, particularly future modeling forecasts that predicted increasingly dispersed employment patterns, longer commutes and a significant loss of open space.

In 2004, and after several years of intensive outreach and public input, SACOG adopted an alternative growth scenario — known as 'Blueprint' — for the six-county region that forecast considerable changes from the traditional approach to development. Under Blueprint, SACOG is projecting changes that pull much of the anticipated growth in housing and employment away from the edges of the region and back into the urbanized areas. Most new growth that does occur on the edges will likely consist of mixed use, providing a better jobs/housing balance right from the start.

Sacramento County will see more housing growth in the City of Sacramento and in the urbanized unincorporated area. Employment growth will be less concentrated in the downtown and Rancho Cordova jobs centers and more evenly distributed among the various jurisdictions. Placer County will see less housing growth on the periphery and more within jurisdictions. The unincorporated part of the county west of Roseville will see significant but balanced growth in both housing and employment with less reliance on the central Roseville jobs center. Yolo County retains much of its rural character due to slow growth policies, adoption of growth boundaries, and exceptionally fertile farmland. Total growth projected for the county remains about the same, but is redistributed among the jurisdictions.

In the Bay Area, land-use planning and transportation responsibilities are split between two regional planning agencies. The Association of Bay Area Governments (ABAG) serves as the Council of Governments for the nine-county Bay Area and assumes responsibility for land-use coordination, housing, demographic and economic forecasts, among many other regional planning responsibilities. The Metropolitan Transportation Commission (MTC) serves as the Metropolitan Planning Organization for the nine-county Bay Area and assumes responsibility for transportation planning, financing and coordination.

ABAG has published biennial demographic projections for the San Francisco Bay Area since the early 1970s. Prior to Projections 2003, ABAG's projections were "base case" forecasts predicated in part on historic land use trends and existing local development policies contained in city and county general plans. Starting with Projections 2003, ABAG began publishing policy-based projections. The first policy-based Projections in 2003 assumed the following:

- Local smart growth policies show results beginning in 2010
- More development occurring in central cities and older suburbs
- Greater support for public transit, walking and bicycling
- Increases in the assumed level of housing production from 2010 to 2030

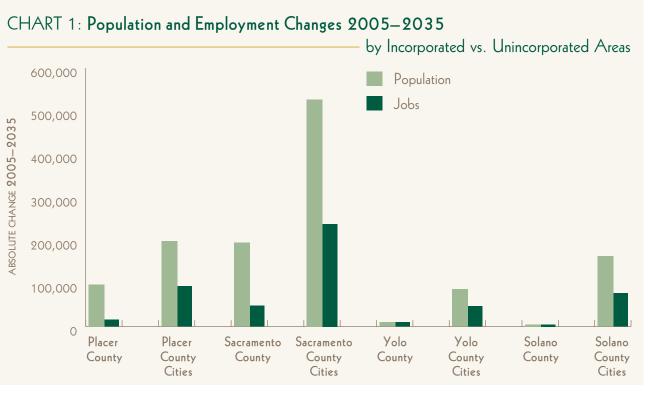


While Projections 2003 lowered the number of forecast jobs by 2030 and increased housing supply, the forecast still fell short of achieving a regional jobs-housing balance. The subsequent Regional Transportation Plan (RTP) prepared by MTC in 2005 forecast an increase of 220,000 incommuters to the Bay Area from surrounding counties by 2030.

For Solano County, ABAG initially projected more household growth in the county's southern cities under the policy-based Projections 2003 compared to Projections 2002. However, ABAG's most recent Projections 2007 has pulled back some of these more aggressive assumptions regarding future growth for Vallejo due to city staff concerns over where and how increases in development could be accommodated.

While the location of future growth within Solano County has trended away from the initial south county emphasis under Projections 2003, the more recent Projections forecasts have continued to improve the future jobs-housing balance for the county overall. In Projections 2007, Solano County is projected to have 16,840 fewer households — but 11,940 more jobs — in 2030 than was forecast previously under Projections

2002. Despite this trend, however, Solano County likely will continue to have an excess of employed residents vs. jobs through 2030 — and will continue to have a significant portion of its jobs held by commuters from surrounding counties — thus continuing the current trend of requiring many of its employed residents to commute elsewhere for work.





## 1.2 Existing Travel Patterns and Future Forecasts

### Existing Travel Patterns

The I-80 gateway between Sacramento and the Bay Area is the second busiest interregional gateway in northern California behind I-580 (the Altamont Pass between Alameda and San Joaquin counties).

While the I-580 gateway experiences significant congestion in the morning and evening peak commuting hours, traffic volumes at the I-80 gateway are somewhat more evenly spread throughout the day and week. This may actually make the

application of such innovations as High Occupancy Toll (HOT) lanes — which require significant peak hour congestion that drivers would be willing to pay to avoid — more difficult to implement.

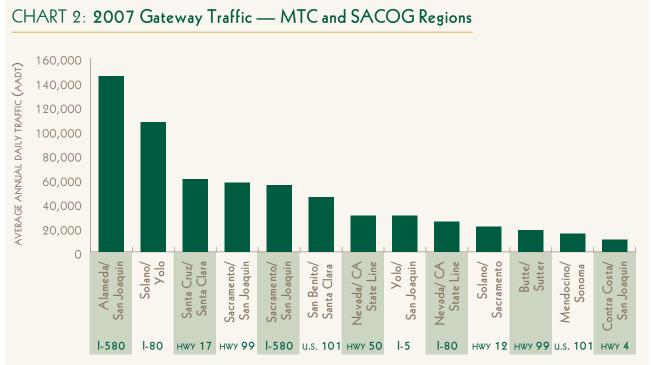
Rail ridership on the Capitol Corridor intercity train service has grown significantly over the last decade. Carrying 1.5 million passengers per year, it is now the third busiest Amtrak corridor in the nation.

#### Existing Travel Models

A variety of travel models are used to produce future travel demand forecasts for the I-80 and Capitol Corridor. These include:

- Regional travel models used by MTC and SACOG, which end at the jurisdictional boundaries of each region.
- The Napa-Solano Travel Model, used by the Solano Transportation Authority and significantly upgraded as a part of this study, which is one of the few "interregional" travel models that covers 16 counties in both the Bay Area and Sacramento regions, and reflects the current demographic forecasts for each area.

The Statewide Travel Model (also known as the "high speed rail model"), which was recently upgraded to provide forecasting for the proposed statewide high speed rail network. This travel model also provides air travel and auto travel forecasts for the entire state, though to date it has been focused on geographic areas of the state where the high speed rail system is planned, particularly San Francisco to Los Angeles.



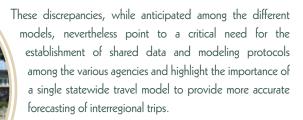


#### Discrepancies Among Travel Model Forecasts

Perhaps somewhat surprisingly for those not familiar with travel model forecasts, it is seldom expected among modeling experts that different travel models will produce similar forecasts. Travel models are best suited at internal comparisons of alternatives within each model.

The following summary highlights the discrepancies among the different travel models:

- Oateway traffic volumes at the 80/505 interchange near the Yolo/Solano border are forecast to be higher by 2030 under the SACOG model than either the Napa-Solano model or the MTC model;
- The Napa-Solano Travel Model forecasts a 55% increase in southbound traffic volumes on the Benicia Bridge (I-680) to over 16,000 peak period vehicles while the MTC model forecasts 10% growth to 13,000.
- The Napa-Solano model forecasts a significant increase in the incommute from the SACOG region. into Solano County along Highway 12 at the Rio Vista Bridge by 2030, while the MTC travel model shows a slight increase in the outcommute from Solano County into the SACOG region.



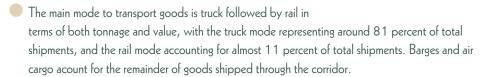
### Freight Demand Along the I-80/Capitol Corridor

Both I-80 and the Capitol Corridor are major freight corridors, related in large part to the Port of Oakland. Unfortunately, very little detailed data exists on current interregional goods movement flows, and existing travel models are poorly equipped to forecast freight

demand into the future. Notwithstanding these constraints, it is possible to offer general conclusions regarding

current and future goods movement patterns along the corridor:

Most of the inbound and outbound shipments to and from the counties that encompass the I-80 corridor, come from and go to other cities in the San Francisco and Sacramento regions. This means that the 1-80 freeway corridor serves mainly to distribute goods that are locally consumed as well as produced regionally or brought in bulk from national or international markets to central Bay Area facilities (e.g. Port of Oakland).



Trucks account for over 90 percent of regional and intrastate tonnage shipped through the corridor, while rail accounts for 25 percent of interstate.



The Port of Oakland, a major trip generator and trip attractor along the I-80 Corridor, is expected to double its current 2.3 million TEU (twenty-foot equivalent unit container) volume by 2012 and to quadruple this volume by 2020. Such growth will necessarily impact ground transportation of both truck and rail modes. Based on ITMS forecasts, truck and rail modes are forecasted to increase in the next ten years — by 43 and 25 percent respectively for inbound shipments, and 28 and 26 percent respectively for outbound shipments.

The Ports of Oakland and Sacramento have set up plans to strengthen their relationship with the purpose of improving goods movement, which includes developing more than 220 acres of land available for freight related activities in the Port of Sacramento.

Given the expected increase of rail shipments along the I-80 corridor, expanded freight rail facilities will be required. As such, acquisition of right-of-way may be necessary. Expanded freight rail operations could affect the capacity for expanding passenger service.

Rail traffic — for both freight and passenger — is already at capacity. There are a number of relatively minor fixes to improve conditions where current congestion is problematic. However, an ultimate solution would be to create a new alignment crossing the Carquinez Strait in the vicinity of Interstate 680, at the same elevation as the highway and following the freeway to Cordelia.

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# II. ALTERNATE FUTURES: THE IMPLICATION OF DIFFERENT CORRIDOR GROWTH PATTERNS

## 2.1 Defining Alternative Land Use Scenarios

One of the key tasks of this study was to investigate the transportation impacts of alternative growth scenarios from an interregional perspective. As described in section 1, both the Bay Area and the Sacramento region are pursuing their own smart growth strategies that have started to shift growth projections away from the edge of both regions. This policy-based forecast is known as "Blueprint" in the SACOG region and "policy-based Projections" in ABAG's nine-county Bay Area. Both policy-based forecasts have lowered overall growth projections for Yolo and Solano counties compared to prior trends-based forecasts. Both have also shifted the geographic emphasis of the growth to southern Solano County (Fairfield/Vallejo) in the ABAG region and eastern Yolo County (West Sacramento) in the SACOG region. Under SACOG's Blueprint, the suburbs east of Sacramento (Roseville etc.) also accommodate more of the region's future growth with an emphasis on jobs-housing balance.

For the purposes of this study, existing smart growth projections — the policy-based projections for both regions noted above — were first modeled to establish baseline travel demand forecasts. Then three alternative interregional land use scenarios were developed for testing through the statewide travel model. These alternative land use scenarios were developed as follows:

Scenario 1: faster and more decentralized growth at the edge of the two regions — in northern Solano County and western Yolo County. Northern Solano County "faster growth" projections were developed emphasizing robust growth at the edges of Vacaville and Dixon. Yolo County "faster growth" projections were developed by SACOG staff based on Blueprint assuming Yolo County's 2050 Blueprint forecast was realized by 2035.

- Scenario 2: faster growth at the core of the regions southern Solano County, the City of Sacramento and its eastern suburbs but with an emphasis on more decentralized growth patterns. This scenario assumes minimal infill and transit-oriented development.
- Scenario 3: faster growth at the core of the two regions (downtown Sacramento and Vallejo) with an emphasis on infill development and growth around transit hubs, such as the Capitol Corridor, at these locations.



It should be noted that all three land-use alternatives were also modeled using the upgraded Solano-Napa travel model. A fourth land-use scenario was also developed specifically for Solano County that achieved a countywide jobs-housing balance by 2035. Those results — while outside the original scope of this interregional study — are summarized in the following table.

## 2 Modeling Results — Statewide Travel Model

The baseline policy-based forecasts and the three alternative land use scenarios — all modeled for 2030 — were analyzed for both travel demand and air quality implications using the statewide travel model. The results are summarized below and in Table 2. More detailed results are available in the appendix beginning with table Y. Existing blueprint forecasts for all four counties on the I-80/Capitol Corridor generally performed better than any of the three land use alternatives.



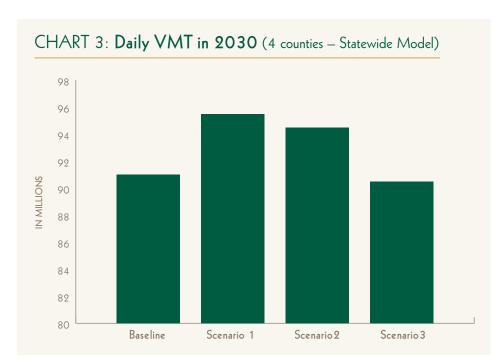
TABLE 1: Year 2030 Total Households and Total Population, by Scenario

| Country                          | Blueprint/<br>Baseline | Alt 1   | Alt 2   | Alt 3   |
|----------------------------------|------------------------|---------|---------|---------|
| County                           | Daseline               | /Alt I  | Alt 2   | Alt 3   |
| Households<br>South Solano       | 124,430                | 110,059 | 131,985 | 131,748 |
|                                  | ,                      | · ·     |         | 1       |
| North Solano                     | 63,860                 | 83,370  | 61,442  | 61,683  |
| Yolo                             | 97,554                 | 131,365 | 76,243  | 76,243  |
| Sacramento                       | 703,533                | 709,443 | 696,581 | 764,478 |
| Placer                           | 203,339                | 168,306 | 238,469 | 188,691 |
| Total Employment<br>South Solano | 153,824                | 132,779 | 156,867 | 157,798 |
| North Solano                     | 61,175                 | 73,357  | 49,274  | 48,337  |
| Yolo                             | 134,940                | 202,572 | 106,389 | 106,378 |
| Sacramento                       | 914,429                | 882,551 | 837,405 | 924,554 |
| Placer                           | 231,639                | 175,940 | 315,137 | 241,007 |
| Percent Change<br>South Solano   |                        | -12%    | +6%     | +6%     |
| North Solano                     |                        | +31%    | -4%     | -4%     |
| Yolo                             |                        | 26%     | -27%    | -27%    |
| Sacramento                       |                        | -6%     | -7%     | 2%      |
| Placer                           |                        | -23%    | 10%     | -13%    |
| South Solano                     |                        | +14%    | +2%     | +3%     |
| North Solano                     |                        | +20%    | -20%    | -20%    |
| Yolo                             |                        | +41%    | -26%    | -26%    |
| Sacramento                       |                        | -10%    | -14%    | -5%     |
| Placer                           |                        | -29%    | 27%     | -3%     |



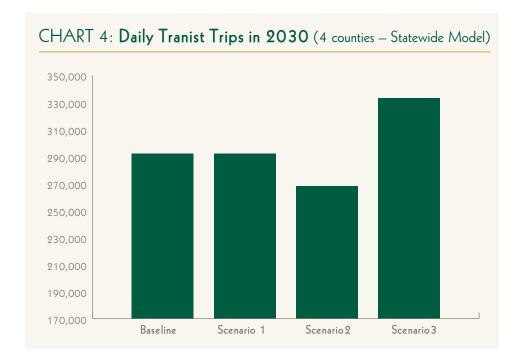
#### Auto Travel

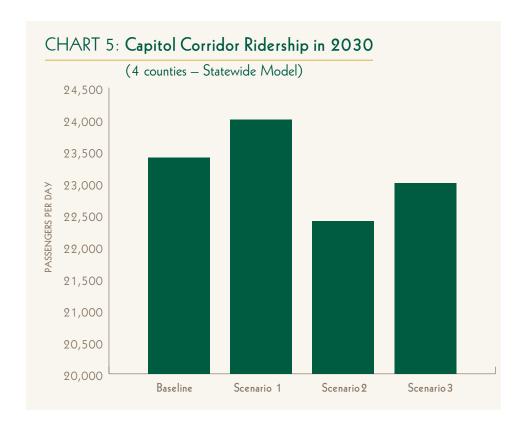
While the total number of daily person-trips remained relatively constant throughout the three land-use scenarios, Scenario 3 (faster core growth in southern Solano County, Sacramento and its eastern suburbs emphasizing infill locations and transit-oriented development) produced the least amount of daily Vehicle Miles Traveled (VMT) — even less than the baseline blueprint forecasts. Scenario 3 also produced fewer Vehicle Hours of Travel (VHT) though not less than the blueprint.



#### Transit Ridership

Linked transit trips for the county-to-county interchanges are shown in the chart below. Linked trips are the metric used by the Federal Transit Administration in New Starts projects (used to calculated net new transit riders). Linked transit trips are summed to the person level, and do not add transfers. Transit trips were highest in Scenario 3, suggesting increased development in infill locations and around transit and rail hubs can attract a greater share of travelers in the corridor.





## Capitol Corridor Ridership

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The chart left shows Capitol Corridor ridership within the Corridor (totals include all stations from Sacramento to San Jose). Interestingly, total system ridership is fairly stable across alternatives. At first review, this result appears somewhat counter-intuitive. But Capitol Corridor riders for the most part are not traveling between Solano, Yolo, Sacramento and Placer Counties (though some riders certainly do have destinations at the Sacramento and Davis stations). Most riders are traveling longer distances to San Francisco, Oakland, Berkeley, Emeryville, and even Silicon Valley. Thus is less surprising that increasing employment in Vallejo or Roseville would not have a major impact on Capitol Corridor ridership.

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In addition, the infill/TOD alternative (Scenario 3) adds housing and employment growth in the centers of each region (downtown Sacramento and central Vallejo), but not necessarily around Capitol Corridor stations. Vallejo, in fact, has no Capitol Corridor station. It should therefore be no surprise that Scenario 1, with its growth in northern Solano County and western Yolo County would produce more Capitol Corridor ridership than Scenario 3. For example, growth in Davis, Dixon and Vacaville should produce more Capitol Corridor ridership through the Davis and Suisun/Fairfield stations than growth in Vallejo



TABLE 2: I-80 Modeling Results for 2030 Statewide Travel Model

|                                    | Blueprint/<br>Baseline | Alt 1      | Alt 2      | Alt 3      |
|------------------------------------|------------------------|------------|------------|------------|
| Daily Vehicle Miles Traveled (VMT) | 91,068,000             | 95,507,000 | 94,788,000 | 90,399,000 |
| Daily Vehicle Hours Traveled (VHT) | 3,761,000              | 4,008,000  | 3,993,000  | 3,819,000  |
| Daily Person Trips                 | 15,403,051             | 14,389,890 | 14,176,104 | 14,340,683 |
| Daily Transit Trips                | 293,843                | 292,929    | 264,292    | 329,245    |
| Capitol Corridor Ridership         | 23,400                 | 24,000     | 22,400     | 23,000     |
| CO2 emissions (daily tons)         | 52,611                 | 54,539     | 53,624     | 52,673     |
| NOX emissions (daily tons)         | 20.5                   | 20.6       | 20.6       | 20.1       |
| ROG emissions (daily lbs)          | 12,082                 | 12,275     | 12,153     | 11,875     |
| PM10 emissions (daily lbs)         | 9,722                  | 10,060     | 9,900      | 9,714      |
| PM2.5 emissions (daily lbs)        | 6,966                  | 7,187      | 7,225      | 7,033      |









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# III. FINDINGS AND RECOMMENDATIONS

## 3.1 Key Study Findings

The analysis of the demographic and travel forecasting scenarios for the I-80/Capitol Corridor reveal the following key findings:

1. Smart growth efforts (or regional "blueprints") in both the Bay Area and the Sacramento region that emphasize a shift in growth away from the edge of each region have potentially significant benefits for both transportation and air quality.

- 2. Regional policy-based projections and lower housing forecasts at the "edge" of the two regions in both Solano and Yolo counties bode well for dampening the increase in travel demand along I-80 between the two regions compared to previous "trends-based" forecasts only in as much as local land-use plans and policies are supportive.
- 3. While newer policy-based "blueprint" forecasts for the edges of the two regions are seemingly compatible, this can be attributed more to coincidence than coordination. Before this study, there historically was very little coordination of demographic or travel forecasts for the two regions.

- 4. Since regional travel models used by both MTC and SACOG stop at existing regional boundaries, interregional commute forecasts are better addressed through the statewide travel model. However, all the travel demand models even the more localized Solano-Napa travel model are significantly constrained in their sensitivity to changes in land use.
- 5. The artificial boundary between the Bay Area and Sacramento doesn't hinder just travel and growth forecasting. Even Caltrans the California State Department of Transportation responsible for interregional transportation planning and investments is organized along a 'district' model that follows the same regional boundaries as MTC/ABAG and SACOG. 'Corridor System Management Plans' being prepared by Caltrans for the I-80 corridor offer a significant opportunity for an interregional approach to corridor planning but are proceeding on separate schedules based on each regional Caltrans district.
- 6. The lack of interregional coordination historically has put the I-80/Capitol Corridor at a competitive disadvantage for securing financing for transportation projects and programs. Two notable exceptions present a model for overcoming the constraints of existing regional boundaries: (1) the Capitol Corridor Joint Powers Authority (CCJPA) has governed the intercity rail service from Sacramento to San Jose since 1998. The CCJPA has succeeded in securing state financing to significantly increase the frequency of train service on the corridor to sixteen round trips per day; (2) the availability of the state Trade Corridor Improvement Funds (TCIF) through Proposition 1B required an unprecedented level of cooperation across the corridor. This cooperation resulted in the awarding of \$825 million in TCIF funds by the California Transportation Commission in April 2008.



## 3.2 Interregional Summit

On April 10, 2008, the study co-sponsors, Caltrans and UC Davis hosted an interregional summit to discuss the study's draft findings and recommendations. After presentations from several state and national experts on megaregions,

intergovernmental coordination and transportation planning, draft study recommendations were presented to and discussed by a dozen breakout groups. Their comments and suggestions were reported back to the broader summit participants and subsequently discussed by a closing panel of elected officials from both regions. Feedback from breakout groups has been incorporated into the final study recommendations that follow.



### 3.3 Recommendations

1. Invest in significant upgrades to the California Statewide Travel Model and regional travel models, including land-use forecasting models

The statewide travel model was upgraded as part of a recent analysis of the proposed High Speed Rail system in California, and was used as part of the interregional travel forecasting in this study. This model and likely will prove to be an increasingly critical tool for forecasting interregional commuting, and interregional freight, rail and air travel. The statewide model also

provides an important opportunity for the development of future integrated models that can produce travel, economic and land-use forecasts statewide. However, the statewide model needs significant improvements if it is to serve as a useful tool for both Caltrans and local and regional planning agencies. The state and regional planning agencies need to pledge critical resources towards upgrading and maintaining the model.

In addition, the following specific steps are also recommended as follow up tasks for this study:

- Include model enhancements laid out in Caltrans' Office of Transportation Systems Information Strategic Model Improvement Program, incudiing improvements to the software interface, GIS-based transportation networks, and interregional model validation through new data collection effforts.
- Add external 'zones' to ABAG and SACOG's demographic models in the I-80 Corridor (as well as other key transportation corridors for each region).
- Revamp ABAG's regional allocation models and consider adopting and implementating an integrated land use model. ABAG should look into new promising models and investigate the potential of implementing an integrated model such as PECAS.
- Set up a technical coordinating committee including ABAG, SACOG, the Solano Transportation Authority, MTC, Caltrans and the Yolo County Transportation District to convene and exchange projections and planning information. The coordinating committee should as its first task set up a data-sharing protocol and process for updating information among SACOG, STA, ABAG, Caltrans and MTC. It is hoped that UC Davis can help play a facilitation role for this.



# 2. Develop an I-80/Capitol Corridor Interregional Corridor Strategic Plan

There are numerous planning documents that cover both the I-80 corridor and Capitol Corridor (Amtrak) in northern California. Yet there is no overarching strategy or plan that unites both corridors and takes a truly interregional approach. Even the California Department of Transportation (Caltrans) is preparing separate Corridor System Management Plans (CSMPs) for the I-80 corridor that stop at the boundaries of each regional district rather than taking a broader, systemwide approach.

The various northern California transportation planning entities did indeed pull together a "megaregional" project list for the recent statewide Trade Corridors Improvement Fund (TCIF). While the availability of TCIF funds required an unprecedented level of interregional cooperation, it also highlighted the lack of a coordinated strategy for transportation investment beyond traditional regional boundaries. An interregional strategic plan should also include a goods movement component and detailed land-use strategies developed by appropriate local governments that help support regional and statewide transportation management goals.

# **3.** Strengthen State Support for Regional Blueprints and Local Land Use Coordination

As demonstrated through this study, there are clear benefits to the state — in this case the state's highway, rail and transit networks — from the ongoing work underway in the regional blueprints. This work will become even more important with the passage of SB375 and as the California Air Resources Board (CARB) develops the scoping plan and implementing regulations for AB32. Funding from Caltrans to support regional blueprints should continue, and technical assistance

should be targeted towards local governments to assist their understanding of the regional and interregional transportation impacts of their local land-use decisions.

# **4.** Explore "Megaregional" Financing Mechanisms for Transportation Projects

The current system of financing transportation projects is severely broken. Solano County has tried several times to pass a local sales tax measure to fix a megaregional bottleneck — the I-80/I-680 interchange at Cordelia junction. The Capitol Corridor rail service has enjoyed tremendous increases in ridership, yet needs significant capital investments in track upgrades and expansion if it is to ever meet its true potential and handle a significant portion of interregional trips in northern California.

While politically challenging, the future of transportation finance likely will include a significant shift toward user fees (tolls, road pricing) and stronger partnerships with the private sector. New financing mechanisms should be pursued for both the I-80 and Capitol Corridor that should include serious analysis of interregional High Occupancy Toll lanes and the potential for full road pricing in the I-80 corridor that could help finance Capitol Corridor operations. In addition, stakeholders and the state legislature should investigate the potential for multi-county tax and bonding



## 5. Develop Better "Megaregional" Coordination and Governance

Emerging megaregions don't need a new form of megaregional government. But the infrastructure that links megaregions is currently managed and financed by a patchwork quilt of

public agencies that are not equipped to plan at a megaregional scale. The artificial boundary between

the Sacramento region and the San Francisco Bay

Area (the Yolo-Solano county border) exists only in the eyes of governmental entities It matters not for commuters, the housing market, air quality, goods movement or the economy. This study has proposed various alternatives for strengthening coordination and governance across the corridor.

One of the more successful models for interregional governance is the Capitol Corridor Joint Powers Authority (CCJPA). A similar JPA for the I-80 corridor,

or one that combines both the Capitol Corridor and the I-80 corridor to the Nevada border, should be seriously considered. The other obvious state agency to coordinate transportation investments at a megaregional scale is Caltrans. Caltrans has responsibility for interregional transportation investments, but is institutionally organized by district within regional boundaries that duplicate the service areas of other regional planning agencies.

In addition, the following specific steps are recommended as follow-up tasks for this

study:

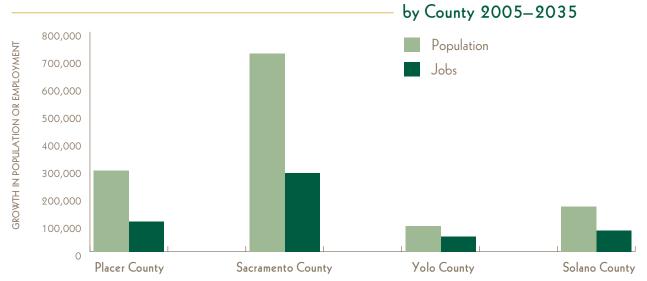
 Ensure that HOV facilities, particularly for express buses serving interregional routes such as Vacaville to Sacramento, are coordinated and continuous in all relevant long-range planning documents.



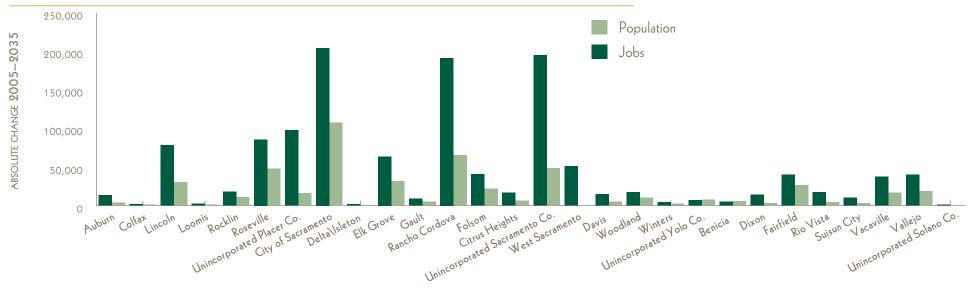
 Strengthen coordination and communication between Solano County and SACOG, and likewise between Yolo County and MTC/ABAG. One method of strengthening this coordination would be to make the UC Davis summit an annual or bi-annual meeting of relevant stakeholders and decisionmakers along the corridor. PLANNING FOR THE NORTHERN CALIFORNIA MEGAREGION

APPENDICES

## APPENDIX CHART 1: I-80 Corridor Population and Employment Growth



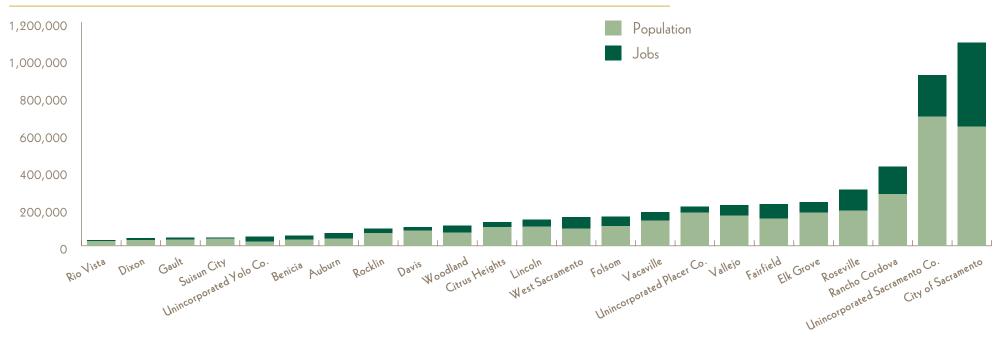
## APPENDIX CHART 2: Population and Employment Growth by Jurisdiction 2005–2035



## APPENDIX TABLE 1: Growth in Population and Employment by Jurisdiction 2005—2035

|                                  |            | 2005             |         |            | 2035             |         |
|----------------------------------|------------|------------------|---------|------------|------------------|---------|
|                                  | Population | Households/D.U.* | Jobs    | Population | Households/D.U.* | Jobs    |
| Auburn                           | 26,670     | 12,170           | 23,663  | 39,776     | 15,566           | 27,422  |
| Colfax                           | 3,118      | 1,371            | 1,081   | 4,630      | 1,812            | 1,925   |
| Lincoln                          | 24,081     | 10,496           | 7,994   | 101,998    | 39,916           | 38,099  |
| Loomis                           | 6,163      | 2,311            | 3,756   | 8,259      | 3,232            | 4,780   |
| Rocklin                          | 50,384     | 19,636           | 13,843  | 68,153     | 26,671           | 24,359  |
| Roseville                        | 102,955    | 42,538           | 64,874  | 188,607    | 73,810           | 112,474 |
| Unincorporated Placer County     | 80,146     | 31,227           | 16,439  | 177,586    | 69,497           | 32,426  |
| Placer County Total              | 293,517    | 119,749          | 131,650 | 589,009    | 230,504          | 241,485 |
| City of Sacramento               | 434,058    | 173,242          | 344,956 | 638,378    | 249,824          | 452,611 |
| Delta/Isleton                    | 6,674      | 2,580            | 3,224   | 8,223      | 3,218            | 3,367   |
| Elk Grove                        | 113,749    | 38,274           | 25,077  | 177,316    | 69,391           | 56,721  |
| Galt                             | 25,008     | 7,905            | 4,690   | 33,766     | 13,214           | 9,877   |
| Rancho Cordova community         | 85,637     | 33,628           | 81,442  | 276,998    | 108,401          | 146,728 |
| olsom                            | 63,798     | 22,478           | 29,379  | 104,627    | 40,945           | 51,011  |
| Citrus Heights                   | 84,771     | 34,376           | 18,204  | 101,282    | 39,636           | 24,651  |
| Unincorporated Sacramento County | 499,918    | 193,246          | 171,530 | 694,584    | 271,820          | 220,009 |
| Sacramento County Total          | 1,313,614  | 505,729          | 678,502 | 2,035,174  | 796,449          | 964,975 |
| West Sacramento                  | 41,208     | 15,448           | 30,655  | 92,339     | 36,136           | 60,535  |
| Davis                            | 66,402     | 24,832           | 16,326  | 80,794     | 31,618           | 21,298  |
| Woodland                         | 55,205     | 17,961           | 25,417  | 72,218     | 28,262           | 35,498  |
| Winters                          | 7,858      | 2,509            | 1,895   | 12,189     | 4,770            | 4,193   |
| Unincorporated Yolo County       | 16,688     | 5,799            | 17,754  | 23,440     | 9,173            | 25,290  |
| Volo County Total                | 187,361    | 66,549           | 92,047  | 280,979    | 109,959          | 146,814 |
| Benicia                          | 27,200     | 10,670           | 15,530  | 32,000     | 12,290           | 20,870  |
| Dixon                            | 17,500     | 5,640            | 5,840   | 31,300     | 9,940            | 9,110   |
| airfield                         | 106,900    | 35,000           | 50,740  | 146,900    | 47,820           | 77,030  |
| lio Vista                        | 7,500      | 3,120            | 2,450   | 25,000     | 9,890            | 6,560   |
| uisun City                       | 28,200     | 8,770            | 4,080   | 38,100     | 11,630           | 7,080   |
| /acaville                        | 97,200     | 31,590           | 30,710  | 134,300    | 44,040           | 47,110  |
| /allejo                          | 122,900    | 42,330           | 35,720  | 163,100    | 55,560           | 54,600  |
| Inincorporated Solano County     | 14,200     | 4,920            | 5,450   | 15,100     | 5,050            | 5,510   |
| Solano County Total              | 421,600    | 142,040          | 150,520 | 585,800    | 196,220          | 227,870 |

## APPENDIX CHART 3: Total Population and Jobs in 2035 — I-80 Corridor by Jurisdiction



## APPENDIX TABLE 2: Year 2030 Daily Person Trips by Couty-to-County Interchange

| TO:                   | FROM:<br>Other Bay Area*         | Solano               | Yolo      | Sacramento | Placer    | Other Sac Region | TOTALFROM                               |
|-----------------------|----------------------------------|----------------------|-----------|------------|-----------|------------------|---|
| Base Case             |                                  |                      | , , , ,   |            |           |                  | , |
| Other Bay Area*       | _                                | 254,450              | 31,419    | 101,379    | 22,317    | 19,831           | 429,396                                 |
| Solano                | 109,646                          | 1,366,627            | 3,606     | 7,972      | 1,483     | 1,197            | 1,490,531                               |
| Volo                  | 9,429                            | 6,333                | 1,025,545 | 213,528    | 3,026     | 1,437            | 1,259,297                               |
| oacramento            | 69,040                           | 22,655               | 255,732   | 8,586,243  | 303,138   | 77,278           | 9,314,085                               |
| Placer                | 16,176                           | 4,205                | 10,759    | 303,260    | 2,270,632 | 19,262           | 2,624,294                               |
| Other Sac. Region     | 12,836                           | 3,196                | 17,753    | 171,343    | 80,319    | _                | 285,447                                 |
| otal                  | 217,127                          | 1,657,466            | 1,344,815 | 9,383,725  | 2,680,914 | 119,004          | 15,403,051                              |
| 2030 Scenario 1: Fast | West SACOG — Northern Soland     | Dispersed            |           |            |           |                  |   |
| Other Bay Area*       | _                                | 234,573              | 44,671    | 97,195     | 17,442    | 19,472           | 413,353                                 |
| olano                 | 140,992                          | 1,371,037            | 5,135     | 7,422      | 1,101     | 1,157            | 1,526,844                               |
| ′olo                  | 13,206                           | 8,636                | 1,477,035 | 203,719    | 1,644     | 1,166            | 1,705,406                               |
| oacramento            | 77,207                           | 25,196               | 362,866   | 7,807,421  | 225,021   | 67,716           | 8,565,427                               |
| lacer                 | 13,997                           | 3,541                | 19,493    | 287,164    | 1,589,171 | 20,210           | 1,933,576                               |
| Other Sac. Region     | 12,703                           | 3,125                | 39,923    | 146,100    | 43,433    | _                | 245,284                                 |
| otal                  | 258,105                          | 1,646,108            | 1,949,123 | 8,549,021  | 1,877,812 | 109,721          | 14,389,890                              |
| 2030 Scenario 2: Fast | East SACOG Greenfield — South    | ern Solano Dispersed |           |            |           |                  |   |
| Other Bay Area*       | _                                | 252,167              | 28,727    | 97,096     | 25,883    | 19,459           | 423,332                                 |
| olano                 | 104,855                          | 1,361,448            | 3,266     | 7,466      | 1,822     | 1,249            | 1,480,106                               |
| ′olo                  | 7,627                            | 5,210                | 768,270   | 144,902    | 2,783     | 197              | 928,989                                 |
| acramento             | 76,496                           | 24,814               | 253,790   | 7,531,811  | 355,485   | 64,052           | 8,306,448                               |
| Placer                | 19,270                           | 4,883                | 16,588    | 278,939    | 2,573,724 | 4,922            | 2,898,326                               |
| Other Sac. Region     | 12,727                           | 3,132                | 1,046     | 106,315    | 15,683    | _                | 138,903                                 |
| otal                  | 220,975                          | 1,651,654            | 1,071,687 | 8,166,529  | 2,975,380 | 89,879           | 14,176,104                              |
| 2030 Scenario 3: Fast | East SACOG Infill — Southern Sol | ano Compact          |           |            |           |                  |   |
| Other Bay Area*       | _                                | 236,590              | 28,019    | 103,506    | 21,622    | 17,773           | 407,510                                 |
| olano                 | 104,004                          | 1,368,586            | 3,208     | 8,190      | 1,479     | 1,128            | 1,486,595                               |
| olo                   | 7,566                            | 5,169                | 756,418   | 156,299    | 2,102     | 152              | 927,706                                 |
| acramento             | 82,537                           | 27,112               | 279,273   | 8,306,576  | 348,489   | 59,112           | 9,103,099                               |
| lacer                 | 15,553                           | 3,929                | 11,428    | 257,583    | 1,980,913 | 4,225            | 2,273,631                               |
| Other Sac. Region     | 11,741                           | 2,946                | 1,071     | 108,961    | 17,423    |                  | 142,142                                 |
| otal                  | 221,401                          | 1,644,332            | 1,079,417 | 8,941,115  | 2,372,028 | 82,390           | 14,340,683                              |

<sup>\*</sup> Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara and Sonoma counties.

## APPENDIX TABLE 3: Percent Change in Year 2030 Daily Person Trips by Couty-to-County Interchange

|                            | FROM:   |                      |      |            |        |                  |           |  |  |  |  |
|----------------------------|---|----------------------|------|------------|--------|------------------|-----------|--|--|--|--|
| TO:                        | Other Bay Area*   | Solano               | Yolo | Sacramento | Placer | Other Sac Region | TOTALFROM |  |  |  |  |
| 2030 Scenario 1: Fast Wes  | 030 Scenario 1: Fast West SACOG — Northern Solano Dispersed |                      |      |            |        |                  |           |  |  |  |  |
| Other Bay Area*            | _   | -8%                  | 42%  | -4%        | -22%   | -2%              | -4%       |  |  |  |  |
| Solano                     | 29%   | 0%                   | 42%  | -7%        | -26%   | -3%              | 2%        |  |  |  |  |
| Yolo                       | 40%   | 36%                  | 44%  | -5%        | -46%   | -19%             | 35%       |  |  |  |  |
| Sacramento                 | 12%   | 11%                  | 42%  | -9%        | -26%   | -12%             | -8%       |  |  |  |  |
| Placer                     | -13%  | -16%                 | 81%  | -5%        | -30%   | 5%               | -26%      |  |  |  |  |
| Other Sac. Region          | -1%   | -2%                  | 125% | -15%       | -46%   | _                | -14%      |  |  |  |  |
| Total                      | 19%   | -1%                  | 45%  | -9%        | -30%   | -8%              | -7%       |  |  |  |  |
| 2030 Scenario 2: Fast East | SACOG Greenfield — South                                    | ern Solano Dispersed |      |            |        |                  |           |  |  |  |  |
| Other Bay Area*            | _   | -1%                  | -9%  | -4%        | 16%    | -2%              | - 1%      |  |  |  |  |
| Solano                     | -4%   | 0%                   | -9%  | -6%        | 23%    | 4%               | - 1%      |  |  |  |  |
| Yolo                       | -19%  | -18%                 | -25% | -32%       | -8%    | -86%             | -26%      |  |  |  |  |
| Sacramento                 | 11%   | 10%                  | -1%  | -12%       | 17%    | -17%             | -11%      |  |  |  |  |
| Placer                     | 19%   | 16%                  | 54%  | -8%        | 13%    | -74%             | 10%       |  |  |  |  |
| Other Sac. Region          | -1%   | -2%                  | -94% | -38%       | -80%   | _                | -51%      |  |  |  |  |
| Total                      | 2%  | 0%                   | -20% | -13%       | 11%    | -24%             | -8%       |  |  |  |  |
| 2030 Scenario 3: Fast East | SACOG Infill — Southern Sol                                 | ano Compact          |      |            |        |                  |           |  |  |  |  |
| Other Bay Area*            | _   | -7%                  | -11% | 2%         | -3%    | -10%             | -5%       |  |  |  |  |
| Solano                     | -5%   | 0%                   | -11% | 3%         | 0%     | -6%              | 0%        |  |  |  |  |
| Yolo                       | -20%  | -18%                 | -26% | -27%       | -31%   | -89%             | -26%      |  |  |  |  |
| Sacramento                 | 20%   | 20%                  | 9%   | -3%        | 15%    | -24%             | -2%       |  |  |  |  |
| Placer                     | -4%   | -7%                  | 6%   | -15%       | -13%   | -78%             | -13%      |  |  |  |  |
| Other Sac. Region          | -9%   | -8%                  | -94% | -36%       | -78%   | _                | -50%      |  |  |  |  |
| Total                      | 2%  | - 1%                 | -20% | -5%        | -12%   | -31%             | -7%       |  |  |  |  |

<sup>\*</sup> Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara and Sonoma counties.

APPENDIX TABLE 4: Year 2030 Daily Linked Transit Trips by Couty-to-County Interchange

| TO:                   | FROM:<br>Other Bay Area*        | Solano                | Yolo   | Sacramento | Placer | Other Sac Region | TOTALFROM |
|-----------------------|---------------------------------|-----------------------|--------|------------|--------|------------------|-----------|
| Base Case             | 2 2                             |                       |        |            |        |                  |           |
| Other Bay Area*       | _                               | 12,767                | 3,946  | 10,834     | 584    | 551              | 28,682    |
| Solano                | 1,483                           | 24,145                | 166    | 484        | 61     | 70               | 26,409    |
| Yolo                  | 853                             | 148                   | 14,730 | 10,696     | 1      | 0                | 26,428    |
| Sacramento            | 4,301                           | 635                   | 3,155  | 185,784    | 1,347  | 75               | 195,296   |
| Placer                | 441                             | 118                   | 16     | 3,369      | 11,673 | 0                | 15,618    |
| Other Sac. Region     | 405                             | 76                    | 2      | 921        | 7      | _                | 1,410     |
| Total                 | 7,483                           | 37,889                | 22,014 | 212,087    | 13,673 | 697              | 293,843   |
| 2030 Scenario 1: Fast | West SACOG — Northern Solar     | no Dispersed          |        |            |        |                  |           |
| Other Bay Area*       | _                               | 9,884                 | 5,977  | 9,955      | 434    | 532              | 26,782    |
| Solano                | 1,406                           | 20,798                | 253    | 439        | 43     | 63               | 23,002    |
| Yolo                  | 1,254                           | 209                   | 18,864 | 11,824     | 1      | 0                | 32,152    |
| Sacramento            | 4,771                           | 679                   | 2,950  | 188,129    | 923    | 66               | 197,518   |
| Placer                | 354                             | 91                    | 20     | 3,680      | 7,820  | 0                | 11,965    |
| Other Sac. Region     | 372                             | 68                    | 2      | 1,062      | 6      | _                | 1,510     |
| Total                 | 8,157                           | 31,729                | 28,066 | 215,089    | 9,227  | 661              | 292,929   |
| 2030 Scenario 2: Fast | East SACOG Greenfield — South   | nern Solano Dispersed |        |            |        |                  |           |
| Other Bay Area*       | _                               | 11,485                | 3,901  | 10,017     | 734    | 556              | 26,693    |
| Solano                | 1,406                           | 23,002                | 160    | 438        | 79     | 71               | 25,156    |
| Yolo                  | 650                             | 111                   | 11,601 | 7,112      | 1      | 0                | 19,475    |
| Sacramento            | 4,656                           | 657                   | 1,902  | 164,959    | 1,669  | 75               | 173,918   |
| Placer                | 495                             | 134                   | 8      | 3,076      | 14,025 | 0                | 17,738    |
| Other Sac. Region     | 371                             | 69                    | 2      | 858        | 12     | _                | 1,312     |
| Total                 | 7,578                           | 35,458                | 17,574 | 186,460    | 16,520 | 702              | 264,292   |
| 2030 Scenario 3: Fast | East SACOG Infill — Southern So | olano Compact         |        |            |        |                  |           |
| Other Bay Area*       | _                               | 10,832                | 3,772  | 11,136     | 601    | 497              | 26,838    |
| Solano                | 2,357                           | 30,100                | 157    | 487        | 62     | 66               | 33,229    |
| Yolo                  | 644                             | 110                   | 11,581 | 8,328      | 1      | 0                | 20,664    |
| Sacramento            | 5,283                           | 745                   | 2,551  | 222,389    | 1,551  | 69               | 232,588   |
| Placer                | 398                             | 105                   | 7      | 3,085      | 10,952 | 0                | 14,547    |
| Other Sac. Region     | 327                             | 68                    | 2      | 975        | 7      | _                | 1,379     |
| Total                 | 9,009                           | 41,960                | 18,070 | 246,400    | 13,174 | 632              | 329,245   |

<sup>\*</sup> Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara and Sonoma counties.

## $\label{eq:APPENDIXTABLE} APPENDIX\ TABLE\ 5: \textbf{\textit{Year}}\ \textbf{\textit{2030}}\ \textbf{\textit{Transit}}\ \textbf{\textit{Shares}}\ \textbf{\textit{of}}\ \textbf{\textit{Total}}\ \textbf{\textit{Trips}}\ \textbf{\textit{by}}\ \textbf{\textit{Couty-to-County}}\ \textbf{\textit{Interchange}}$

| TO:                   | FROM:<br>Other Bay Area*        | Solano                | Yolo      | Sacramento | Placer | Other Sac Region | TOTALFROM                               |
|-----------------------|---------------------------------|-----------------------|-----------|------------|--------|------------------|---|
| Base Case             |                                 |                       | , , , , , |            |        |                  | , |
| Other Bay Area*       | _                               | 5.0%                  | 12.6%     | 10.7%      | 2.6%   | 2.8%             | 6.7%                                    |
| Solano                | 1.4%                            | 1.8%                  | 4.6%      | 6.1%       | 4.1%   | 5.8%             | 1.8%                                    |
| Yolo                  | 9.0%                            | 2.3%                  | 1.4%      | 5.0%       | 0.0%   | 0.0%             | 2.1%                                    |
| Sacramento            | 6.2%                            | 2.8%                  | 1.2%      | 2.2%       | 0.4%   | 0.1%             | 2.1%                                    |
| Placer                | 2.7%                            | 2.8%                  | 0.1%      | 1.1%       | 0.5%   | 0.0%             | 0.6%                                    |
| Other Sac. Region     | 3.2%                            | 2.4%                  | 0.0%      | 0.5%       | 0.0%   | _                | 0.5%                                    |
| Total                 | 3.4%                            | 2.3%                  | 1.6%      | 2.3%       | 0.5%   | 0.6%             | 1.9%                                    |
| 2030 Scenario 1: Fast | West SACOG — Northern Solan     | o Dispersed           |           |            |        |                  |   |
| Other Bay Area*       | _                               | 4.2%                  | 13.4%     | 10.2%      | 2.5%   | 2.7%             | 6.5%                                    |
| Solano                | 1.0%                            | 1.5%                  | 4.9%      | 5.9%       | 3.9%   | 5.4%             | 1.5%                                    |
| Yolo                  | 9.5%                            | 2.4%                  | 1.3%      | 5.8%       | 0.1%   | 0.0%             | 1.9%                                    |
| Dacramento            | 6.2%                            | 2.7%                  | 0.8%      | 2.4%       | 0.4%   | 0.1%             | 2.3%                                    |
| Placer                | 2.5%                            | 2.6%                  | 0.1%      | 1.3%       | 0.5%   | 0.0%             | 0.6%                                    |
| Other Sac. Region     | 2.9%                            | 2.2%                  | 0.0%      | 0.7%       | 0.0%   | _                | 0.6%                                    |
| Total                 | 3.2%                            | 1.9%                  | 1.4%      | 2.5%       | 0.5%   | 0.6%             | 2.0%                                    |
| 2030 Scenario 2: Fast | East SACOG Greenfield — South   | nern Solano Dispersed |           |            |        |                  | '                                       |
| Other Bay Area*       | _                               | 4.6%                  | 13.6%     | 10.3%      | 2.8%   | 2.9%             | 6.3%                                    |
| Solano                | 1.3%                            | 1.7%                  | 4.9%      | 5.9%       | 4.3%   | 5.7%             | 1.7%                                    |
| Yolo                  | 8.5%                            | 2.1%                  | 1.5%      | 4.9%       | 0.0%   | 0.0%             | 2.1%                                    |
| Dacramento            | 6.1%                            | 2.6%                  | 0.7%      | 2.2%       | 0.5%   | 0.1%             | 2.1%                                    |
| Placer                | 2.6%                            | 2.7%                  | 0.0%      | 1.1%       | 0.5%   | 0.0%             | 0.6%                                    |
| Other Sac. Region     | 2.9%                            | 2.2%                  | 0.2%      | 0.8%       | 0.1%   | _                | 0.9%                                    |
| Total                 | 3.4%                            | 2.1%                  | 1.6%      | 2.3%       | 0.6%   | 0.8%             | 1.9%                                    |
| 2030 Scenario 3: Fast | East SACOG Infill — Southern So | lano Compact          |           |            |        |                  | '                                       |
| Other Bay Area*       | _                               | 4.6%                  | 13.5%     | 10.8%      | 2.8%   | 2.8%             | 6.6%                                    |
| Solano                | 2.3%                            | 2.2%                  | 4.9%      | 5.9%       | 4.2%   | 5.9%             | 2.2%                                    |
| /olo                  | 8.5%                            | 2.1%                  | 1.5%      | 5.3%       | 0.0%   | 0.0%             | 2.2%                                    |
| pacramento            | 6.4%                            | 2.7%                  | 0.9%      | 2.7%       | 0.4%   | 0.1%             | 2.6%                                    |
| Placer                | 2.6%                            | 2.7%                  | 0.1%      | 1.2%       | 0.6%   | 0.0%             | 0.6%                                    |
| Other Sac. Region     | 2.8%                            | 2.3%                  | 0.2%      | 0.9%       | 0.0%   | _                | 1.0%                                    |
| Total                 | 4.1%                            | 2.6%                  | 1.7%      | 2.8%       | 0.6%   | 0.8%             | 2.3%                                    |

<sup>\*</sup> Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara and Sonoma counties.

APPENDIX TABLE 6: Year 2030 Daily Vehicle Hours of Travel and Vehicle Miles of Travel by County

|                       | Baseli                         | ine                 | Scenai    | rio 1      | Scena     | rio 2      | Scenar    | io 3       |
|-----------------------|--------------------------------|---------------------|-----------|------------|-----------|------------|-----------|------------|
| County                | VHT                            | VMT                 | VHT       | VMT        | VHT       | VMT        | VHT       | VMT        |
| Year 2030 Daily Vehi  | icle Hours of Travel and Vehic | cle Miles of Travel |           |            |           |            |           |            |
| Solano                | 431,000                        | 9,273,000           | 617,000   | 13,429,000 | 416,000   | 8,843,000  | 393,000   | 8,375,000  |
| Yolo                  | 255,000                        | 7,162,000           | 423,000   | 11,603,000 | 278,000   | 7,784,000  | 271,000   | 7,577,000  |
| Sacramento            | 2,113,000                      | 51,322,000          | 2,149,000 | 50,935,000 | 2,163,000 | 51,030,000 | 2,204,000 | 51,939,000 |
| Placer                | 962,000                        | 23,311,000          | 819,000   | 19,540,000 | 1,136,000 | 27,131,000 | 951,000   | 22,508,000 |
| Total                 | 3,761,000                      | 91,068,000          | 4,008,000 | 95,507,000 | 3,993,000 | 94,788,000 | 3,819,000 | 90,399,000 |
| % Change from Baselin | e                              |                     |           |            |           |            |           |            |
| Solano                |                                |                     | 43%       | 45%        | -3%       | -5%        | -9%       | -10%       |
| Yolo                  |                                |                     | 66%       | 62%        | 9%        | 9%         | 6%        | 6%         |
| Sacramento            |                                |                     | 2%        | -1%        | 2%        | -1%        | 4%        | 1%         |
| Placer                |                                |                     | -15%      | -16%       | 18%       | 16%        | -1%       | -3%        |
| Total                 |                                |                     | 7%        | 5%         | 6%        | 4%         | 2%        | - 1%       |
| Intra-County Only     |                                |                     |           |            |           |            |           |            |
| Solano                | 147,000                        | 2,910,000           | 160,000   | 3,323,000  | 150,000   | 3,014,000  | 145,000   | 2,883,000  |
| Yolo                  | 78,000                         | 2,025,000           | 170,000   | 4,248,000  | 96,000    | 2,457,000  | 95,000    | 2,434,000  |
| Sacramento            | 1,369,000                      | 30,992,000          | 1,496,000 | 32,977,000 | 1,502,000 | 32,916,000 | 1,563,000 | 34,412,000 |
| Placer                | 463,000                        | 10,109,000          | 439,000   | 9,461,000  | 677,000   | 14,889,000 | 533,000   | 11,549,000 |
| Total                 | 2,057,000                      | 46,036,000          | 2,265,000 | 50,009,000 | 2,425,000 | 53,276,000 | 2,336,000 | 51,278,000 |
| % Intra-County Chang  | e from Baseline                |                     |           |            |           |            |           |            |
| Solano                |                                |                     | 9%        | 14%        | 2%        | 4%         | -1%       | -1%        |
| Yolo                  |                                |                     | 118%      | 110%       | 23%       | 21%        | 22%       | 20%        |
| Sacramento            |                                |                     | 9%        | 6%         | 10%       | 6%         | 14%       | 11%        |
| Placer                |                                |                     | -5%       | -6%        | 46%       | 47%        | 15%       | 14%        |
| Total                 |                                |                     | 10%       | 9%         | 18%       | 16%        | 14%       | 11%        |
| Percent Intra-County  |                                |                     |           |            |           |            |           |            |
| Solano                | 34%                            | 31%                 | 33%       | 31%        | 36%       | 34%        | 37%       | 34%        |
| Yolo                  | 31%                            | 28%                 | 40%       | 37%        | 35%       | 32%        | 35%       | 32%        |
| Sacramento            | 65%                            | 60%                 | 70%       | 65%        | 69%       | 65%        | 71%       | 66%        |
| Placer                | 48%                            | 43%                 | 54%       | 48%        | 60%       | 55%        | 56%       | 51%        |
| Total                 | 55%                            | 5 1%                | 58%       | 54%        | 61%       | 56%        | 61%       | 57%        |

 $\textbf{note:} \ VMT \ \textit{and} \ VHT \ \textit{were calculated using trip table data-zone-to-zone distances multiplied by congested \textit{skimmed vehicle times and distances.}$ 

# $\label{eq:appendix} \textit{APPENDIX TABLE 7: Year 2030 Carbon Dioxide (CO_2) Emissions, Daily Tons}$

|                | No Build |        | Scenario 2 | Scenario 3 |
|----------------|----------|--------|------------|------------|
| Solano         | 4,905    | 5,850  | 5,181      | 5,068      |
| Yolo           | 4,196    | 6,397  | 3,609      | 3,486      |
| Sacramento     | 32,307   | 32,469 | 31,189     | 32,993     |
| Placer         | 11,203   | 9,823  | 13,646     | 11,127     |
| Corridor       | 52,611   | 54,539 | 53,624     | 52,673     |
| Percent Change |          |        |            |            |
| Solano         |          | 19%    | 6%         | 3%         |
| Yolo           |          | 52%    | -14%       | -17%       |
| Sacramento     |          | 1%     | -3%        | 2%         |
| Placer         |          | -12%   | 22%        | -1%        |
| Corridor       |          | 4%     | -2%        | -2%        |

## APPENDIX TABLE 8: Year 2030 Oxides of Nitrogen (NOX) Emissions, Daily Tons

| No Build       |        | Scenario 1 | Scenario 2 | Scenario 3 |  |
|----------------|--------|------------|------------|------------|--|
| Solano         | 1.664  | 1.885      | 1.658      | 1.619      |  |
| Yolo           | 1.422  | 2.039      | 1.095      | 1.053      |  |
| Sacramento     | 12.644 | 12.707     | 12.206     | 12.912     |  |
| Placer         | 4.806  | 4.001      | 5.671      | 4.533      |  |
| Corridor       | 20.536 | 20.632     | 20.630     | 20.118     |  |
| Percent Change |        |            |            |            |  |
| Solano         |        | 13%        | 0%         | 3%         |  |
| Yolo           |        | 43%        | -23%       | -26%       |  |
| Sacramento     |        | 1%         | -3%        | 2%         |  |
| Placer         |        | -17%       | 18%        | -6%        |  |
| Corridor       |        | 0%         | 0%         | -2%        |  |

## APPENDIX TABLE 9: Year 2030 Reactive Organic Gases (ROG) Emissions, Daily Pounds

|                | No Build |        | Scenario 2 | Scenario 3 |  |
|----------------|----------|--------|------------|------------|--|
| Solano         | 816      | 970    | 813        | 794        |  |
| Yolo           | 728      | 1,213  | 561        | 539        |  |
| Sacramento     | 7,716    | 7,755  | 7,449      | 7,880      |  |
| Placer         | 2,822    | 2,337  | 3,330      | 2,662      |  |
| Corridor       | 12,082   | 12,275 | 12,153     | 11,875     |  |
| Percent Change |          |        |            |            |  |
| Solano         |          | 13%    | 0%         | -3%        |  |
| Yolo           |          | 43%    | -23%       | -26%       |  |
| Sacramento     |          | 1%     | -3%        | 2%         |  |
| Placer         |          | -17%   | 18%        | -6%        |  |
| Corridor       |          | 2%     | 1%         | -2%        |  |

# ${\sf APPENDIX\,TABLE\,10:\,Fine\,Particulate\,Matter} < 10\,{\sf micrometers\,(PM_{10})\,Emissions,\,Daily\,Pounds}$

|                | No Build | Scenario 1 Scenario 2 |       | Scenario 3 |  |
|----------------|----------|-----------------------|-------|------------|--|
| Solano         | 904      | 1,080                 | 964   | 943        |  |
| Yolo           | 772      | 1,168                 | 656   | 634        |  |
| Sacramento     | 5,952    | 5,982                 | 5,746 | 6,078      |  |
| Placer         | 2,094    | 1,830                 | 2,534 | 2,059      |  |
| Corridor       | 9,722    | 10,060                | 9,900 | 9,714      |  |
| Percent Change |          |                       |       |            |  |
| Solano         |          | 20%                   | 7%    | 4%         |  |
| Yolo           |          | 51%                   | -15%  | -18%       |  |
| Sacramento     |          | 1%                    | -3%   | 2%         |  |
| Placer         |          | -13%                  | 21%   | -2%        |  |
| Corridor       |          | 3%                    | 2%    | 0%         |  |

# $\label{eq:appendix} \textit{APPENDIX TABLE 11: Fine Particulate Matter} < 2.5 \ \textit{micrometers (PM}_{2.5}) \ \textit{Emissions, Daily Pounds}$

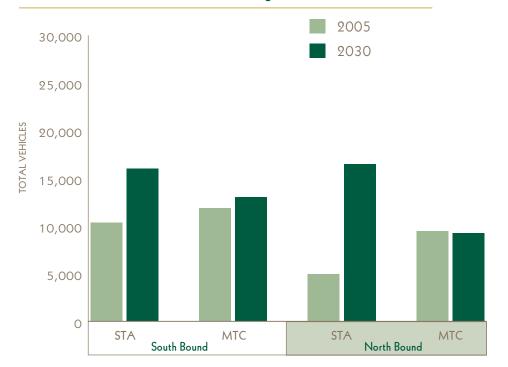
|                | No Build | Scenario 1 | Scenario 2 | Scenario 3 |  |  |  |
|----------------|----------|------------|------------|------------|--|--|--|
| Solano         | 551      | 661        | 587        | 575        |  |  |  |
| Yolo           | 463      | 772        | 468        | 454        |  |  |  |
| Sacramento     | 4,409    | 4,431      | 4,256      | 4,503      |  |  |  |
| Placer         | 1,543    | 1,323      | 1,913      | 1,502      |  |  |  |
| Corridor       | 6,966    | 7,187      | 7,225      | 7,033      |  |  |  |
| Percent Change |          |            |            |            |  |  |  |
| Solano         |          | 20%        | 7%         | 4%         |  |  |  |
| Yolo           |          | 67%        | 1%         | -2%        |  |  |  |
| Sacramento     |          | 1%         | -3%        | 2%         |  |  |  |
| Placer         |          | -14%       | 24%        | -3%        |  |  |  |
| Corridor       |          | 3%         | 4%         | 1%         |  |  |  |

# APPENDIX TABLE 12: Year 2030 Capitol Corridor Ridership by Corridor Station

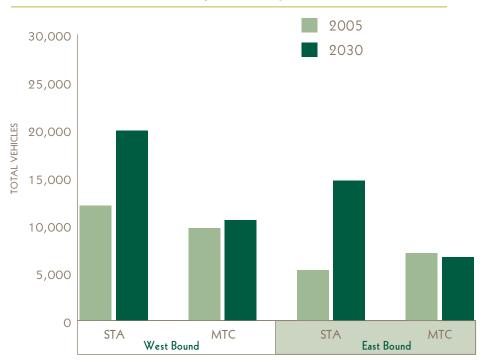
|                     |          |            |            |            | Percent Change from Baseline |            |            |
|---------------------|----------|------------|------------|------------|------------------------------|------------|------------|
| Station*            | Baseline | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 1                   | Scenario 2 | Scenario 3 |
| Auburn              | 100      | 100        | 100        | 100        | 2%                           | 1%         | 6%         |
| Rocklin             | 300      | 300        | 400        | 300        | -22%                         | 29%        | -13%       |
| Roseville           | 1,200    | 1,100      | 1,200      | 1,300      | -6%                          | 2%         | 4%         |
| Sacramento          | 7,700    | 7,000      | 7,400      | 7,700      | -9%                          | -4%        | 0%         |
| Davis               | 2,100    | 3,200      | 1,900      | 1,900      | 54%                          | -6%        | -6%        |
| Suisun City         | 800      | 900        | 800        | 900        | 7%                           | 0%         | 4%         |
| Contra Costa County | 3,300    | 2,900      | 3,200      | 2,800      | -13%                         | -1%        | -13%       |
| Alameda County      | 6,400    | 6,800      | 6,100      | 6,500      | 7%                           | -3%        | 2%         |
| Santa Clara County  | 1,500    | 1,700      | 1,300      | 1,500      | 16%                          | -6%        | 11%        |
| System Total        | 23,400   | 24,000     | 22,400     | 23,000     | 2%                           | -3%        | - 1%       |

<sup>\*</sup> Stations outside of study area are summed to County.

## APPENDIX CHART 4: Benicia Bridge — 2 Hour AM Peak



## APPENDIX CHART 5: Carquinez Bridge — 2 Hour AM Peak













P.O. Box 2050 Oakland, CA 94604-2050

510.464.7900 PHONE info@abag.ca.gov E-MAIL www.abag.ca.gov WEB Caltrans, District 4
111 Grand Avenue
Oakland, CA 94612

510.286.4444 PHONE ????@dot.ca.gov E-MAIL www.dot.ca.gov/dist4 WEB Joseph P. Bort MetroCenter 101 Eighth Street Oakland, CA 94607-4700

510.817.5700 PHONE 510.817.5769 TDD/TTV info@mtc.ca.gov E-MAIL www.mtc.ca.gov WEB 1415 L Street, Suite 300 Sacramento, CA 95814

916.321.9000 PHONE 916.321.9550 TDD/TTY sacog@sacog.org E-MAIL www.sacog.org WEB One Harbor Center, Suite 130
Suisun City, CA 94585
707.424.6075 PHONE
staplan@sta-snci.com E-MAIL
www.solanolinks.com WEB