MEETING NOTICE
AND AGENDA

TransNet INDEPENDENT TAXPAYER
OVERSIGHT COMMITTEE (ITOC)
The ITOC may take action on any item appearing on this agenda.

Wednesday, February 11, 2009
9:30 a.m.
SANDAG
7th Floor Conference Room
401 B Street, 7th Floor
San Diego, CA 92101

Staff Contact: Charles “Muggs” Stoll
(619) 699-6945
mst@sandag.org

AGENDA HIGHLIGHTS

• TransNet EARLY ACTION PROGRAM FINANCING OPTIONS
• TransNet PLAN OF FINANCE UPDATE
• TransNet TRIENNIAL PERFORMANCE AUDIT DRAFT REPORT

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Welcome to SANDAG. Members of the public may speak to the TransNet Independent Taxpayer Oversight Committee (ITOC) members on any item at the time the ITOC is considering the item. Also, members of the public are invited to address the ITOC on any issue under the agenda item entitled Public Comments/Communications/Member Comments. Speakers are limited to three minutes. The ITOC may take action on any item appearing on the agenda.

This agenda and related staff reports can be accessed at www.sandag.org under Meetings on SANDAG’s Web site. Public comments regarding the agenda can be forwarded to SANDAG via the e-mail comment form also available on the Web site. E-mail comments should be received no later than noon, two working days prior to the ITOC meeting.

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**ITEM #**

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<th>ITEM</th>
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<tr>
<td>+1. SUMMARY FOR THE JANUARY 14, 2009, ITOC MEETING</td>
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<td>A summary of the January 14, 2009, ITOC meeting has been prepared for the ITOC’s review and approval.</td>
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<td>2. PUBLIC COMMENTS/COMMUNICATIONS/MEMBER COMMENTS</td>
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<td>Members of the public will have the opportunity to address the ITOC on any issue within the jurisdiction of the ITOC. Speakers will be limited to three minutes each. Committee members also may provide information and announcements under this agenda item.</td>
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<td>+3. TransNet EARLY ACTION PROGRAM FINANCING OPTIONS (Renée Wasmund)</td>
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<td>With the current liquidity instrument for $300 million of the $600 million in bonds issued in March 2008 approaching the expiration of its one-year term, several options for replacement were considered by the finance team and its advisors. This report presents a summary of the options considered and asks that the Board of Directors accept the renewal liquidity bid from JP Morgan. The ITOC is asked to recommend to the Board of Directors that they approve the staff recommendation to renew the JP Morgan liquidity proposal.</td>
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<td>+4. TransNet PLAN OF FINANCE UPDATE (Charles &quot;Muggs&quot; Stoll)</td>
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<td>In preparation for the SANDAG FY 2009/2010 Capital Improvement Program and Overall Work Program budgets, the annual TransNet Plan of Finance update has begun, and the work to date will be presented to the ITOC for discussion. This report item was not available at time of mail-out; it will be sent under separate cover.</td>
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<td>+5. TransNet TRIENNIAL PERFORMANCE AUDIT DRAFT REPORT (Cathy Brady, Sjoberg Evashenk Consulting, Inc. and Hamid Bahadori, ITOC Project Manager)</td>
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<td>A draft of the TransNet Triennal Performance Audit report will be presented to the ITOC for discussion prior to submitting it to the Transportation Committee for review in accordance with the TransNet Extension Ordinance.</td>
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<td>+6. FUTURE MEETING SCHEDULE</td>
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<td>The next ITOC meeting is scheduled for Wednesday, March 11, 2009, at 9:30 a.m.</td>
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MEETING SUMMARY FOR THE JANUARY 14, 2009, INDEPENDENT TAXPAYER OVERSIGHT COMMITTEE (ITOC) MEETING

File Number 1110200

Attendance

Committee Members:  • John Meyer, ITOC Chair  
• Kevin Cummins  
• Jesus Garcia  
• Valerie Harrison  
• Jim Ryan

Absent:  • Hamid Bahadori  
• Ron Gerow  
• Tracy Sandoval  
• Gary Gallegos

Staff:  • Kim Kawada

The meeting of the TransNet Independent Taxpayer Oversight Committee (ITOC) was called to order by Chair John Meyer at 9:30 a.m.

1. APPROVAL OF MEETING SUMMARY

Action: Upon a motion by Mr. Garcia and a second by Ms. Harrison, the ITOC approved the November 12, 2008, meeting summary.

Chair Meyer asked staff if there is a system in place to follow up on items that the members requested to be briefed on or requested a follow-up presentation to the ITOC.

Ms. Kawada stated that staff has a Follow-Up Spreadsheet (FUSS) that incorporates these types of requests from all meetings. She would discuss the concern with Muggs Stoll to ensure that it is happening for the ITOC.

Ms. Harrison stated that the ITOC also had requested that each agenda include an additional item for discussion of any follow-up items from the previous meeting.

Ms. Kawada stated that she also would discuss this request with Mr. Stoll.
2. PUBLIC COMMENTS/COMMUNICATIONS/MEMBER COMMENTS

Chair Meyer commented that this spring there would be three vacancies on the ITOC, and SANDAG has published a public notice soliciting candidates for the three open positions. He requested the members to contact anyone they know in their professional field and encourage them to apply. The application deadline is February 9, 2009. Chair Meyer stated that it is imperative to fill all three positions.

Ms. Kawada stated that staff has standard contact lists for public works directors and city managers. She stated that the notice has been posted on the SANDAG Web site as well. She stated that with ITOC concurrence, staff also would have the notice printed in local newspapers and given to other local agencies, such as Chambers of Commerce.

Mr. Garcia requested clarification on which positions would be open, and Chair Meyer stated that the open positions were finance/budgeting, right-of-way acquisition, and construction management. Chair Meyer commented that he has not decided whether to re-apply for the finance/budgeting position.

Maryam Babaki, City Engineer for National City, stated her concerns that under the current economic conditions, the Regional Transportation Congestion Improvement Program (RTCIP) fees required under the TransNet Ordinance were negatively affecting developers and local jurisdictions and causing many projects from being developed. She asked the ITOC to consider re-evaluating the requirements for these fees. She stated that the Ordinance requirements are very strict and do not allow for exceptions or waivers. Ms. Babaki commented that a senior housing project in National City with 500 units would require the developer to pay an additional $1 million in the RTCIP fees over the cost of the project. She stated that this type of project for seniors would not generate as much traffic as other typical developments, and yet would still be required to pay the development fee.

Ms. Harrison asked whether the city had considered a payment plan for the developer.

Ms. Babaki stated that the city is working with the developer, but even if the city offered a payment plan, the fees would have to be paid up front from the city’s general fund and would require a lien on the property. Liens often make it more difficult to obtain competitive financing.

Chair Meyer requested that Ms. Babaki raise this issue with the city managers association and also put these issues in writing to the ITOC so the item can be addressed at a future meeting.

3. 2008 REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM (RTIP) QUARTERLY AMENDMENT (RECOMMEND)

Sookyung Kim, Financial Programming Manager, presented the item. At its meeting on July 25, 2008, the SANDAG Board of Directors adopted the 2008 RTIP, the five-year program of major transportation projects in the San Diego region covering the period from FY 2009 to FY 2013. SANDAG processes amendments to the RTIP on a quarterly basis based on requests from member agencies. The ITOC is asked to review this amendment, focusing on the TransNet Program of Projects, and recommend approval to the Transportation Committee at its January 16, 2009, meeting.
SANDAG transmitted the draft project amendment to interested parties for a 15-day public review period. The comment period ended December 30, 2008, and no comments have been received. Ms. Kim summarized the proposed amendments and provided additional information regarding those projects included in the TransNet Program of Projects. Caltrans projects included the State Route (SR) 52 Freeway (CAL26)/Noise Barrier Program (CAL69), the SHOPP Collision Reduction (CAL46B)/SHOPP Bridge Preservation (CAL46D), and the SR 11 (CAL66) project. The City of Lemon Grove projects included in the amendment is the Street Improvements (LG13) and SANDAG projects include the Joint Transit Operations Center (SAN13)/Escondido Maintenance Facility (SAN31), Nonmotorized Projects (SAN21) – which adds the Bayshore Bikeway extension project, the Feasibility Study for MAGLEV (SAN49), and the I-15 Integrated Corridor Management Project (SAN94). Metropolitan Transit System (MTS) projects include the TransNet Expanded Service Subsidy (MTS23A) and the Mission Valley East (MVE) LRT Operating (MTS27A)/Bus & Rail Rolling Stock (MTS28). Also included in the amendment is the TransNet Smart Growth Incentive Program (V04).

Chair Meyer commented that the ITOC is receiving these reports quarterly and asked whether the amendments were such that a quarterly report was required or could the RTIP items be brought less often.

Ms. Kim stated that staff receives numerous requests for RTIP changes, and in order to keep the members up to date, staff needs to bring RTIP amendments on a regular basis. Staff has looked at the frequency and actually, a quarterly RTIP amendment is as infrequent as possible.

Mr. Cummins commented that in his opinion the ITOC should take a different perspective than recommending approval of the RTIP amendment. He stated that one alternative would be to determine that the ITOC “finds no problems with the amendment.” Mr. Cummins stated that he does not have enough information on all the projects to determine if the changes are an efficient use of tax dollars or whether ITOC members can determine that these projects fulfill TransNet requirements. He stated that Section 1C of the TransNet Ordinance stated that high priority should be given for congestion relief, and he can’t look at the project whether it fulfills or does not fulfill that requirement.

Mr. Garcia stated in the past he had questioned the percentage of use of the regional longer-distance bikeways versus local bikeways for nonmotorized projects. He stated that if the local bikeways have a higher usage, the TransNet funds should be used for those bikeways and not for the regional bikeways.

Ms. Kim suggested that for next quarterly report SANDAG bicycle planning staff could be present to discuss how the projects are prioritized for funding and specifically address Mr. Garcia’s question of bicycle usage. She stated that SANDAG staff is working on a Regional Bike Plan that is looking at different categories of bicycle facilities in the region.

Ms. Kim stated that Attachment 3, Table 2 to the report item provides the Revenue versus Program Analysis and only applies to local agencies with TransNet local street improvements in this RTIP amendment. The table also shows each city’s available balance and programmed amount for their 30 percent maintenance requirements.

Ms. Kim stated that the projects included in the RTIP amendment all have fairly routine changes, and if there were any with significant changes, she would discuss these specifically with the ITOC.

Action: Upon a motion by Mr. Cummins and a second by Mr. Ryan, the ITOC found no issues with the changes to projects in Amendment No. 2 to the 2008 RTIP.
4. OVERVIEW OF DEVELOPMENTS IN THE FINANCIAL MARKETS AND THE CALIFORNIA STATE BUDGET PROCESS (INFORMATION)

Marney Cox, Chief Economist, presented the item and stated that there have been concerns about the TransNet revenue projections due to the downturn in the economy, and staff has scheduled regular updates for the Board of Directors and the ITOC. He stated that staff is focusing on any changes that may require an adjustment to the revenue projections by SANDAG. Mr. Cox stated that recently released job numbers reflect a loss of more than 500,000 more jobs at the national level for a total loss of 2.5 million jobs during 2008. He stated this recession is now considered one of the worst since World War II and on par with the recessions that occurred in 1974-75 and 1981-82. Mr. Cox stated that over half the jobs lost were in the last four months of this year with the largest loss in November and December. Because of this, the economic outlook during the first part of this current calendar year is projected to be very weak.

Mr. Cox stated that in San Diego, we did not experience job losses every month during 2008 as the nation did; in fact, some months the region experienced growth. At the national level the losses were mostly in construction and finance, however in October, the recession broadened, and job losses were experienced in other areas such as retail services. He stated that from January through October 2008, construction employment in San Diego had not declined, showing signs of stabilizing. However, because of the acceleration in job losses nationwide at the end of the year, during November 2008 local construction employment began to decline after ten months of stability. The acceleration in job losses nationwide also has led to a rapid rise in the unemployment rate from 6.8 percent in November to 7.3 percent recorded for December 2008. A similar increase is expected locally when the data for December is released. Mr. Cox stated that locally, unemployment is at 6.9 percent, but we expect the local rate to follow the national trend to just over a 7 percent decline.

Mr. Cox stated that there is some evidence that conditions in the housing market have started to improve. Home sales have been rising, although more than 50 percent of the recent home sales were foreclosures. He stated that prices are weak and continue to fall at the local level. The drop in home prices during 2008 has been about 34 percent; overall from peak to trough the median home price is expected to decline about 50 percent. He stated that evidence now shows that over half of the units that came out of foreclosure during the first quarter 2008 are behind on their mortgage payments again. If this trend persists, it will add more foreclosures to the already saturated market, increasing the number of homes on the market and further weakening home values.

Mr. Cox stated that at the federal level there are plans and programs designed to reduce mortgage interest rates, which are now at a little higher than 5 percent. These low mortgage rates are being pushed down by the federal dollars being infused into the market.

Mr. Cox stated that we are now seeing signs that the credit freeze is beginning to thaw at the national level, and we think this is due to the Federal Reserve taking action to bypass the banks and are make funds directly available to businesses. There is evidence that that is working to help strengthen the economy. On the other hand, he stated that lending standards are getting tougher, and those consumers with lower credit rating scores in the 500 and 600 range are no longer able to purchase items on credit (like automobiles), and sales for these goods have declined 20 to 30 percent since the economic downturn started. As a result of slower sales, many retailers are being forced to lay off employees.
Mr. Cox stated the economic downturn is in line with our initial expectations and is consistent with our forecast of a 4 percent decline in TransNet sales tax revenue during FY 2009; so no adjustment to our estimate is warranted at this time.

Chair Meyer commented that car sales are down 20-30 percent and asked if staff can actually expect the 4 percent decline to hold because auto sales are such a large component of sales tax revenues.

Mr. Cox stated that auto sales are second only to restaurant sales for sales tax revenues and agreed that they are a major component. He stated nationally, programs are being designed to ensure that the trend does not worsen. He stated that the consensus forecast shows that there would be an improvement if these programs are successful.

Chair Meyer stated that any federal program would take time before the impact affected the market; usually it takes up to six months for a program to be put in place and the impacts to be seen in the market. He stated that the decline in car sales over the next six months can have a very detrimental effect on local sales tax revenues.

Mr. Cox stated that one federal program designed to stem the trend in declining auto sales is to provide money directly to those lenders that offer auto loans so they have immediate access to capital. Also, the lender can offer different financial incentives to urge more people to purchase, to offer more loans, and to encourage the consumer to trade current vehicles in for new vehicles.

Ms. Harrison requested clarification on whether the numbers presented today took into account home-based or Internet businesses because of the difficulty in tracking those types of businesses.

Mr. Cox stated that the total employment numbers tracked and reported by the state’s Employment Development Department include small businesses (like Internet consultants) and are called self-employed; other workers are classified as wage and salary employees. This self-employed component is tracked each month through a household survey. During recessions there is a great deal of movement between these two groups. A wage and salary employee may be laid off and become self-employed instead of becoming unemployed, although possibly earning less money. In San Diego, self-employed is one of the largest employment groups in the region and can have an impact on the local economy as it shrinks or grows.

Ms. Harrison asked whether black market employment was accounted for, and Mr. Cox stated that there are no records and no ability to track black market numbers.

Renée Wasmund, Finance Director, provided an update on the SANDAG variable rate bond program and the steps being taken to alleviate pressures in the market. She reviewed the performance of the variable rate bonds and stated that Dexia continues to trade at higher rates than other bond liquidity providers. Staff is considering different options for replacing Dexia. She reviewed the performance of our variable rate program versus the market benchmark and stated that we continue to trade better than the market.

Ms. Wasmund compared our variable-rate program versus a fixed-rate program and stated that SANDAG continues to experience savings due to the variable rate strategy.

Ms. Wasmund stated that as we go forward, staff continues to evaluate Dexia’s performance. SANDAG has a high rating, but the market looks at the liquidity providers because of the need for remarketing of the bonds. The market is not comfortable holding a bond where the performance of the liquidity provider is not strong. Staff met with financial consultants to strategize the best way to
go forward with our bonds. SANDAG issued a request for proposals (RFP) for a replacement liquidity provider. She stated that the RFP covered not only the Dexia-backed bonds but the JP Morgan bonds as well because that contract expires in March 2009. Staff included both the full amount of our $600 million in bonds and the $100 million commercial paper program in the RFP.

Staff will review the proposals when received and weigh the pros and cons to determine what steps to take next. She stated that there will be costs involved no matter the decision. There would be costs to terminate the current contract with Dexia and costs to enter into a contract with a new provider that may trade at a better rate. Staff is evaluating several different possible options, but until all the bids are received, there is no way to determine the financial impacts.

Ms. Wasmund reviewed how the short-term market situation will continue to be impacted by the bank liquidity market. She commented that banks are tightening their exposure to the market and the demand for liquidity is up, so costs have increased. She stated with the current market situation, there are many unknown variables, but we can expect more constraints and increased costs. Staff will continue to monitor the situation to minimize potential impacts to SANDAG programs.

Ms. Kim briefed the ITOC on the state budget crisis and the impact on transportation projects. SANDAG has been assessing the impact of the current state budget, or lack thereof, to the current ongoing transportation projects. Staff is scheduled to present this item for discussion and possible action by the Transportation Committee at its January 16, 2009, meeting, and as a result, staff is presenting this to the ITOC today.

Ms. Kim presented an overview of the impacts to transportation projects, including the TransNet Early Action Program projects, funding options, ongoing efforts, and the long-term view of the impact of the budget crisis. She stated that the state budget crisis, which began shortly after the FY 2009 budget was signed, is now posing a significant risk to ongoing construction contracts. The state is short on cash, which affects the solvency of the General Fund.

Because transportation bond-funded projects are derived from the General Fund from which bonds are issued, the condition of the General Fund affects the state's ability to meet bond-funded project commitments. The proceeds from bond sales are deposited in the Pooled Money Investment Account (PMIA), and the state uses the PMIA as a cash management tool to meet its payment obligations. As more money is needed for PMIA, bonds are issued. However, without a state budget, the state is unable to issue more bonds, and PMIA has dropped sharply. Caltrans has issued a memo that suspended award of new bond-funded contracts and has encouraged other agencies to do the same until the issue is resolved.

Ms. Kim stated that SANDAG is looking at impacts to the region’s transportation projects. The suspension of awarding new bond-funded projects affects several projects (SR 905 Unit 1B, Santa Margarita, and Pacific Surfliner). In addition to this suspension, other more immediate projects that are already in construction are at jeopardy (such as I-15 and SR 52). Ms. Kim stated that Table 1 of the Transportation Committee report lists these specific projects; projects under construction total $557 million, while projects ready to award total $177 million.

Ms. Kim stated that suspension of projects means that aside from individual contractors’ work being affected, there are costs to the region as suspending current construction contracts is not free; there are many costs associated with suspension. Caltrans has estimated costs associated with the suspension for the construction projects would total approximately $19 million. This cost includes
preparing sites for suspension, demobilization and remobilization, for delays and other potential claims, and also a monthly cost associated with maintaining the site.

Ms. Kim stated that there are other options short of total suspension. The option recommended by staff is a cash management option. With this option, SANDAG would use existing non-bond funds, both federal and TransNet within each corridor to keep projects moving. This would keep projects on track for about five to eight months, depending on the contract and allow the time to wait for the state to resolve the budget situation and attempt to issue more bonds. The risk is that at the end of the five to eight months, projects would be short of funds if no state budget is enacted. Ms. Kim stated that to implement this option, we need California Transportation Commission (CTC) approval in order to move bond funds to projects not originally bond funded. If this proposal is approved by the SANDAG Board, staff will seek CTC approval in late January. Concurrently with seeking CTC approval, staff will be seeking Federal Highway Administration approval for funding projects that already have been awarded with different non-federal funding.

Ms. Kim stated that at this time, contractors are at risk of not getting paid. Also even after the CTC approves the use of bond funds, up to $20 million in TransNet funds may be required every month for cash flow purposes to continue paying ongoing costs. Staff is talking with the contractors to get their agreement to work without pay or for limited pay with some assurance that funds are on their way. Another option being considered is to slow down some work in order to continue operations at reduced levels without shutting down the project. Caltrans and the contractors are assessing the practicality and cost of these options.

Ms. Kim stated that one other funding possibility if the state cannot resolve its problems before the eight months are up could be the federal economic stimulus program. We are working to see if these funds could replace the unavailable bond funds, with the understanding that when bond funds return, the CTC would re-program them on other regional priorities. She stated that the region also could consider additional regional borrowing, but with current market conditions, issuing new bonds is very risky.

Ms. Kim stated that staff is updating the TransNet Plan of Finance (POF) as part of an annual process. Staff also will continue working to develop more refined potential long-term impacts. This item will be discussed with the Transportation Committee and presented to the Board of Directors for approval. Staff will be working with the CTC to move bond funds through its various bond programs (CMIA, STIP, TCIF) to non-bond projects. Upon approval, these actions will be reflected with an amendment to the RTIP. Ms. Kim stated that any significant comments from the ITOC will be provided to the Transportation Committee and the Board of Directors.

Ms. Harrison requested clarification that the funds being transferred included TransNet funds and whether the formal action would be brought back to the ITOC for their approval.

Ms. Kim stated that the TransNet funds would be used to backfill those bond funds that are moved out of the project. The action would take an RTIP amendment with specific funding for each project identified and that would require approval.

Jack Boda, Director of Mobility Management and Project Implementation, stated that staff will be implementing the cash management option on a corridor basis so funds would only be moved within each corridor.
Mr. Garcia stated that the worst consequence would be that the non-bond project would run out of money, and Mr. Boda confirmed that it was a possibility.

Chair Meyer stated that if this plan is going to the Transportation Committee for approval and includes the use of TransNet funds, it should be an action item for the ITOC as well.

Ms. Wasmund stated that staff is not proposing to take funds out of a project, only to move funds within each corridor. This action is not a budget action and does not increase the amount of funding being used for each corridor.

Discussion ensued regarding the approval process for use of TransNet funds, the use of TransNet funds to keep projects moving, and the need for quick action in this particular instance to ensure cash flow. Staff confirmed that no changes to the TransNet program would be made without ITOC approval in the form of an amendment to the RTIP.

Mr. Garcia asked whether staff had considered the option of slowing the delivery of projects. Mr. Ryan commented that slowing projects might decrease the amount of payments, but the contractors would still need to be paid. The only other option would be to shut down the project completely.

Mr. Boda stated that contractually the contractor does not need to alter delivery of the project. They have a contract specifying dates for delivery.

Chair Meyer stated that slowing or shutting down projects would increase the total project cost immensely due to expenses for equipment leases, demobilization, remobilization, and other costs associated.

Ms. Kawada asked the ITOC if they had any specific comments to present to the Transportation Committee, and Chair Meyer stated that he would like staff to tell the Transportation Committee that the ITOC will do their best to protect TransNet funding and interests, but would support the recommendation in order to keep projects moving forward to avoid demobilization and suspension costs.

Mr. Cummins stated that the report doesn’t review all the options that could be considered; it only addresses the cash management option. He stated that he would recommend putting forward all options to the Transportation Committee and the expected costs involved with each so the Transportation Committee can weigh all options. He commented that the root of the issue is the state budget and until that situation is resolved, we won’t know if the situation will improve or worsen.

Ms. Kawada reviewed the current state budget situation and some of the recommended solutions put forth by the legislative leadership. She stated that we continue to look at what we can do as a region to ensure that the impact is less and projects can continue.

Mr. Cummins stated that there are some big issues that have not been addressed if the state budget situation continues for several more months. He stated that the impacts to TransNet presented now are short term and stated that staff needs to look at long-term impacts and present those to the ITOC.
Ms. Wasmund stated that staff is working on a second alternative if the state pushes the bond funds out two years. She stated that staff will look at how that would affect our POF and TransNet program and how soon SANDAG would have to enter the financial market to borrow to backfill any delayed funding.

Mr. Boda stated that if we move forward with the cash management option and backfill with federal economic stimulus funds, SANDAG is asking CTC for assurances that when the bond money comes back, it is directed to other regional priorities.

Mr. Garcia requested clarification regarding how long projects can be funded under the cash management option. He also asked staff to discuss the plan for funding if the federal stimulus package does not come forward.

Mr. Boda stated that each corridor has its own cash flow and is affected differently; each corridor’s funding is displayed in the table in the report.

Ms. Wasmund stated that if the stimulus funds do not come through, one option is to slow down projects or not begin new projects.

Mr. Boda stated that the situation is very fluid at this time, and there are many different scenarios that could occur. He stated that SANDAG would like some indication from the ITOC that they support staff’s basic strategy.

Mr. Cummins stated that the ITOC would support the strategy, but stated that staff should be prepared to brief the ITOC at a special meeting if any significant developments occur or if changes to the funding proposal affect TransNet.

**Action:** Upon a motion by Mr. Ryan and a second by Mr. Garcia, the ITOC stated their support for the staff strategy based on the information provided at this time. (Mr. Cummins abstained.)

5. **OVERVIEW OF THE DESIGN SEQUENCING PROCESS (INFORMATION)**

Allan Kosup, Caltrans Corridor Director, presented the item. He stated that he would compare design sequencing to other project delivery methods and define exactly what it is and when it is used. He stated that he would define risks and benefits and highlight projects that have used design sequencing in the region.

Mr. Kosup reviewed the goals of innovative contracting tools, such as design sequencing, which seek to reduce owner risks and accelerate project delivery. Innovative contracting focus areas include procurement, project development, construction duration, and quality of the project. Mr. Kosup stated that depending on the focus areas, the delivery and procurement method is chosen. Different innovative delivery and procurement methods include design-bid-build, design sequencing, construction management at risk, design build, and job order contracting.

Mr. Kosup briefed the ITOC on the details and background of design sequencing. He stated that the vision and purpose of design sequencing is to allow overlap of construction activities with ongoing design of the project in order to accelerate delivery by as much as 12 months. Design sequencing also promotes collaboration with the contractor.
Design sequencing eligibility criteria include limited public controversy, utility conflicts identified, final environmental clearance and all permits received, the project is fully funded, and project selection on a statewide basis is delegated to the Caltrans Director.

Mr. Kosup reviewed a list of design sequencing pilot projects in the region and the status of each. He stated that there are many different types of projects that use design sequencing.

Mr. Kosup stated that there are risks when using design sequencing. These risks include the implementing agency’s falling behind in delivering subsequent stages to the contractor, an increase in claims because new information results in change of character of the work, additional costs required to address revisions, and because it is a new project delivery method, it takes time to be understood by all the players.

Gustavo Dallarda, Caltrans Corridor Director, briefed the ITOC on the details of how design sequencing was used for the I-15 Unit 1 project and for the SR 76 project. He described the different design stages and how construction and planning worked together.

Mr. Cummins asked whether there was enough detail in the plans that only minor changes are needed that didn’t affect the total bid or did Caltrans see the need for major changes in plans that affected the project bid price significantly.

Mr. Dallarda stated that the trend was toward more change orders, but those happen with any project. He stated that there are dispute procedures in place for any significant changes, but most often the situation does not significantly affect the total cost of the project. He stated that there are a higher number of change orders due to the design sequencing process, but this is not necessarily a negative issue. The question is whether they result in bigger claims, and that has not been determined.

Mr. Garcia requested clarification on what percentage of the total cost of the project was included within the first sequence of the I-15 project, and Mr. Dallarda stated that for this project the percentage was probably high due to the number of bridges included in the first stage.

Mr. Dallarda continued his briefing and stated that the benefits of design sequencing are faster delivery, higher level of excitement due to an innovative project, added flexibility to Caltrans processes, such as the right-of-way acquisition component, and co-location of construction and design staff. Co-location was necessary to reduce costs so that information could be provided in a timely manner.

Mr. Kosup stated that there are 10 to 15 design sequencing projects throughout the state, and initial findings show a significant time savings. He stated that the capital cost is similar to traditional methods and while the support costs are greater for design sequencing, they are being offset by escalation savings due to earlier project delivery.

Mr. Kosup stated that lessons learned locally are that projects are being bid at approximately 70 percent completeness in design, and there is limited opportunity for contractor input. He stated that they also are seeing higher contingencies to address changes in quantities and in character of the project.
Chair Meyer asked whether Caltrans intended to change contingencies based on the level of plan design at bid, and Mr. Dallarda stated that contingencies are based on risk so the less design in the plan, the higher the risk and the greater the contingency.

Mr. Kosup stated that Caltrans does a cost certification to assess the risk that may be involved when the project goes to bid in order to determine contingencies. He stated that Caltrans has learned that the level of risk is greater for projects that involve acquisition and utility relocation. Also, the design has to be in sufficient detail at the time of bid for the contractor to assess the construction method.

Mr. Kosup stated that Caltrans is working on extending the legislative authority for design build beyond the pilot program, which ends December 2009. Also we are building on experiences and lessons learned and will continue improving the process. He stated that design sequencing is a good tool in appropriate situations and can be used to achieve aggressive delivery of projects.

Mr. Cummins asked if there were economic stimulus projects that would benefit from design sequencing, and Mr. Kosup replied that there are several candidate projects included on the economic stimulus list, and each one is different. Several of the projects would be good candidates because they could be put to bid with less detailed plans.

Action: This item was presented for information.

6. QUARTERLY REPORT ON TransNet MAJOR CORRIDORS PROJECTS (INFORMATION)

Richard Chavez, Principal Engineer, presented the item and provided an overview of the TransNet major corridors projects in terms of project cost control and schedule adherence and the general trends that affect both cost and schedule. This overview fulfills the ITOC requirement defined in the TransNet Ordinance to review the major corridor projects on a quarterly basis. The major corridors projects are designed to enhance mobility along the corridor and provide congestion relief. A total of $364 million of construction contracts was awarded in 2008 for this TransNet program. Additional research is necessary, but this total is believed to be the largest total in the history of TransNet.

The SANDAG TransNet project office monitors the major corridors projects. Project expenditures are tracked against Board-approved budgets, and critical-path project schedules are compared against baseline schedules. The project office assesses trends that affect the cost and schedules of the projects and recommends solutions. The project office operates and maintains the TransNet Dashboard reporting system that provides cost, schedule, and trend information for projects. The Dashboard can be accessed at www.KeepSanDiegoMoving.com.

Mr. Chavez listed the major corridors projects currently being monitored and stated that projects 7 through 11 are not included in the Dashboard at this time. Work is underway to add these projects in the near future.

Mr. Chavez reviewed the adherence to schedule and stated that the open-to-traffic/open-for-service dates remain on schedule for the majority of the major congestion relief projects. He summarized project schedule challenges and risks.

Chair Meyer asked if any of these projects would be affected by the current state budget crisis and funding problems.
Mr. Chavez stated that it is too early to know, but most likely some of the projects funded by bond dollars could be affected. He stated that staff is looking at different cash flow scenarios to the POF and is trying to determine both the short and long-term impacts. He stated the current situation is dynamic because of the state budget constraints, but also because of the possibility of the federal economic stimulus package.

Mr. Chavez stated that the cash flow charts from the Dashboard can be found in Attachment 1 to the report. These charts indicate that the actual expenditures are tracking closely against budgeted amounts for most projects.

Mr. Chavez stated that his presentation would focus on trends. He reviewed the trends in prices for roadway excavation, aggregate base, asphalt concrete, concrete pavement, and structural concrete and the impact of these trends to the overall cost of project bids.

Mr. Chavez stated that the Caltrans Construction Cost Index shows a small increase from the previous quarter as shown in Attachment 2 to the report. The 12-month index is up 5.4 points to 241.1 for the third quarter of 2008 compared to the second quarter of 2008, when the index was at 235.7. The second quarter was adjusted down from 240.0 as last reported. The 12-month index is down a total of 100.1 points from its all-time high of 341.2 during the second quarter of 2007. Comparing the index back to 2002, the cost index has increased 53 percent. TransNet major corridors projects costs were estimated in 2002 dollars when the TransNet Extension Ordinance was originally prepared.

The average number of bidders on Caltrans projects over $5 million shows a small increase over the previous quarter. The average number of bidders is a good indication of the level of competition for transportation project construction work. More competition usually means better bid prices. The average number of bidders is up 0.3 points to 6.0 for the third quarter of 2008 compared to the second quarter of 2008, when the average number of bidders was 5.7. The average number of bidders is up a total of 2.8 points from a low of 3.2 bidders experienced during the third quarter of 2006.

Mr. Ryan asked whether SANDAG was still experiencing heavy competition in bids from contractors, and Mr. Chavez replied yes.

**Action:** This item was presented for information.

7. SAN DIEGO REGION ECONOMIC STIMULUS PROPOSAL (DISCUSSION)

Dan Martin, Project Implementation Program Manager, presented the item. He stated that recent actions by the federal government have focused on initiating programs to stimulate the nation's economy. There have been ongoing discussions at the federal level of a possible economic stimulus package that would create jobs and deliver needed infrastructure to nation. SANDAG staff has been working with agencies within the San Diego region to develop an economic stimulus proposal that includes both transportation and public works projects that could be implemented over the short term.

Mr. Martin provided copies of the report from the December 19, 2008, Board of Directors meeting for potential discussion by the ITOC. He reviewed the development and outreach efforts to date. He stated that Congress is considering an infrastructure stimulus package that would create jobs and deliver needed infrastructure to the nation.
SANDAG staff has been working with our partners within the San Diego region to develop a comprehensive economic stimulus proposal.

Mr. Martin provided an overview of the development of the proposal and a high level summary of the projects contained within the proposal. He stated that projects considered include those that are “Ready to Go,” can advertise in 6 months, and can advertise in 12 months. The proposal includes both transportation projects and public works projects. The transportation projects include highway, transit, local streets and roads, and bikeways. The public works projects include, but were not limited to, sewer, water, storm drain, buildings, parks, recycled water, photovoltaic systems, and flood control.

Mr. Martin stated that in early November, SANDAG staff worked with the 18 cities, County, Caltrans, MTS, and North County Transit District to develop a list of transportation projects. In mid-November, the list of projects was expanded to include public works projects, and additional outreach was made to other agencies in the region, including the San Diego County Water Authority to develop a comprehensive proposal. All projects submitted by each agency have been included in the proposal.

Mr. Martin stated that in the first part of December, SANDAG staff conducted an economic analysis to evaluate the economic impacts that may result from implementing the projects included in the proposal. The results by the numbers were shown on page 3 of the report. Mr. Martin stated that a total of 1,043 projects were submitted for the region, with an estimated cost of approximately $7.5 billion to construct. In total, the projects would create approximately 96,000 jobs that receive more than $5 billion in wages. Mr. Martin stated that overall the construction of these projects would increase the San Diego region’s gross metropolitan product by nearly $12 billion.

Mr. Martin reviewed the table showing a breakdown of project costs by program and delivery schedule. The proposal includes a balance of project types; approximately one-third of the project costs are in the highway program, with another one-third in local public works. The remaining third consists of transit and local transportation.

Mr. Martin stated that the projects ready to advertise within six months account for approximately 50 percent of the project costs. The proposal includes maps and project listings for each program in its respective schedule for delivery. The proposed program also is summarized in a map that shows the total project costs, jobs added, and wages added for each Congressional district; this map can be found on page 5 of the report.

Mr. Martin stated that a copy of the proposal can be found online at www.sandag.org/stimulus. The projects shown are critical to the future of mobility in San Diego County and are included in the region’s overall transportation strategy. The proposal is intended to inform and educate the regional decisionmakers.

Mr. Martin stated that the next steps will be to continue to work with the region to enhance project information, to maintain a comprehensive list of projects, and to partner with Caltrans and National Association of Regional Councils to incorporate the regional projects on the statewide list.

Mr. Garcia asked whether the list of projects included those for the City of San Diego, and Mr. Martin stated that SANDAG encouraged the City to submit their projects not only to SANDAG, but to partner with any other state or national agencies as well.
Mr. Boda stated that SANDAG has worked with the San Diego Regional Chamber of Commerce and the San Diego Regional Economic Development Corporation, as well as other organizations to develop this very comprehensive list of projects.

Mr. Garcia requested clarification on whether there would be an earmark for the funds or how they would be distributed, and Mr. Boda stated that there would be no earmarks according to the Obama administration.

Mr. Cummins asked what if any advantage did staff gain by separating projects on the maps based on Congressional districts.

Ms. Kawada stated that when the maps were developed, staff wanted to ensure that our Congressional delegation was aware of our needs and show that we are supportive of the stimulus package as a region. We wanted to show the various types of projects within each of their districts to get their support for the federal economic stimulus package.

Mr. Cummins requested clarification regarding the fact that staff presented this as a comprehensive list, but is still entertaining other projects for inclusion.

Mr. Martin stated that staff initially focused on specific projects and then as the list developed, other agencies have approached us with other types of projects, such as public works projects, that are similar and fit into the parameters. We have included those projects and continue to receive requests. The list of projects will continue to develop as we learn more details of the federal stimulus program as well. The Board of Directors accepted the list as a starting point and directed staff to continue with its development.

Chair Meyer commented that these projects are supposed to be ready to go, but the language in the proposal includes projects ready in the short-term. For example, the some projects are not even close to ready because they are still environmentally contentious.

Mr. Boda stated that SANDAG accepted some projects from the San Diego County Water Authority based on its recommendation, but staff has not screened the projects provided. He stated that staff looked at projects that are ready to go in the short term, as well as those that could be ready to go within a year. He stated that the stimulus program is still in development, and until we know the details, the strategy is to be prepared with all projects included.

Chair Meyer expressed his concern that SANDAG and the region need to have a credible list of projects that fit the criteria of ready to go to ensure we are competitive.

Ms. Kawada stated that the list we submit will still be put under scrutiny by our legislators and others. She stated that there may be timeframes for how quickly stimulus dollars would need to be spent, and our list of projects could be split between a shovel-ready program and a ready-to-go program within 12 months.

Mr. Garcia asked whether SANDAG would submit our list of projects directly to Washington, DC for the federal package, or are there plans to be included in the statewide package.

Mr. Boda stated that it had not been decided at this time. SANDAG will continue to work with the state and other agencies and be ready to respond with the best possible package and best method to be competitive.
Mr. Cummins asked whether the list of projects would return for final approval once the economic stimulus package is released.

Mr. Boda stated that the final list of projects would require approval from the Board of Directors. He stated that the major transportation projects listed are included in the Regional Transportation Plan.

**Action:** This item was presented for discussion.

8. **FUTURE MEETING SCHEDULE**

The next ITOC meeting is scheduled for Wednesday, February 11, 2009, at 9:30 a.m. Chair Meyer stated that if there are any significant updates for Item 4, the ITOC would have a special meeting.

9. **ADJOURNMENT**

Chair Meyer adjourned the meeting at 12:23 p.m.
San Diego Association of Governments - TransNet Program

INDEPENDENT TAXPAYER OVERSIGHT COMMITTEE

February 11, 2009

AGENDA ITEM NO.: 3

Action Requested: RECOMMENDATION

TransNet EARLY ACTION PROGRAM FINANCING OPTIONS

With the current liquidity instrument for $300 million of the $600 million in bonds issued in March 2008 approaching the expiration of its one-year term, several options for replacement were considered by the finance team and its advisors. This report presents a summary of the options considered and asks that the Board of Directors accept the renewal liquidity bid from JP Morgan. The ITOC is asked to recommend to the Board of Directors that they approve the staff recommendation to renew the JP Morgan liquidity proposal.

**TransNet EARLY ACTION PROGRAM FINANCING OPTIONS**

**Introduction**

In December 2005, the Board of Directors approved a TransNet Extension financial strategy for implementing the Early Action Program (EAP) of projects and for fulfilling ongoing commitments for the existing TransNet program. The financial strategy approved by the Board included expanding the existing commercial paper program from $135 million to $335 million (to provide cash flow until the bonds were issued), locking in low interest rates through an interest rate exchange agreement (swap), and issuing $600 million of long-term variable rate debt in March 2008. The strategy has been executed, and has resulted in significant progress on the EAP projects in the last three years.

This item is being discussed with the Independent Taxpayer Oversight Committee (ITOC) at its February 11 meeting. Any comments will be brought to the Board of Directors for consideration.

**Recommendation**

The Board of Directors is asked to authorize the Executive Director to amend the current agreement with J.P. Morgan to renew the liquidity facility on Series A and B bonds for 364 days through March 25, 2010, at a rate of 105 basis points (1.05%).

Monthly reports have been provided to the Board since October 2008 providing the status of the financial market, and the steps we are taking to minimize any potential impact on SANDAG. As reported previously, and as discussed in the attached memo from PFM (Attachment 1), the J.P. Morgan liquidity facility (supports the Series A and B bonds) expires at the end of March 2009. Additionally, although the Dexia facility (supports the Series C and D bonds) doesn’t expire for another 4 years, we’ve been exploring our options with respect to replacing Dexia which would result in a reduction of our borrowing costs. The current cost of the J.P. Morgan liquidity facility is 20 basis points and the current cost of the Dexia liquidity facility is 22.5 basis points. A Request for Quotes for replacement liquidity facilities was issued in January to 22 banks. The only bid received was from J.P. Morgan to renew its facility for another 364 days at a cost of 120 basis points. Upon further negotiations with J.P. Morgan, it agreed to reduce its bid to 105 basis points.

This bid is 85 basis points higher than the current J.P. Morgan facility, but is reflective of the current environment. We considered another option which would involve issuing a one-year bond anticipation note which would allow us to convert $300 million of our variable rate debt into a short-term fixed rate for one year. Following are the pros and cons associated with both options:

**Renewal of J.P. Morgan Liquidity Facility:**

**Pros:**

- Despite the volatility in the banking sector and credit markets in general, J.P. Morgan-supported variable rate bonds are trading near all-time record lows.

- Continues business relationship with a highly rated credit provider in an environment where credit is extremely tight, thereby increasing our options for renewal.
Cons:

- Renewal fee is 85 basis points higher than the current agreement, thereby increasing the cost of borrowing.

One-year Bond Anticipation Note:

Pros:

- Does not require a liquidity facility, thereby saving the additional 85 basis points.
- Potentially lower cost of borrowing (current one year note rates are 93 basis points, but are on the rise).

Cons:

- Cost of borrowing is not locked in until closing at the end of March which means we are exposed to interest rate risk until that time. Since the J.P. Morgan renewal bid will no longer be available (bid expires 2/13/09), even if the rates are not attractive at that point, we would have no choice but to execute the transaction at whatever the one year note rate is at the time.
- Necessitates a second transaction in one year to either reenter the variable rate bond market, or sell another one year bond anticipation note. Both of these transactions carry their own risks. Reentering the variable rate market would again require a liquidity facility and given our current experience it is unclear what the availability will be in one year for liquidity facilities. Selling another one year bond anticipation note a year from now exposes us to interest rate risk.
- Requires a significant modification to the default provisions of the trust indenture which if in the unlikely event we were unable to refund the notes at the end of one year, would mean SANDAG would be in default and could trigger a cascading default which would impact the entire capital structure (including the interest rate swaps).

We are recommending that we continue with our current variable rate strategy and renew the J.P. Morgan liquidity facility for the Series A and B bonds at 105 basis points, and maintain the Dexia liquidity facility for the Series C and D bonds. While this means that we will be trading higher than what we expected when we initially executed this strategy, it is on average approximately 80 basis points lower than current traditional fixed-rate bonds. Since issuing the bonds 45 weeks ago, SANDAG has saved over $5.5 million as compared the cost if we had issued fixed rate bonds. It is important to remember that our strategy is a long-term one, and this liquidity renewal is only for one year. After the end of one year, we will again examine our options and the pricing of those options. In addition, in our opinion, this strategy carries less overall risk to SANDAG than issuing a one year bond anticipation note, given the current market environment. Because of the extraordinary conditions of the market, the program will continue to require ongoing monitoring and adjustments to reflect the most advantageous and cost-effective approach for SANDAG.

GARY L. GALLEGOS
Executive Director

Attachment: 1. Memo from Public Financial Management

Key Staff Contact: Renee Wasmund, (619) 699-1940; rwa@sandag.org
February 2, 2009

Memorandum

To: SANDAG
From: Keith D. Curry; Public Financial Management
Re: Renewal of Liquidity for 2008 Variable Rate Bonds

As you are aware, in February 2008, SANDAG solicited underlying liquidity support for its then-expected issuance of $600 million in Variable Rate Demand Bonds (VRDBs).

At that time, SANDAG received multiple and aggressive bids for its credit support. One half of the program was placed with Dexia Bank at a rate of 22.5 basis points per annum for a period of five years.

The second half of the program was placed with JP Morgan at a rate of 20 basis points per annum for a period of 364 days. Because the JP Morgan facility will expire in March, 2009, it is necessary to renew or replace this facility.

In the past year, there has been an unprecedented change in the credit support market. Many major international banks have been downgraded or pulled out of the market and the remaining participants have sharply curtailed their initiation of new facilities. All major bond insurers except FSA and Assured Guaranty (which is acquiring FSA), have been downgraded and no longer compete effectively in the municipal market.

In addition, the disintegration of the Auction Rate Bond market has sent billions of Auction Rate issuers in search of new bank liquidity or credit support.

The net impact of this has been a scarcity of bank liquidity support and pricing that is unprecedented in terms of its increase.

In December, SANDAG in consultation with PFM and its investment banking team solicited for new liquidity bids for the purpose of renewing/substituting the JP Morgan commitment upon its expiration, and to consider the option of replacing the Dexia liquidity early given the trading differential resulting from credit downgrades at Dexia. Dexia also provides credit support for the SANDAG commercial paper program.
Twenty-two banks were solicited and encouraged to bid. Only JP Morgan provided a bid to renew its facility for a period of 364 days. The bid would increase the annual cost of the JP Morgan facility from 20 basis points to 105 basis points or $2.55 million on $300 million of bonds. (The actual increase will be somewhat less since the bonds begin to amortize this year.)

In light of this bid, the SANDAG finance team considered other options, the most likely of which would have been to issue a one-year bond anticipation note that would not have required credit support. This approach would have eliminated the bank liquidity charge, but would have required SANDAG to incur costs of issuance and be committed to undertaking a second transaction in one year to refund the notes. In light of the costs involved, the risk in necessitating a second transaction in 2010, and the ongoing uncertainty in the credit support markets, SANDAG has elected to maintain the JP Morgan liquidity and to closely monitor this situation.

It is expected that as the banking system continues to improve under Federal stimulus and oversight, additional liquidity and more competitive pricing will be available in the future.

On a positive note, the JP Morgan supported bonds are trading near all-time record lows. The remarketing for the week of January 26 was at 0.15%.

The higher liquidity fee would suggest that the two tranches of the SANDAG capital program supported by JP Morgan would trade at the sum of the swap rate and the liquidity/remarketing cost or 4.52% and 4.93% respectively for 2009. While this is higher than the expected synthetic fixed rate at the swap rate, it is on average approximately 80 basis points lower than a traditional fixed rate bond cost, saving approximately $2.4 million annually over traditional fixed rate bonds.

As we have noted in prior discussions of the international financial crisis, SANDAG continues to maintain a lower cost of capital and to be able to successfully negotiate these unprecedented circumstances.

We are continuing to monitor the situation with Dexia and the credit support markets in general to identify additional measures to reduce cost and risk associated with the SANDAG debt portfolio.

In light of the upcoming expiration, it is important that SANDAG take steps to renew the JP Morgan liquidity facility prior to March 26, 2009.

Please feel free to contact me should you have any questions.
TransNet EARLY ACTION PROGRAM FINANCING OPTIONS

A recently developed financial proposal that will be taken to the SANDAG Board of Directors Policy meeting on Friday February 13, 2009, is attached to this item. It involves a potential opportunity to modify two-thirds of the existing interest rate swaps for the TransNet program in order to take advantage of unusual current market conditions.

Attachment: 2. Draft Board of Directors Item 2A for the February 13, 2009, meeting
PROPOSED AMENDMENT TO TransNet EXISTING INTEREST RATE SWAPS

File Number 1110200

Introduction

The current market conditions have created an unusual situation that may be an opportunity for SANDAG to lower its borrowing costs by amending two of the three existing TransNet interest rate swaps.

Discussion

On November 22, 2005, SANDAG executed three 30-year floating-to-fixed interest rate swaps of $200 million each. The swaps were entered into in order to lock in historically low interest rates in advance of issuing $600 million of variable rate demand bonds. The swaps are designed to hedge the variable rate bonds to a fixed rate. The swaps are working as designed and have resulted in a borrowing rate of approximately 4.2 percent, realizing a savings to date of $5.7 million compared to borrowing at a fixed rate. An opportunity has presented itself that could further reduce our cost of borrowing beginning in 2018. The attached memorandum (Attachment 1) from SANDAG’s financial advisor, Public Financial Management (PFM), explains the potential amendment to the two swaps. PFM staff will be present at the February 13, 2009, Board of Directors meeting to review the proposed strategy.

Recommendation

The current market conditions have created an unusual situation that may be an opportunity for SANDAG to lower its borrowing costs by amending two of the three existing TransNet interest rate swaps. The Board of Directors is asked to concur with the recommendation from our financial advisor, Public Financial Management, to solicit interest to possibly amend the existing interest rate swaps.

Board Policy No. 032, “San Diego County Regional Transportation Commission Interest Rate Swap Policy,” establishes guidelines for the use and management of interest rate swaps. The policy will be used as guidance for any recommended swap amendments.

Next Steps

With the Board of Directors’ approval, staff will issue a Request for Quotes to determine the financial feasibility of amending the swaps. We will provide an update and recommended action to the Board of Directors at the February 27, 2009, meeting.

GARY L. GALLEGOS
Executive Director

Attachment: 1. Memorandum from PFM dated February 9, 2009

Key Staff Contact: Renée Wasmund, (619) 699-1940, rwa@sandag.org
Memorandum

To: SANDAG

From: Andrew McKendrick, PFM Asset Management LLC

CC: Keith Curry, Public Financial Management, Inc.

Re: Benefit of amending an existing hedge related to 2008 Trans Net II financing by the overlay of a SIFMA/LIBOR basis swap

Introduction

An interesting opportunity has appeared in the market for the swaps used as part of the existing $600,000,000 long-term financing. PFM suggests SANDAG consider an amendment to the existing transactions to take advantage of the market’s unusual moves during the recent turmoil in order to reduce the cost of that financing. SANDAG should reasonably expect, based upon historical relationships, that the amendment would on average generate 136 basis points of annual cash flow benefit beginning in 2018 on the outstanding debt (136 basis points would be $2,130,000 in 2018 for each of the two, then $156,600,000 bond issues), and the likelihood of being worse off in the future as a result of entering this transaction is extremely low.

On November 22, 2005, the San Diego County Regional Transportation Commission (“SANDAG”) executed three floating-to-fixed interest rate swaps (the “Swaps”). The Swaps were entered in anticipation of the issuance of $600,000,000 2008 variable-rate TransNet II Bonds issued early in 2008. The Swaps are designed to hedge the variable rate bonds to a fixed rate and together form a “synthetic fixed rate” financing. The hedge was done as three swaps of $200,000,000 each.

The first executed transaction is a $200,000,000, 30-year, floating-to-fixed swap with Bank of America under which SANDAG pays a fixed rate of 3.41% and receives 65% of 1-month LIBOR. The other two executed transactions are each $200,000,000, 30-year, floating-to-fixed swaps with Goldman Sachs Mitsui Marine Derivative Products and Merrill Lynch Capital Services under which SANDAG pays a fixed rate of 3.8165% and receives 65% of 1-month LIBOR for the first 10 years of the swap (April 1, 2008 to April 1, 2018) and receives the SIFMA Municipal Swap Index for the last 20 years of the swap (April 1, 2018 to April 1, 2038). Appendix A lists further details and includes graphics of the cash flows.

In 2005, the financing team, consisting of advisors, banks and SANDAG staff, determined to take tax risk on some of the hedge by using a 65% of LIBOR swap for the full maturity of the Bank of America swap and for the first 10-years of the Goldman Sachs and Merrill Lynch swaps in order to reduce the fixed rate payable by SANDAG under each swap. Tax risk is the risk that income tax rates will be lower in the future causing the receipt on the variable side of a % of LIBOR swap to be less than the payment on the hedged tax-exempt variable rate debt.
Market

The recent market turmoil has created an interesting opportunity for SANDAG given the structure of the Swaps with the SIFMA index during the latter years. As illustrated in the graph below, the market traded ratio between LIBOR swaps and SIFMA swaps has increased dramatically due to a number of factors, including a lack of liquidity, a breakdown in the similar markets for fixed rate taxable and tax-exempt bonds and the bankruptcy of Lehman Brothers, which has created an imbalance in the SIFMA swap market relative to the LIBOR swap market. This allows SANDAG to effectively amend the existing SIFMA swaps to LIBOR by overlaying a SIFMA to LIBOR basis swap, which would significantly reduce the costs of the financing after 2018, assuming a return to normal, or even near to normal trading relationships.

![Ratio of SIFMA to LIBOR swap rates by maturity](image)

Typically, SIFMA to LIBOR ratios are higher for longer maturities than they are for shorter maturities as illustrated both in the chart above, which is beneficial to the pricing of the proposed change.
Basis Swaps
SANDAG could take advantage of the current SIFMA/LIBOR relationships by executing a SIFMA versus LIBOR floating-to-floating or “basis” swap. The combination of the basis swap and the existing swap would effectively amend the existing swaps without having to actually change the existing floating-to-fixed interest rate swaps. This overlay would allow SANDAG to bid out the new transaction to a group of potential counterparties without changing the existing hedges.

In the current market for basis swaps of that particular maturity SANDAG could enter a new transaction with a payment of the SIFMA index, and receive 98.3% of 1-Month LIBOR.

The expected benefit to SANDAG would be a substantial reduction in the cost of the debt after 2018. Assuming current income tax rates, PFM expects that on average and over time, the Bonds will trade at approximately 65% of LIBOR so the expected excess payment on the hedge to SANDAG would be 33.3% of LIBOR.

Based upon the historical performance shown in Appendix B and expectation for a similar differential in future performance, PFM would expect that on average the benefit to SANDAG would be similar to historical levels. Current market pricing is less attractive than it was in late 2008, as illustrated by the decline on the chart on page 2 from the recent higher levels. PFM would be cautious about choosing a target level that is relatively “safe” such as 100% of LIBOR or better.

Risk
In exchange for these expected savings, SANDAG would be accepting tax risk, but would be doing so at levels that imply no income taxes in future years, due to the current market anomaly. We use a % of LIBOR as a proxy for tax-exempt debt. Historically, 67% of LIBOR has approximately equaled SIFMA and 65% of LIBOR has approximately equaled the rate paid on SANDAG variable rate bonds. By entering the basis swap at SIFMA vs. 100% of LIBOR, the expectation is that even if marginal income tax rates are substantially reduced, SANDAG would not be worse off by having made the change. Appendix C contains risk analysis for one of the two possible basis swaps.

Conclusion
The current market turmoil creates an opportunity for SANDAG to effectively amend the existing fixed payer swaps in place for the TransNet II financing by entering a basis swap that will effectively change the future receipt of the Swaps from SIFMA to a high percentage of LIBOR. The expectation, based upon the historical benefit of this basis swap (136 basis points), would be for a $2,210,000 annual cash flow benefit beginning in 2018 for each of the two, then $156,600,000 bond issues. If the market moves so that this basis swap can be done at 100% of LIBOR, this is a good level to enter such a transaction and provides substantial likely benefit with limited downside risk to SANDAG.
Appendix A

Structure of current swaps

On November 22, 2005 SANDAG executed the following three (3) interest rate swaps. The terms of the transactions are outlined below:

1. Floating-to-fixed Interest Rate Swap

<table>
<thead>
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<th>Notional Amount:</th>
<th>$200,000,000</th>
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<tbody>
<tr>
<td>Effective Date:</td>
<td>April 1, 2008</td>
</tr>
<tr>
<td>Maturity Date:</td>
<td>April 1, 2038</td>
</tr>
<tr>
<td>SANDAG Pays:</td>
<td>3.41% (monthly, 30/360)</td>
</tr>
<tr>
<td>SANDAG Receives:</td>
<td>65% of USD-LIBOR</td>
</tr>
<tr>
<td></td>
<td>(monthly, Act/360)</td>
</tr>
<tr>
<td>Reset Dates:</td>
<td>Effective date and first day of each calendar month</td>
</tr>
<tr>
<td>Counterparty:</td>
<td>Bank of America, N.A.</td>
</tr>
</tbody>
</table>

A diagram of the swap is shown below:
2. Floating-to-fixed Interest Rate Swaps

Notional Amount: $400,000,000 (aggregate)
Effective Date: April 1, 2008
Conversion Date: April 1, 2018
Maturity Date: April 1, 2038
SANDAG Pays: 3.8165% (monthly, 30/360)
SANDAG Receives: 65% of USD-LIBOR until conversion date,
SIFMA Municipal Swap Index thereafter (monthly, Act/360)
Reset Dates: Effective date and first day of each calendar month until conversion date,
Weekly every Thursday thereafter
Counterparties: Goldman Sachs Mitsui Marine Derivative Products, L.P.
Merrill Lynch Capital Services, Inc.

A diagram of the swaps is shown below:

![Diagram of swaps]
This table shows (in basis points) the historical difference between a receipt based upon 98% of 1-Month LIBOR and a receipt based upon SIFMA. Each number in the table shows the difference in a given month with the average annual difference along the bottom row. This forms the basis for our expectation for performance in the future, assuming the same marginal income tax rate. All other factors being equal, an increase in marginal income tax rates would create higher benefit to SANDAG and a reduction in marginal income tax rates would cause less benefit to SANDAG.

PFM suggests setting a target, of 100% of LIBOR, for entering the basis swap. This would generate a higher expected benefit, and a higher historical benefit than the numbers illustrated here.
Appendix C – Risk Analysis

Table 1 – Present Value Analysis

Table 1 shows the likely present value depending on the realized relationship between LIBOR and SIFMA in the future. It also shows the likely termination amount that would be owed due to an early termination of a swap related to one of the two possible basis swaps at various future dates (down the left side of the table) and various market trading ratios between SIFMA and LIBOR (across the top of the table).

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<th>Effective Date</th>
<th>National Amount</th>
<th>65.0%</th>
<th>75.0%</th>
<th>90.0%</th>
<th>98.3%</th>
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<td>$93,374</td>
<td>$0</td>
<td>$(75,375)</td>
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</tbody>
</table>

Table 2 – Impact on Annual Cashflow

Table 2 shows the likely impact a basis swap may have on future cash flows given a variety of levels for LIBOR (down the left side) and levels of the LIBOR/SIFMA ratio (across the top).

As shown in both tables, tax exempt rates (SIFMA) would have to be greater than taxable rates (LIBOR) for SANDAG to be made worse off in the future by having entered the basis swap.
Appendix D - Definitions

**Basis Swap** – an agreement between two parties to exchange interest payments based on different variable-rate indices, e.g. SIFMA vs. LIBOR; a floating-to-floating swap

**Interest rate swap** – a contract between two parties, referred to as “counterparties”, to exchange interest rate payments at specified dates in the future. One party under the swap contract normally makes payments based on a fixed rate while the other party makes payments based on a variable (floating) rate.

**LIBOR** – the London Inter-Bank Offered Rate is the rate on U.S. dollar denominated deposits with maturities from 1 day to 12 months transacted between banks in London. LIBOR is the benchmark swap floating index in the taxable or corporate swap market.

**SIFMA Index** – a composite of 650+ high-grade, weekly reset, tax-exempt Variable-Rate Demand Obligations (VRDO’s). The SIFMA Municipal Swap index is the benchmark floating-rate index in the tax-exempt or municipal swap market.

**Synthetic Fixed-Rate Debt** – the issuance of variable-rate debt in conjunction with a floating-to-fixed (“fixed-payer”) swap

**Percentage of (% of) LIBOR swap** – a swap whose floating leg is reset based on a percentage of a taxable rate (e.g. 65% of LIBOR) rather than a true tax-exempt rate, e.g. the SIFMA Index. A % of LIBOR swap generally carries a lower expected or nominal fixed rate than a comparable SIFMA swap to compensate the fixed payer (issuer) for the assumption of basis and tax risk.

Note: for a Synthetic Fixed-Rate Debt transaction using a % of LIBOR swap, the actual, effective fixed rate paid may be higher or lower than the nominal swap rate depending on how well the swap floating index tracks the issuer’s variable-rate bond cost.

**Basis Risk** – a shortfall between the interest rate paid on an issuer’s underlying bonds and the rate received on a swap hedge. A tax-exempt variable-rate bond issue hedged with a % of LIBOR swap exposes the issuer to Basis Risk. Basis Risk normally refers to a temporary shortfall due to technical factors, e.g. supply/demand for tax-exempt VRDO’s, as opposed to a permanent shortfall caused by structural factors (see Tax Risk)

**Tax Risk** - a form of Basis Risk resulting from tax law changes such that the federal or state tax exemption of municipal debt is eliminated or its value reduced. This will cause municipal bond yields to rise relative to taxable bond yields.
San Diego Association of Governments - TransNet Program

INDEPENDENT TAXPAYER
OVERSIGHT COMMITTEE

February 11, 2009

AGENDA ITEM NO.: 4

Action Requested: DISCUSSION

TransNet PLAN OF FINANCE UPDATE

File Number 1110200

Introduction

In December 2005, the SANDAG Board of Directors approved the first Plan of Finance (POF) for the TransNet extension and established a financial strategy for implementing the Early Action Program (EAP) of projects and fulfilling ongoing commitments for the existing TransNet program. The financial strategy approved by the Board of Directors included expanding the existing commercial paper program from $135 million to $335 million, locking in low interest rates through an interest rate exchange agreement (swap), and issuing $600 million of long-term variable rate debt in April 2008. The POF was approved by the SANDAG Board of Directors with the understanding that the POF is a dynamic process that requires continual refinement as circumstances change and should be updated at least annually. Therefore, the POF was updated for the first time in December 2006 when three transit projects were added to the EAP and then again in January 2008 in anticipation of the successful $600 million bond issuance in April 2008. This update focuses on the changes in the program that have occurred over the last year, including revisions to both the cost and revenue assumptions used in assessing the program.

The EAP was established to “jump-start” the implementation of several key projects prior to the beginning of the TransNet Extension in 2008, with the objective of completing those projects within the first five to seven years of the new program. This visionary action has resulted in much progress on several EAP projects in the last three years and the issuance of the long-term bonds last year has allowed for this momentum to continue. The POF Update presented in this report reveals that the cost and revenue modifications made to the program approved last year results in a very similar outcome and that staying the course on the current EAP program is still an appropriate strategy.

Discussion

Important Developments for the TransNet Program in the Past Year

State Bond Funding - We continued our efforts to secure additional funds from the $19.9 billion Proposition 1B State Infrastructure Bonds. We have secured additional funds beyond the original $432 million secured from the Corridor Mobility Improvement Account (CMIA) element of the bonds in 2007, to a total of $825.8 million. However, recent budgetary difficulties have resulted in the inability of the State of California to issue bond to support the Proposition 1B program. Recent action by the SANDAG Board of Directors has implemented a plan that will manage funds within
the EAP corridor projects to allow time for the state bonding process to resume. The updated POF presented here assumes that the bond funds will be restored in time to avoid consideration of applying additional TransNet funds that are currently not programmed. Should it become clear in the future that Proposition 1B bond funding will not be restored in time to avoid a substantial cash flow interruption, the POF would need to be updated to reflect the delay at that time.

**Construction Cost De-escalation** - After a recent period of unprecedented high rates of growth in construction costs from 2004 to 2007, we have seen an equally unprecedented decline in construction costs over the last year (Attachment 1). This has led to significantly reduced bid prices on several key EAP project construction contracts that have been let over this time period. In addition to adjustments to the current EAP projects, this has led to a substantial revision to the cost escalation assumptions for this Plan of Finance update.

**Changes to Sales Tax Revenue Projection** - Unfortunately, the nation and the San Diego region continue to experience a downward trend in taxable retail sales and sales tax revenues from which TransNet sources of revenue are derived. FY 2008 TransNet receipts were 1.4 percent lower than FY 2007; using national level information from Global Insights as a guideline, SANDAG staff’s initial estimate was for FY 2008 to decline by 2.9 percent. Receipts for TransNet for the first quarter of the current fiscal year were nearly 4 percent less than the same period in the previous year. Using the Global Insights national level data as well as local data showing how our economy has been impacted by past severe recessions, SANDAG staff expects the current economic slowdown to reduce sales tax receipts by 4.0 percent for FY 2009. The rate at which the national economy is declining is expected to slow during the last quarter of FY 2009 and begin to grow slowly during the first quarter of FY 2010; locally our economy is expected to follow a similar trend, although San Diego will likely rise out of the recession ahead of the nation as a whole. From peak to trough on an annual basis, local sales tax receipts are expected to decline 5.4 percent. The national and local economies are not expected to fully recover from the downturn until calendar year 2011, while the transition to more normal rates of revenue growth may take three years (2013). We are expecting our sales tax revenue to follow a similar path; staff is projecting growth of 2 percent in FY 2010, the first positive growth after two years of decline and off a much lower FY 2009 base year. These rates of growth have been reflected in the POF model for this update.

**Cost and Revenue Projections**

**Costs:**

The SANDAG TransNet Program Office continues to work with the Corridor Directors and project teams to refine the costs and schedules for the EAP projects. The costs are updated to current year dollars and then escalated to the year of construction based on the revised construction escalation rates. These rates are adjusted every year based on industry trends. The rapid decline in construction costs this past year discussed previously, have resulted in lower costs for several EAP projects and a substantial revision to the assumed cost escalation for the program going forward as shown in the following table.
There were some changes to project schedules that were incorporated into the POF model as part of the annual update to the Capital Improvement Program (CIP). There also will be proposed scope and budget adjustments reflecting program changes. These proposed changes will be presented in a separate report prior to the approval of this POF Update. In performing the POF Update, these revised and more detailed costs and schedules were used for the EAP projects, while the non-EAP project costs are included in aggregate due to the lesser level of project definition and detail.

Revenues:

The amount of state and federal funds assumed for the EAP are based on committed funds to date. In addition, the revenue forecast is based on a series of assumptions that can be summarized as follows:

For fiscal years covering the current Regional Transportation Improvement Program period (FY 2009 to FY 2013), federal and state funds are based on committed or authorized amounts. For future years, SANDAG estimated federal, state, and local transportation funds based on historic experience, including an assumption of a federal participation rate of 50 percent for New Starts and Small Starts for the major transit projects. SANDAG also substantially revised its assumptions to forecast TransNet sales tax receipts as discussed above and summarized in the following table.

It is anticipated that during the 40-year life of the TransNet program, there will be periods of high and low economic cycles, and that the program as presented in this updated POF has a reasonable expectation of fulfilling the Ordinance.

The results of the POF model run using the updated project costs and revenue forecast is summarized in a projected cash balance graph and is compared to the results of the January 2008 POF Update cash balance graph and in a table (Attachments 2, 3, and 4).
Analysis of POF Update Results

The POF Update presented in this report confirms that the action taken to keep all of the EAP projects on their current schedules last year can be maintained with very similar results as last year. While the substantial downturn in sales tax receipts is cause for concern, the simultaneous decrease in construction costs over the past year has resulted in a counter-balancing development that generally reaffirms the conclusions of the POF Update in 2008. Continuing to move forward with the EAP and overall TransNet program will allow the momentum gained in these past three years to continue. By delivering a combination of finished construction projects such as the I-15 Managed Lanes Middle Segment and critical development milestones on other projects, the region will be providing for the mobility needs of its citizens while continuing to successfully compete for the additional funds the program will need in the future.

This POF Update considers the EAP without substantial changes to the corridors. Scenarios to further enhance the functionality and mobility of corridors currently under development have been assessed at a very preliminary level. However, full assessment of these scenarios would be more appropriate once the details of the federal economic stimulus plan are known. Therefore, it is quite possible that another update to the POF will be required shortly after the upcoming regular annual update.

Next Steps

Following is the proposed schedule:

- February 11 ITOC - Review of POF (Information)
- February 20 Transportation Committee - Review of POF (Information)
- March 11 ITOC - Final review of POF Update and recommendation to the Transportation Committee
- February 20 Transportation Committee - Final review of POF Update and recommendation to the Board of Directors
- February 27 Board of Directors - Final review and approval of POF Update

As noted above, the POF is not only updated annually, but also on an as-needed basis, in order to flag any significant changes in the key assumptions used in the financial model, such as a federal economic stimulus package revenues. The ITOC, Transportation Committee, and Board of Directors will be advised of any major developments and will consider any recommended changes to the approved financial strategy.

Attachments:  1. Caltrans Construction Cost Index
               2. Projected Cash Balance for Current Feb 2009 TransNet POF Update
               3. Projected Cash Balance for Approved Jan 2008 TransNet POF Update
               4. Major Corridor POF Update Comparison (Jan 2008 vs. Feb 2009)

Key Staff Contact: Charles “Muggs” Stoll, (619) 699-6945, mst@sandag.org
Caltrans Construction Costs (12-Month Index)
Current (February 2009) Plan of Finance: Hold EAP Schedules
End Balance

 Millions of Dollars

EAP
Non-EAP TransNet Projects

Additional Matching Funds Required

Fiscal Years

2008 UTC Rapid Bus (Super Loop)
2009 I-5 Lomas
2010 SR 52 Ext.
2012 I-15 ML & BRT
2013 Mid-City Rapid Bus
2014 SR 76 Widening, Mid-Coast Transit, Orange/Blue Line Upgrades
2007 SPRINT
2009 I-5
2010 SR 52 Ext.
2011 South Bay BRT
2012 I-15 ML & BRT
2013 Mid-City Rapid Bus
2014 SR 76 Widening, Mid-Coast Transit, Orange/Blue Line Upgrades
Approved (January 2008) Plan of Finance: Hold EAP Schedules
End Balance

Millions of Dollars

-6,000
-4,000
-2,000
0
$2,000
$4,000
$6,000

Fiscal Years

'08 '10 '12 '14 '16 '18 '20 '22 '24 '26 '28 '30 '32 '34 '36 '38 '40 '42 '44 '46 '48

EAP
Non-EAP TransNet Projects

Additional Matching Funds Required

2007 SPRINTER
2008 UTC Rapid Bus (Super Loop)
2009 I-5 Lomas
2010 SR 52 Ext.
2011 South Bay BRT
2012 I-15 ML & BRT
2013 Mid-City Rapid Bus
2014 SR 76 Widening, Mid-Coast Transit, Orange/Blue Line Upgrades
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<th>POF Update Year</th>
<th>EAP Completion (FY)</th>
<th>Negative Cash Flow (FY)</th>
<th>Additional Revenues Needed (escalated $)</th>
<th>Present Value of Additional Revenues</th>
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<td>Jan 2008 Approved</td>
<td>2014</td>
<td>2026</td>
<td>$2.8 billion</td>
<td>$1.2 billion (2006$)</td>
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<tr>
<td>Feb 2009 Update</td>
<td>2016</td>
<td>2036</td>
<td>$4.1 billion</td>
<td>$1.3 billion (2008$)</td>
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San Diego Association of Governments - TransNet Program

INDEPENDENT TAXPAYER OVERSIGHT COMMITTEE

February 11, 2009

AGENDA ITEM NO.: 5

Action Requested: DISCUSSION/POSSIBLE ACTION

FIRST TRIENNIAL TransNet PERFORMANCE AUDIT DRAFT REPORT File Number 1139000

The ITOC is asked to discuss the attached TransNet Performance Audit draft report. The Performance Audit has been conducted by Sjoberg Evashenk Consulting, Inc., in accordance with the requirements of the TransNet Extension ordinance. Based on the results of the discussion, the ITOC may accept the document and allow for its review by the Transportation Committee as required by the ordinance, subject to resolution of any edits or changes the ITOC may suggest.

Attachments: 1. Transmittal Cover Letter
2. Draft TransNet Performance Audit Report
February 4, 2009

John Meyer, Chair
Hamid Bahadori, Member
Kevin Cummins, Member
Jesus Garcia, Member
Ron Gerow, Member
Valerie Harrison, Member
Jim Ryan, Member
Independent Taxpayer Oversight Committee
401 B Street, Suite 800
San Diego, California 92101

Dear Independent Taxpayer Oversight Committee (ITOC) Members:

We are pleased to present our draft TransNet Performance Audit Report, discussing the results of the audit of the San Diego Association of Governments (SANDAG) and Department of Transportation, District 11 (Caltrans) involvement in the TransNet-funded Early Action Program (EAP) projects. As stated in our contract scope of work, our audit focused on applying certain procedures to assess and improve the efficiency and effectiveness of planning and programming, project delivery, cost control, schedule adherence, and other activities including contracting, construction, quarterly reports, and performance measurement.

The draft audit report has been discussed with SANDAG, Caltrans, and the ITOC Audit Subcommittee, and their views and perspectives have been incorporated into our draft report to ensure it is fair, accurate, complete, and objective as well as that the recommendations are reasonable in accordance with government auditing standards. We look forward to answering any questions you may have related to information in the draft audit report at the February 11, 2009 ITOC monthly meeting. Under provisions of the Ordinance and our contract, once the ITOC approves the draft audit report, it will be distributed to the SANDAG Transportation Committee for comment within a 60-day response period.

Thank you in advance for your review of this report. We appreciate the cooperation and time you have afforded us during this audit, and we have enjoyed working with your committee.

Regards,

Catherine Brady, Director
Sjoberg Evashenk Consulting, Inc.
San Diego Independent
Taxpayer Oversight Committee

TransNet Performance Audit

February 4, 2009

Submitted By:

455 Capitol Mall•Suite 700•Sacramento, California•95814•Tel 916.443.1300•Fax 916.443.1350
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>1</td>
</tr>
<tr>
<td>Introduction and Background</td>
<td>7</td>
</tr>
<tr>
<td>Scope and Methodology</td>
<td>15</td>
</tr>
<tr>
<td><strong>Chapter 1:</strong> A Robust Governance Structure is Employed, Although Oversight could be Enhanced</td>
<td>19</td>
</tr>
<tr>
<td><strong>Chapter 2:</strong> While Solid Management over TransNet Exists, Greater Performance Monitoring and Reporting Would Further Promote Accountability</td>
<td>37</td>
</tr>
<tr>
<td><strong>Chapter 3:</strong> Revenue and Cost Models are Practical; Yet, Project Budget and Schedule Reprioritizations Should be Better Chronicled</td>
<td>51</td>
</tr>
<tr>
<td><strong>Chapter 4:</strong> Project Delivery Methods are Sound; However, Some Practices Could be Enhanced</td>
<td>69</td>
</tr>
<tr>
<td><strong>Chapter 5:</strong> Conclusions and Recommendations</td>
<td>93</td>
</tr>
<tr>
<td>Appendix A: TransNet Highway Construction and Transit Projects</td>
<td>101</td>
</tr>
<tr>
<td>Appendix B: Audit Interviews Conducted</td>
<td>105</td>
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Executive Summary

In 2004, the San Diego voters renewed their commitment to the region’s transportation improvement program by approving Proposition A, implemented through the TransNet Extension Ordinance (Ordinance), and continuing an existing half-cent transportation sales tax for an additional forty years. Although the measure became effective April 1, 2008, the San Diego Association of Governments (SANDAG) and its partners embarked on an ambitious program to accelerate certain major corridor highway construction and transit projects beginning in Fiscal Year 2005-2006. SANDAG estimated that costs for these early action program (EAP) projects slated for completion by 2015 will reach $5 billion.

With the TransNet program only in the infancy of its 40-year duration, it is premature to predict results and reach conclusions on ultimate project delivery efficiencies or the success of performance outcomes given that many projects are still in preliminary scoping and environmental phases. For most projects, complete information is often not available because these projects have not evolved from early development stages into design and construction phases where more defined results can be assessed. Thus, we focused largely on the overall structure, practices, and controls established by SANDAG and Caltrans to plan, implement, manage, monitor, and oversee the development and delivery of the early action projects. Successfully accomplishing these steps should lay the foundation for sustaining a viable 40-year transportation and transit development system. Our audit revealed that SANDAG and Caltrans have launched a solid network with appropriate oversight, fiscal control, program management, and project delivery practices, although we identified activities that could be enhanced at a program-wide as well as project-specific level.

In the sections that follow, we describe SANDAG and Caltrans efforts addressing the key elements of a successful program delivery listed below:

- Governance and Oversight
- Performance Monitoring and Accountability
- Fiscal Control and Budget Data
- Project Management and Delivery

A Robust Governance Structure is Employed, Although Oversight Could be Enhanced

Over the last three years, SANDAG has worked in conjunction with its transportation and transit partners to employ a robust framework with many critical elements to help achieve long-term project and program success. For instance, we found appropriate levels of governance and involvement from the SANDAG Board of Directors (Board), SANDAG Transportation Committee, and the Independent Taxpayers Oversight Committee (ITOC) that provide valuable and necessary oversight for key project costs and delivery practices. SANDAG’s broad responsibilities and delivery methods have fostered an environment of collaboration that successfully crosses local jurisdictional and governmental borders to create synergies in the development of the region’s transportation and transit projects. In part, this is demonstrated through SANDAG’s use of corridor director positions in concert with
Caltrans allowing for heightened accountability through a cross-agency project management structure tracking projects from cradle to grave, as well as continuous monitoring over all corridor projects’ schedules and costs.

However, better information could be provided to oversight bodies, including the ITOC, to assist in policy-setting, monitoring, and decision-making as current data provided does not capture full project history, critical prior budget actions, scope adjustments approved, project risks and benefits, or cumulative impact of past decisions made. Additional statistics related to project impact on travel time and congestion, as well as project performance in terms of schedule and budget adherence.

**While Solid Management over TransNet Exists, Greater Performance Monitoring and Reporting Would Further Promote Accountability**

In an effort to enhance transparency and promote accountability, SANDAG and Caltrans both utilize appropriate tools and employ reasonable processes to monitor the overall TransNet program as well as manage individual project performance. Throughout the highway and transit project efforts, SANDAG and Caltrans management foster a collaborative environment setting the tone emphasizing the coordinated flow of critical project data between the agencies, controls over budget and schedule adherence, and joint resolution of project dilemmas.

SANDAG and Caltrans apply numerous practices and automated tools to track budget and schedule data. For instance, detailed project budget and schedule data used by SANDAG and Caltrans project managers are consolidated through a “Dashboard” database that efficiently streamlines data collection and summarizes corridor, segment, and project status through the automatic integration of data gathered from disparate systems. Available for use by internal project teams as well as the general public, we found Dashboard data related to budgets, expenditures, and schedules to be generally reliable.

While the Dashboard provides a good framework for online reporting of project status, older budget and expenditure data included for certain projects may skew data and activities under the TransNet program. Additionally, some early projects are not included within the Dashboard data thus providing an incomplete picture of TransNet funded project activity. SANDAG should revisit the intent and vision of the Dashboard and determine how best to track and provide meaningful project results as well as consider other minor enhancements recommended by our audit.

Moreover, the TransNet program would benefit from incorporating challenging goals and targets for program outcomes and develop and track associated measures to assess efficiencies and effectiveness of efforts as part of a comprehensive monitoring system. Existing TransNet program goals could be more clearly defined through objectives linked to specific performance measures. In addition to adopting meaningful effectiveness measures, SANDAG should establish goals, strategies, and performance measures to track program and project delivery efficiency indicators related to meeting delivery milestones, staying within set ranges of cost estimates, and reducing support costs and overhead by predetermined
amounts. Results from these performance indicators should be made available to oversight entities, particularly the ITOC, Corridor Directors, and to the public.

Revenue and Cost Models are Practical, Yet Project Budget and Schedule Reprioritizations Should be Better Chronicled

Another critical component of a successful program is sound financial planning and controls over financial management. Our review revealed that SANDAG’s Plan of Finance and debt structure model appear reasonable and are based on sound assumptions that provide and dedicate funding to complete the EAP projects as promised. Since accelerating funding for these projects, as of June 30, 2008, SANDAG has committed approximately $635 million in bonds and commercial paper financing. Moreover, SANDAG has well-positioned itself to maximize funding and is motivated in identifying potential revenue streams that could leverage sales tax revenue. Although the 40-year revenue forecast is difficult to predict with certainty at this time, such forecasts and cost projections appear reasonable. Further, budget projections are periodically revisited using actual results and adjusted as necessary in preparing future forecasts. For instance, since actual sales tax receipts have decreased in the last two years, SANDAG revised its short-term revenue projections downward, and is in the process of modifying its long-term funding forecasts.

However, the availability of sufficient funding is and is likely to remain a significant challenge to project completion. Toward this end, when the EAP projects were identified, the SANDAG Board effectively dedicated nearly all of federal, state, and local TransNet sales tax funds to the delivery of these projects. The governing and oversight bodies publically vetted and deliberated the decision and ultimately agreed the EAP projects would provide the most regional benefits—even at the risk that other TransNet projects may not be accomplished. As part of the biennial Regional Transportation Improvement Program process as well as the annual budget process, SANDAG and its transportation partners continually revisit and revise project budget, scope, and delivery schedules as part of regional planning and prioritization efforts. The continual reprioritization is consistent with its authority as the Regional Transportation Commissions and was reemphasized in the Ordinance.

With the ongoing reprioritization and budgetary movement of the various EAP project components, SANDAG should employ mechanisms to formally track the budget history of each corridor or segment outlined in the Ordinance as amended or updated during annual processes. Such tracking of evolutionary changes occurring over time would memorialize the early decisions and actions affecting a particular corridor or segment in a consolidated manner—as well as provide decision makers charged with program oversight with additional information to use when weighing options or alternatives presented to them for resolution. Currently, much of this information is available in a variety of forms such as the quarterly reports submitted to the ITOC and SANDAG Board as well as in project team meetings and other senior management reports; yet, no central repository or consolidated resource exists to easily account for funding or project scope changes made.
Project Delivery Methods are Sound, However Some Practices Could be Enhanced

Generally, SANDAG and Caltrans appear to have an adequate project management and oversight structure to review, update, and monitor projects to ensure sufficient cost controls and timely project delivery. Overall practices in place for project delivery are consistent with peers and industry best practices. However, SANDAG could benefit from formalizing its project delivery practices and procedures by memorializing Board policy direction into procedural implementation manuals to guide daily project activities, and by instituting uniform filing systems and automated tools for tracking project history files.

Because the TransNet program is in its infancy, many of the EAP projects are in preliminary scoping or early design stages. For instance, only four projects have begun construction. While not enough time has passed or efforts completed for us to draw conclusions on project performance, preliminary indications revealed that taxpayers are seeing early value for their investment. Our review of EAP project data between Fiscal Years 2006-2007 and 2008-2009 revealed that while several individual projects and segments have experienced budget overruns and schedule delays, the EAP projects generally appear to be on schedule and are currently meeting the TransNet authorized program budget of nearly $5 billion. Our review of the underlying detail behind budget overages by project phase revealed that generally project managers employed reasonable cost monitoring and project management techniques to timely address and mitigate project scope, schedule and cost changes, while minimizing the overall project cost overruns.

In addition to reasonably established timelines, proven construction cost estimate models, and techniques based on sound assumptions, solid processes are in place to monitor costs throughout a project’s lifecycle in areas such as task order amendments and change order approvals. Our comparisons of bids to estimates for the 21 EAP project construction contracts issued over the past three years showed an average difference of only 2.2 percent for all contracts. Additionally, our review of key performance indicators for the EAP projects showed industry-acceptable low percentages of change orders as compared to contract amounts, and cost estimate variances within the acceptable norm. Although we found sound procedures were established to award and monitor consultant work, better documentation practices could be employed in reviewing and approving task order requests for time extension for those task order amendments we reviewed. Similarly, change orders issued over the last three years accounted for approximately 14 percent of amounts originally bid. While this percentage is higher than the 10 percent average in the construction industry, the difference between payments and the initial contract bid value was only 7.64 percent.

Moreover, lessons learned from previous projects are discussed and considered on an informal basis through weekly project development meetings and monthly corridor director meetings. However, project evaluation closeout forms used by Caltrans should be more consistently prepared and completed as each phase is completed on long-term projects rather than waiting until construction is final and all claims addressed—which extends several years. Other potential project improvement opportunities for TransNet project practices include consistently applying risk assessments and related mitigation plans, improving project performance reporting practices, and creating a comprehensive set of project development policies and procedures for transit projects.
**Recommendations**

Continuing the strong practices launched and momentum gained in the initial three-year period of the TransNet program, we have recommended 25 improvements and refinements to enhance the TransNet program. A complete list and discussion of each recommendation is provided in Chapter 5 of this report, with highlights summarized below:

- Develop high-level project summary documents, or “Report Card” to capture project detail relating to key project budget, schedule and scope changes;

- Standardize ITOC administrative documents, including meeting agendas and status reports used in the ITOC oversight and decision-making process;

- Revisit the intent and vision for the Dashboard to potentially include all TransNet projects as well as to refine existing data to ensure accuracy, complements, and clarity of data nuances;

- Define and clarify project and program performance goals and targets to measure program performance;

- Continue to regularly monitor and review the debt to revenue ratio and report status monthly to the ITOC;

- Establish a mechanism to link and track the Ordinance planned projects and amounts with current plans and budgets for all TransNet projects;

- Enhance current project management and delivery practices by ensuring post-evaluation forms are consistently used and completed for all projects after each project phase, as well as memorializing transit practices and uniform filing systems; and

- Ensure consistent implementation and reliance on best practices to tighten project delivery tools including risk assessment tools.
Introduction and Background

With reports of traffic increasing and congestion growing at rates faster than highway construction and available transit services, the voters in San Diego County passed Proposition A in November 2004 calling for a continuation of the existing half-cent transportation sales tax for an additional 40-year period, from 2008 through 2048, to relieve traffic congestion, improve safety, and expand highways, transit, and local streets and services. This proposition, implemented through the San Diego Association of Governments (SANDAG) Board of Directors’ adoption of the TransNet Extension Ordinance (Ordinance), paved the way for these local funds dedicated to transportation improvements to be leveraged through state and federal matching dollars for improving regional systems. SANDAG is designated as the Regional Transportation Commission responsible for major highway and transit projects and is ultimately responsible for implementing the Ordinance and TransNet projects.

TransNet Extension Ordinance of 2004

Recognizing the continued need for transportation and transit improvement projects, the SANDAG Board of Directors prepared and authorized the Ordinance and Expenditure Plan to expand upon the foundation and projects completed under the original TransNet program approved by voters in 1987. The Ordinance and Expenditure Plan, a legal document that formally enacts sales tax measures approved through the public voting process, provided for the implementation of the region’s transportation improvement program and identified an estimated $14 billion for other transportation and transit improvement projects to be completed between 2008 and 2048. The Ordinance distributed funds as shown in Table 1.

Table 1: TransNet Distribution of Funds Over 40 Years (in millions, 2002 dollars)

<table>
<thead>
<tr>
<th>Expenditure Plan Component</th>
<th>Amount over 40 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Transportation Corridor Improvements</td>
<td></td>
</tr>
<tr>
<td>-Freeway, Highway, and Transit Capital Projects</td>
<td>$5,150</td>
</tr>
<tr>
<td>-Project Specific Transit Operations</td>
<td>$1,100</td>
</tr>
<tr>
<td>-Freeway, Highway, and Transit Environmental Mitigation</td>
<td>$600</td>
</tr>
<tr>
<td>Local System Improvements</td>
<td></td>
</tr>
<tr>
<td>-Local Street and Road Projects</td>
<td>$3,950</td>
</tr>
<tr>
<td>-Local Street and Road Projects Environmental Mitigation</td>
<td>$250</td>
</tr>
<tr>
<td>-Smart Growth Incentive Competitive Grant Program</td>
<td>$280</td>
</tr>
<tr>
<td>Transit System Improvements</td>
<td></td>
</tr>
<tr>
<td>-Continuing Bus/Rail Support and Improvements</td>
<td>$2,240</td>
</tr>
<tr>
<td>(Senior/Disabled/Youth Transit Passes and Services)</td>
<td></td>
</tr>
<tr>
<td>Congestion Relief Program</td>
<td>$13,570</td>
</tr>
<tr>
<td>Bicycle, Pedestrian and Neighborhood Safety Grant Program</td>
<td>$280</td>
</tr>
<tr>
<td>Administration (SANDAG)</td>
<td>$140</td>
</tr>
<tr>
<td>Independent Taxpayer’s Oversight Committee (ITOC)</td>
<td>$10</td>
</tr>
<tr>
<td>Total TransNet Funding:</td>
<td>$14,000</td>
</tr>
</tbody>
</table>

Source: TransNet Extension Ordinance and Expenditure Plan, p.18
Specifically, the Ordinance targeted regional congestion relief projects with funding for environmental mitigation, bicycle and pedestrian safety, local streets and roadways, and smart growth initiatives, transit services. For instance, it specified that major transportation corridor capital projects receive approximately 49 percent, or $6.85 billion of estimated funds, while transit operation services and local system improvements were slated to receive $2.24 billion and $4.48 billion, respectively, over the 40-year life of the program. Within these allocations, the TransNet extension included $850 million for environmental mitigation and approximately $280 million in grants for smart growth incentives to be allocated on a regional competitive grant basis for local transportation infrastructure improvements.

Further, the Ordinance laid out 47 specific corridor projects that the SANDAG Board selected for inclusion in the TransNet Extension program (see Appendix A). Two percent of all available funds were earmarked for bicycle paths and facilities, pedestrian improvements, and neighborhood safety projects. The TransNet Extension Ordinance also allocates a portion of funds for senior, disabled, and youth discounted transit passes.

To ensure sales tax revenues are appropriately distributed to the designated entities and programs in accordance with Ordinance provisions, SANDAG has developed an internal system called Project TTRAK which automatically calculates the sales tax distribution in compliance with the Ordinance. Detailed allocations within Project TTRAK serve as subsidiary records to SANDAG’s financial system providing a listing of revenues received that must be distributed to various programs and entities. Designated SANDAG staff reconciles and recalculates the TransNet revenue distribution amounts monthly for all entities and program categories.

The Ordinance also established the Independent Taxpayer Oversight Committee (ITOC) to provide enhanced levels of accountability and monitoring of program expenditures compliance with Ordinance provisions. Further, the Ordinance establishes the ITOC’s responsibility for conducting triennial performance audits of SANDAG and other agencies involved in the implementation of TransNet-funded projects and programs to review project delivery, cost control, schedule adherence, and related activities.

Sales Tax Revenues are Leveraged to Finance Projects

One tenet of the Ordinance is to leverage each TransNet dollar with a dollar from another funding source, such as the state gas tax or federal funds. Specifically, the Ordinance assumed that 50 percent of the costs of the major corridor projects would be covered by non-TransNet program sources such as state, federal, and other matching dollars. Some of the other funding sources used for TransNet EAP projects include:

- **Federal Funds**—Four separate federal programs relating to congestion mitigation and air quality improvement, high priority projects, regional surface transportation, and the safe, accountable, flexible, efficient transportation equity act.

- **State Funds**—Four primary state funding pools include state transportation improvement program, state highway operation and protection program, corridor mobility improvement account, and traffic congestion relief program.

- **Local Funds**—Various sources from local cities and districts.
Depending on the project, TransNet funds do not always constitute the majority of funding. For instance, for the EAP projects, TransNet monies comprise approximately 40 percent of the funding committed for those projects as shown in Figure 1.

Figure 1: TransNet Funding Sources Committed Through Fiscal Year 2008 (in millions)

SANDAG has Primary Responsibility over TransNet, Although Other Entities are Involved

Originally formed in 1966 as the “Comprehensive Planning Organization” and renamed in 1980, the San Diego Association of Governments (SANDAG) is a regional decision-making body consisting of 18-city agencies and the County of San Diego. Governed by a Board of Directors comprised of mayors, council members, and supervisors that represent each of the local jurisdictions. Supplementing the Board are advisory representatives from Imperial County, Caltrans, Metropolitan Transit System, North County Transit District, United States Department of Defense, San Diego Unified Port District, San Diego County Water Authority, Southern California Tribal Chairmen’s Association, and Mexico’s local consulate office. In addition to other committees, the Board is advised by its nine-person Transportation Committee on major policy-level matters related to transportation and provides oversight for many highway, transit, and other TransNet projects. The Board is assisted by a professional staff of executives, planners, engineers, and researchers.

As a result of the increased regional responsibilities assumed by SANDAG over the last seven years, it exercises broader authority and decision-making ability over the region’s highway and transit development. According to SANDAG budget documents, SANDAG
holds the following related designations and responsibilities in the San Diego region among others:

- Council of Governments for the San Diego Region
- Metropolitan Planning Organization
- San Diego Regional Consolidated Agency
- Regional Transportation and Funding Allocation Agency
- San Diego County Regional Transportation Commission
- Congestion Management Agency
- Co-lead Agency for Air Quality Planning

With its multitude of roles, SANDAG has the authority to direct the use of greater levels of transportation funding in the San Diego region than do most other large regional transportation agencies in the State. For instance, as the designated Regional Transportation Commission, the SANDAG entity is charged with responsibility to implement, fund, and administer any regional transportation improvement program including those funded by countywide sales tax initiatives such as the 2004 TransNet Extension Ordinance. Yet, while the authority and administration over the TransNet Extension rests primarily with SANDAG, other key entities provide critical involvement and shared responsibilities over certain transportation development functions as outlined below:

- **Caltrans**
  For TransNet’s major corridor capital projects, the Caltrans’ San Diego District 11 Office works closely and collaboratively with SANDAG on projects to improve mobility in the region. The Ordinance includes language specifically establishing shared responsibilities between SANDAG and Caltrans for project development and management over local state highway projects. Further, all major decisions regarding project scope, budgets and timelines are to be agreed upon by both SANDAG and Caltrans. Although SANDAG may choose to outsource portions of the project delivery work, Caltrans is responsible by State statute for providing oversight of the projects relating to state highways to ensure that work is performed according to the standards established by the State of California. Under the TransNet program, SANDAG relies on Caltrans for the vast majority of highway project delivery work. Currently, Caltrans District 11 employs approximately 1,400 staff, of which approximately 800 are dedicated to TransNet highway transportation projects.

- **Metropolitan Transit System (MTS)**
  MTS is a California public agency that owns assets of the San Diego Trolley, Inc. and San Diego Transit Corporation and provides transit services for the central, south, northeast and southeast regions of San Diego County. It also owns San Diego and Arizona Eastern Railway. Overseeing operations is a 15-member board of directors with representation from the cities of San Diego, Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, Santee as well as the County. Currently, MTS staff participates on transit EAP projects providing planning insight and input into the transit networks MTS will operate once developed.
**North County Transit District (NCTD)**
NCTD is a regional transit operator that provides public transportation to Northern San Diego County through the BREEZE bus system, COASTER commuter rail service, SPRINTER light rail, and LIFT para-transit services. Its board of directors includes representatives from each incorporated city in the district including the county supervisor representing unincorporated areas of the north county cities of Carlsbad, Oceanside, Vista, and San Marcos. In addition to managing the completion of the TransNet designated-SPRINTER light rail development project, NCTD provides transit planning input and advice to SANDAG on TransNet projects as needed.

**City of San Diego**
The City of San Diego Engineering and Capital Projects Department is responsible for a wide range of activities related to design, construction, and delivery of public improvement projects including local roadways. Based on the City’s submission of a number of eligible local transportation improvement projects, SANDAG began distributing TransNet Extension sales tax revenue to the City in July 2008 for these projects. Additionally, the City of San Diego is involved in all Caltrans and SANDAG-administered highway and multi-modal projects that impact the City’s use of land including local roads, existing transit lines, and other areas under the permit process as well as participates on the SANDAG regional Cities and County Transportation Advisory Committee.

**County of San Diego**
The County of San Diego’s Department of Public Works maintains nearly 2,000 miles of roads in the county’s unincorporated areas and is responsible for local traffic engineering, land development civil engineering review, design engineering, and construction management. Similar to the City, the County also submits its list of eligible local transportation improvements projects to SANDAG and receives distributions of the excise tax. Given the TransNet Extension distributions have only recently commenced in July 2008, the County has not yet seen any substantial funding. However, the County does provide advice and insight to SANDAG and Caltrans for the TransNet major corridor highway and transit projects surrounding connector roads, ramps, or permits needed. Regional perspective and input is also provided through the County’s participation on SANDAG’s Cities and County Transportation Advisory Committee.

**Independent Taxpayer Oversight Committee (ITOC)**
The TransNet Extension Ordinance established an Independent Taxpayers’ Oversight Committee (ITOC) to provide increased accountability for expenditures made under the TransNet program and ensure all voter mandates are carried out as required by developing recommendations for improvements to the financial integrity and performance of the program. Additionally, the ITOC oversees independent annual fiscal and compliance audits as well as triennial performance audits to ensure voter mandates are carried out in accordance with the Ordinance. The Ordinance further states that ITOC also serves as an independent resource to SANDAG.
TransNet Early Action Program Projects

In 2005, statistical data indicated regional congestion was increasing, but the infrastructure to handle traffic was not being built fast enough to keep pace. To demonstrate its commitment towards immediate improvement of the region’s transportation needs, SANDAG worked in close collaboration with Caltrans to accelerate the delivery of certain major corridor projects identified in the Ordinance. These accelerated EAP projects were initially selected following guidance established in the Ordinance and given priority as they remained uncompleted from the original ordinance in 1987 and under criteria established through the regional transportation improvement planning process. Additionally, during the ensuing three years, other projects were eligible to be added or accelerated as an early action project if they met similar criteria.

Yet, because sales tax revenues from the TransNet program could not be distributed until July 1, 2008, the SANDAG Board made a strategic decision to borrow against future revenues and leverage available state and federal funds by approving the sale of $135 million in commercial paper in 2006. SANDAG further increased its financing activities in the spring of 2008 by authorizing $600 million of long-term variable rate bonds. With the availability of funding through the early financing techniques employed, the SANDAG Board approved certain EAP projects, as shown in Figure 2, for accelerated delivery by 2015.

Figure 2: TransNet EAP Projects and Distribution of Project Funding

Source: TransNet Extension Ordinance and Expenditure Plan Analysis, March 2004; and Board actions as documented in meeting minutes between 2005 and December 2008
Most of the projects are in preliminary project phases of environmental or design. Given that the TransNet Extension program has just started its 40-year clock, only three main EAP projects have been completed or are nearing completion—namely the I-15 Middle segment, SPRINT rail, and I-5 HOV lanes. Further, not all early action projects are related to development and construction of highway or transit systems—some are related to purchases of new buses, trolleys, and station improvements. In addition to the 17 projects identified as EAP projects, there are approximately 32 non-EAP projects also designated in the Ordinance as shown in Appendix A.
Scope and Methodology

The TransNet Extension Ordinance established a requirement that ITOC conduct triennial performance audits of the agencies involved in the implementation of TransNet-funded projects. In August 2008, Sjoberg Evashenk Consulting, Inc. (SEC) was selected by the ITOC to conduct the first in a long series of triennial performance audits of TransNet-funded Early Action Program (EAP) projects. The period covered by this audit was July 2005 through June 2008, except where we needed to obtain contextual or underlying support data from periods prior to 2005 or more recent information to fully analyze project activities and practices.

The main audit objectives were to:

- Determine whether the organizational structure and operational processes allow for effective and efficient project delivery, cost control, and schedule adherence
- Identify process changes in contracting, construction, permitting, and other procedures that could improve the efficiency and effectiveness of the program
- Evaluate the efficiency and effectiveness of the ITOC, and adherence to bylaws
- Identify potential barriers to proposed changes and implementation challenges

Toward these goals, we assessed the underlying framework established over the last three years to guide the 40-year TransNet program by reviewing practices in the following areas:

- Governance and organizational structure;
- Program and project oversight;
- Financial management and modeling;
- Project and program development and progress monitoring;
- Program and project adherence to budgets and schedules;
- Technology and communication tools used;
- Existing program and project performance measures;
- Procurement and contracting practices; and
- Task order amendments and change order processes.

As part of understanding the environment and historical context of the TransNet program, we reviewed federal, state, and local laws and ordinances in addition to annual budgets, prior audits, fact sheets, online data, program management assessment conducted in 2005, and regional planning documentation and prioritization criteria including:

- Regional Comprehensive Plan of 2004 and 2007;
- Regional Transportation Congestion Improvement Plan of 2006 and 2008;
- Regional Transportation Improvement Program of 2006 and 2008;
- 2030 Regional Transportation Program of 2003 and 2007; and
To analyze and consider the full complement of challenges and successes surrounding the organizational and operational procedures in the development of the EAP projects, we researched similar programs, current best practices, and industry benchmarks as well as conducted a wide-range of interviews to ascertain perspectives, insights, options, and recommendations on the implementation of the TransNet program. Specifically, we met with over 60 transportation executives, officials, managers, staff, and stakeholders. For a complete listing of audit interviews conducted, refer to Appendix B of this report.

As part of assessing governance and oversight, we reviewed meeting agendas and minutes from the SANDAG Board of Directors, SANDAG Transportation Committee, and the ITOC including reports and data provided at these meetings over the last three years as well as memorandums of understanding, program handbooks and manuals, board policies, bylaws, organizational charts, status updates, quarterly reports, and annual reports. Using these documents, we analyzed roles and responsibilities, levels of communication and collaboration, communication of program status, depth and type of data provided to decision makers, and sufficiency of oversight inquiries. Additionally, we reviewed a mandated governance assessment report conducted by the State Legislative Analyst’s Office in accordance with Senate Bill 1703. Moreover, we reviewed state and federal requirements and available audits conducted by the Bureau of State Audits, Federal Transit Administration, Federal Highway Administration, and contracted firms over transportation and transit activities.

To ascertain the adequacy of financial models, projections, and management over the TransNet program, we studied and analyzed pertinent documentation from various sources including SANDAG’s financial records, modeling spreadsheets and databases, historic and prospective revenue projections and underlying assumptions, regression analyses, bond issuance documents and official statements, interest swap agreements, plans of finance, board status reports, and SANDAG Board meeting minutes. Similarly, we reviewed cost estimates and underlying supporting documents with assumptions and calculations. Additionally, we reviewed SANDAG’s general ledger and subsidiary ledgers to recalculate sales tax distributions to ensure they complied with the Ordinance provisions.

Based on inquiries and documentary review, we assessed the project priority process used to identify the EAP projects as well as employed on a regular basis to change project budgets, modify schedules, accelerate or delay projects, or add projects to the TransNet program. Specifically, we reviewed the Ordinance, Board minutes and Board policies, TransNet Plan of Finance, regional transportation plans, capital improvement programs, and project meeting documentation.

To evaluate and assess program and project development, monitoring, control, and oversight, we analyzed policies and procedures, project delivery manuals, practices, and processes. Additionally, we selected a sample of projects from the 17 EAP projects to review for compliance with policies and procedures, adherence to budgets and schedule, monitoring and approval of activities, and reasonableness of approach. Because of the preliminary phases of several of the projects, data available was incomplete at this project stage. However, we reviewed and analyzed project specific documentation including, but not limited to—environmental documents and design plans; project team coordination meeting minutes;
detailed schedules and budgets; cost estimates and actual costs; contracts and change orders; task orders and amendments; payment vouchers for contractors and invoices for consultants; and resource staffing assignments.

We reviewed automated tools used to manage the TransNet program and individual projects against budgets and schedules. Specifically, we compared budgeted costs, actual expenditures, planned timelines, and actual completion dates displayed in the Dashboard with underlying Primavera and Microsoft Project program management scheduling tools as well as SANDAG’s financial data recorded in its Integrated Financial and Administrative Solution (IFAS) and Caltrans’ Transportation Accounting and Management System (TRAMS) financial system. Additionally, we calculated percentages of budgets exhausted against progress made on project tasks as well as analyzed how corridor directors and project managers used data from the Dashboard to manage projects.

To assess existing program and project performance measures, we conducted inquiries of SANDAG and Caltrans staff as well as reviewed SANDAG’s State of the Commute report from 2005, Caltrans’ Performance Measurement report from 2007, and the State of Virginia’s Transportation Accountability Commission 2008 report. Further, we reviewed data tracked and reported through the University of California, Berkeley’s on-line Performance Measurement System (PeMS). We compared the TransNet measures used against those employed by other entities, general best practices, and trends in the industry.

Additionally, we evaluated SANDAG’s and Caltrans’ contracting and procurement practices through a review of contracting and procurement manuals, board policies and directives, project file documents, competitive proposal documents, bid summaries, contracts, agreements, task orders and scopes of work, change request documents, invoices, payment vouchers, and contractor evaluation. Further, we selected a sample of task order amendments and construction contract change orders to assess the controls over the contract modifications, budget and schedule adjustments, consultant and contractor monitoring and performance evaluations.

Finally, we attempted to compare the TransNet program practices and protocols against other like entities in terms of size, population, and urban focus. As such, we identified transit and transportation entities in the following to compare San Diego against—Los Angeles, Orange, San Jose, San Francisco, and Sacramento, California as well as entities in Arizona, Washington, and Virginia. However, we were not able to obtain full and complete data; thus, only limited comparisons could be drawn.

We conducted this audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The audit findings and conclusions were presented and discussed with representatives of SANDAG, Caltrans, and the ITOC prior to completion of the audit. Management comments were considered and incorporated into the report as appropriate.
Chapter 1:  
A Robust Governance Structure is Employed, Although Oversight Practices Could be Enhanced

Since 2005 when the early action program (EAP) projects of the TransNet Extension Ordinance (Ordinance) were launched, the program has enjoyed a strong framework in place to vision and guide direction over the Ordinance major corridor projects. Building upon the responsibilities outlined in the Ordinance, SANDAG and its partners have established a structure to guide the planning, development, implementation, management, and monitoring of the TransNet program. Specifically, the program employs elements consistent with industry best practices such as the following:

- Employing governance and oversight for the ongoing and frequent review of progress made towards achieving goals and objectives and timely decision-making process to effect changes to program management and administration when necessary.

- Using written plans, agreed-upon approaches, and memorandums of understanding to define and clarify roles and responsibilities for management principles and decision-making parties involved in the TransNet program.

- Establishing a joint agency management structure to implement and monitor project development, delivery, and performance and be accountable for project schedule and cost.

Functioning under the guidance of the San Diego Association of Governments (SANDAG) Board of Directors (Board) and its Transportation Committee as well as oversight of the Independent Taxpayer Oversight Committee (ITOC), the governance and management structure established for the Ordinance has operated with concurrence over the first three years of the program. The structure affords open and ongoing collaboration and communication amongst all players between the governing board, SANDAG Transportation Committee, SANDAG executive and project teams, and external partners at Caltrans, Metropolitan Transit System (MTS), and North County Transit District (NCTD). Critical program and project-level detail related to costs, schedule, and scope are fully discussed and vetted at all levels, and alternatives and decisions are regularly deliberated. With transparency and accountability as key tenets and driving forces behind the TransNet program, SANDAG appears to have practices in place over its EAP projects to ensure those concepts remain clearly in focus.

Operating under written plans and formal memorandums of understanding, SANDAG and its partners have defined roles and responsibilities to accomplish region-wide goals that include conflict resolution practices designated to ensure challenges and obstacles are promptly vetted and resolved to keep projects moving forward. For instance, memorandums of understanding between SANDAG and Caltrans for the joint development of highway construction projects as well as between SANDAG and regional transit operators guiding transit development projects provide the relationship framework. Supplemental written plans further define project team member roles and activities, cross-jurisdictional project team reporting relationships, and conflict resolution procedures.
Moreover, SANDAG uses an innovative corridor director structure steering its transportation construction relationship with Caltrans that holds individuals accountable for managing multi-disciplinary teams of experts with the expectation that projects are ultimately delivered on budget and on schedule.

While independent oversight is exercised by state and federal agencies as well as external private firms that conduct reviews and audits of administrative, operational, and project delivery practices, other local bodies also maintain a watchful eye over the TransNet program and individual projects. Specifically, the SANDAG Board, SANDAG Transportation Committee, and the ITOC conduct critical reviews and deliberations of EAP project activities and the use of funds for these projects. We have, however, identified areas where enhanced information would provide decision makers, including the ITOC, with better tools to deliberate project items, weigh and make decisions, and strengthen its oversight role. For example, information related to individual project history, critical prior budget actions and scope adjustments approved, or cumulative impact of past decisions made could enhance oversight practices. Additionally, data related to project financing, risks, and benefits could be provided through a “Report Card” type concept that is employed by others in the transportation industry. Moreover, oversight bodies could better monitor the overall TransNet program with access to statistics related to project impact on travel time and congestion as well as project performance in terms of schedule and budget adherence.

Board and Transportation Committee Are Involved in Decision Making

From the inception of the TransNet program, the SANDAG Board has been designated as the final arbitrator in regional issues and continues to be appropriately involved in active governance and approval of program activities. Specifically, changes to project scope, schedule, budget and any other amendments to project concept as outlined in the SANDAG long-range and short-range regional transportation plans, are reviewed and approved by the Transportation Committee and the SANDAG Board. Based on interviews and reviews of Board meeting minutes, it appears that the Board is appropriately involved in its governance of the TransNet program and does not appear to provide “rubber-stamp” approvals. Moreover, acting in its capacity as an oversight and policy-advisory committee to the SANDAG Board, the SANDAG Transportation Committee engages in significant discussions of key aspects on project planning and funding priorities with committee members and considers public input before forwarding its recommendations to the Board for a formal approval.

Under provisions of the original 1987 TransNet Ordinance and its enabling legislation, the SANDAG Board, in its capacity as the Regional Transportation Commission, is authorized to allocate revenues derived from the excise tax per the terms of the ballot measure and consistent with the Regional Transportation Plan. As part of this role, the Board must approve an expenditure plan for all excise tax revenues that includes statutory provisions and a number of major capital corridor projects with road construction, highway improvements, and transit elements—a responsibility that continued with the passage of the TransNet Extension Ordinance in 2005. Since the voters extended the excise tax, SANDAG has collaborated with local jurisdictions and transportation partners to identify and refine specific projects and programs to be included in the plan. Nonetheless, the Board ultimately makes
the final decision to move forward with a plan as well as maintains the authority for any amendments to that plan or changes to the overarching vision of the TransNet program.

Decisions appear to be made and input considered at both an overall TransNet program level as well as at the individual project level. SANDAG and its partners routinely provide the Board with program and project information related to cost, scope, and schedule to enhance the process. For instance, data such as project updated budgets, environmental impact studies and related air capacity conformity analysis are presented to the Transportation Committee for incorporation into the Regional Transportation Plan. Also, we found that various parties pose rigorous questions relating to the impact of time delays on project budgets, underlying reasons for recurring requests for additional funding, and project management approach that serve to vet issues and assist in maximizing cost savings and ensuring cost efficiencies in project delivery. Appropriate elements seem to be considered as additional requests and inquiries are made of the Corridor Directors, Caltrans, and SANDAG executives participating in these meetings. Moreover, the SANDAG Transportation Committee and the ITOC often request additional information to explain reasons for augmented project funding and project-specific matters to attain a better understanding of the underlying issues and make fully informed decisions. Further, several options are typically reviewed and project additional costs and desired scope changes may be scaled up or down. Thus, we found a deliberative and thoughtful process is employed to allow the many alternatives and impacts to be considered—yet, it is too early in the TransNet program to conclude with certainty the quality of the oversight on ultimate outcomes.

Similarly, the SANDAG Transportation Committee, in its role to advise the SANDAG Board on major policy-level matters related to transportation, is also heavily involved in the TransNet program with its assistance in the preparation of the Regional Transportation Plan and making ongoing recommendations to the Board relating to key project scope, budget and schedule changes. During its monthly meetings, the Committee asks probing questions of SANDAG and its partners as part of the Transportation Committee’s governance over the timely and on-budget completion of projects. For instance, the reallocation of funds between different project phases on the SR-76 project and mitigating the budget shortfall due to a statewide shortage of funding from the State Transportation Improvement Program was considered with respect to the risks and potential impact on the overall TransNet EAP project delivery schedule and budget. Specifically, budgeted dollars for the SR-76 right-of-way were reallocated to the SR-76 Middle segment to augment the project budget and accommodate the environmental studies needs.

Other SANDAG committees also provide information and recommendations to the Board. One committee, the Regional Planning Committee, provides data and details related to needs assessment, plans, transportation goals, financing, and design components of the entire region that can be considered by the Board against the framework of the TransNet program.
Similarly, the Public Safety Committee advises the Board on matters related to public safety through collaboration, information sharing, effective technology, monitoring, and assessment.

**ITOC Efforts fulfill its Oversight Role**

Established in 2005 as part of the Ordinance, the ITOC was created to oversee the TransNet program and ensure activities are carried out in accordance with the Ordinance. The ITOC members, screened and selected based on specific professional expertise delineated in the Ordinance, have the following responsibilities:

- Provide an increased level of accountability for expenditures under TransNet Extension;
- Ensure all voter mandates are carried out as required in the TransNet Ordinance;
- Assist SANDAG in the implementation of TransNet projects and programs through professional expertise offered by ITOC members;
- Report to the SANDAG Board with regard to program and project delivery, and overall performance;
- Rely on project/program data furnished by SANDAG, and strive to improve the reliability of data, to improve the analytical and modeling processes;
- Facilitate a cooperative and productive working relationship between the ITOC and SANDAG implementation team;
- Assist SANDAG in finding opportunities to advance technologies and transportation developments; and
- Provide general oversight in terms of monitoring project schedules, refining TransNet performance measures, and assisting SANDAG in evaluating transportation system performance.

Since its inception, the ITOC has made significant achievements in fulfilling its defined responsibilities and provided much oversight of the TransNet program. For instance, operating under a set of by-laws to govern its oversight process, ITOC has implemented a well-developed meeting structure to support its project review and decision-making process. ITOC routinely receives a multitude of data and information from SANDAG and its transportation partners related to project specific activities, budget, scope and schedule updates, as well as financing information. Frequently, the ITOC members submit questions and concerns to specific SANDAG staff that relate to the members’ technical expertise and experience. For example, one ITOC member with environmental and engineering expertise requested supplemental information on the TransNet environmental mitigation program. SANDAG staff work diligently to address such requests from the ITOC.

Our observations of ITOC meetings and review of meeting minutes found the ITOC members pose appropriate questions and engage in meaningful discussions, such as inquiring as to effect of proposed budget and schedule changes on the overall EAP project delivery schedule when reviewing proposed project funding or bridge loans. Moreover, the ITOC’s
allegiance to the public’s trust and its commitment to work with SANDAG and partners in meeting TransNet goals over the last three years is unwavering. However, it is reasonable that some inherent conflicts might arise as the ITOC’s focus remains on TransNet only whereas the various approved projects also fulfill larger regional needs and goals.

SANDAG’s Broad Responsibilities Afford Regional Focus and Collaboration from Regional Partners

Unlike many of its local government peers, SANDAG’s authority is broad and includes several responsibilities outside of the transportation realm. While other regions have governmental entities carrying out similar transportation and regional planning duties as SANDAG, these responsibilities are typically distributed among multiple organizations. For instance, operating under several of its other designations as described in the Introduction of this report, SANDAG also makes regional transportation decisions based on quality of life factors, traffic safety, and smart growth concepts. Similarly, in its role as the Regional Transportation Commission, SANDAG is charged with administering the TransNet Extension Program and is entrusted with the following related transportation and transit responsibilities that allow for broader levels of planning and funding of regionally significant projects:

- Transit planning, programming, project development, and construction;
- Allocation of expenditures of federal transportation revenues as the metropolitan planning organization;
- Adoption of a congestion management plan as the congestion management agency;
- Plan and program of funds as the regional transportation agency; and
- Determination of the conformity of transportation plans with air quality plans as co-lead agency for air quality planning.

Originally formed in 1966, as the “Comprehensive Planning Organization” and in 1980 renamed SANDAG, the organization was charged with oversight and coordination of long-range transportation and regional planning across the urban area. In subsequent years, its responsibilities were broadened to include roles in areas such as transportation funding, transportation construction, and transit development—thus, forming a more complex entity. For instance, SANDAG’s role in planning and development of the transit transportation projects has changed significantly over the last several years. Specifically, in 2003, Senate Bill 1703 transferred responsibilities for transit planning, programming, development, and construction from the North County Transit Development Board and the Metropolitan Transit System to SANDAG.

Additional responsibilities were granted to SANDAG under the TransNet Ordinance that further provided and defined general roles and responsibilities over highway transportation planning, implementation, delivery, management and oversight. For instance, for major capitol corridor projects such as those defined in the early action program, SANDAG has authority to establish project eligibility criteria for funding under the Ordinance and must ensure that all TransNet projects are consistent with its near-term Regional Transportation
Improvement Plan and the longer-range Regional Transportation Plan—both plans that are ultimately approved by the SANDAG Board. As part of its authority, SANDAG approves project schedules and budgets and can amend the Ordinance expenditure plan, budgets, and priorities as needed to maximize federal, state, and local transportation funding for the region. This responsibility includes the ability to exchange or loan funds to augment the Regional Transportation Plan and ensure project delivery for the benefit of the region.

Because of its far reaching responsibilities over both planning and funding for both transportation and transit projects, unlike many of its local government peers, SANDAG is in the position to more easily encourage collaboration among its regional partners and, ultimately, make the final decision on initiating and completing regional projects. While coordinating its different roles and responsibilities can be challenging, this broad exposure affords SANDAG opportunities to consider and assist in the design of programs that envelop various projects that coordinate and accomplish several region-wide goals simultaneously. As a 2006 Legislative Analyst Office Report concluded, SANDAG has a greater ability to consider a wider range of options such as highway expansion, transit, or managed lanes in its allocation of funding and can “weigh service needs throughout its region.” This ability is of further value when factors such as San Diego population growth and continued geographic dispersion of employment and housing increase the complexity of commute patterns and demand more transportation flexibility and options. Moreover, due to the SANDAG Board and staff having a broader set of responsibilities, the State Legislative Analyst’s Office also believes it is better able to detect linkages among policies and pursue multiple objectives simultaneously—a feature benefiting the Regional Transportation Improvement program goals, and ultimately the TransNet Extension Ordinance provisions as well.

As demonstrated throughout the documents we reviewed and persons interviewed, major decisions on policies and projects are studied carefully by SANDAG and Caltrans staff with frequent and significant input from other transportation partners and stakeholders. Moreover, the Legislative Analyst’s Office found that SANDAG operates in a deliberative fashion placing emphasis on resolving disagreements and attempting consensus before issues reach the full governing board.

**Defined Roles and Responsibilities Foster Collaboration**

Given its position in the region’s transportation and transit development projects, SANDAG in conjunction with the Ordinance, has created a framework for the definition of roles and responsibilities amongst the key transportation associates to plan, develop, implement, and deliver TransNet projects. For instance, acknowledging Caltrans’ role in highway projects, the Ordinance establishes a shared responsibility in that all state highway improvements, including project development and overall project management, shall be a joint responsibility of Caltrans and SANDAG. It further stipulates that all major decisions regarding project concept, scope, location, budgets and timelines are to be agreed upon by both SANDAG and Caltrans. For transit projects, although SANDAG is responsible for delivery of the transit component of TransNet projects, local transit operators MTS and NCTD are also involved in the planning of transit projects and work closely with SANDAG on project delivery to ensure an effective network will be sustainable once in operation. The oversight structure is depicted in Figure 3.
Guiding the involvement of the different and unique government entities are several master agreements and memorandums of understandings (MOUs) between SANDAG and each entity. For instance, one master agreement and subsequent supplemental agreements discuss the sharing of roles and responsibilities between the State (Caltrans) and the Transportation Commission (SANDAG) including the provisions surrounding project preliminary, development, and oversight services, the creation of a new project delivery structure, and establishment of director positions and their specific responsibilities for timelines and budgets, as well as an outline of the scope of work agreed upon for the EAP projects. Additionally, there are project specific MOUs that are created between SANDAG and primarily Caltrans that contain more granular detail of responsibilities and tasks in addition to cooperative agreements over the street and highway areas that involve multiple jurisdictions.
Combined, these written documents provide a solid albeit complex basis from which each entity operates within the TransNet network that designates accountability and responsibility of each. We found the MOU documents to be clear and contain a sufficient level of detail to guide actions. To address instances of disagreement or dispute resolution, SANDAG created a written conflict resolution plan outlining the protocol for resolution. Specifically, once a conflict is identified at the project level, the plan requires discussion among project staff; if unresolved, the conflict may then be elevated through additional levels including project manager, corridor director, executive management, the Transportation Committee and ultimately the SANDAG Board. To avoid the elevation of issues to the Transportation Committee or even Board level, SANDAG and Caltrans have instituted informal meetings where the Executive Management team, Corridor Directors, and project managers meet after work hours to renegotiate issues and diligently seek consensus. These meetings are on an ad-hoc basis in addition to other regularly scheduled project meetings. Over these initial years of the ordinance, the plan appears to work as intended in resolving disagreements.

With just three years into the TransNet program, we found an apparent true sense of communication, collaboration, and commitment among parties afforded through not only the written agreements established, but also through standard practices employed designed to seek buy-in and agreement of project team members and oversight players. The processes employed call for involvement of external entities at critical points; for instance, entities such as MTS and NCTD are involved at the global planning and strategic level as well as participation as members on individual project development teams as needed.

Part of making the TransNet program a success is ensuring that all parties are working well together and issues impeding effective cooperation are promptly resolved. An ongoing and inherent challenge for TransNet remains maintaining open communication between all project stakeholders and addressing and resolving issues as they arise and in a timely manner. For instance, factors such as the variability of available funding, construction price fluctuation, or depressive market conditions make the need for close communication and collaboration essential to address project delivery. We found that frequent communications occur between and amongst SANDAG management and its transportation partners, project staff on individual teams, and the ITOC and the Board to coordinate and seek buy-in of changed approach to cope with such economic changes.

Executive management from all entities meets formally and informally with project team members and Corridor Directors to ensure communication is unrestricted and collaboration is ongoing. Yet, there appears to be an appropriate balance between staying involved and avoiding micro-managing the project team. The communication structure in place seems to avoid potential disconnects between staff and management as well as between management and the Board with all team members brought into decisions at the appropriate point and level. Moreover, many staff involved with the TransNet program have previously worked with several of the agencies involved and, thus, have a common understanding of various organizational cultures and business practices that facilitates the day-to-day staff interactions. Several MTS and NCTD developers now work at SANDAG as part of the legislatively mandated transfer of responsibilities and a number of high-level SANDAG employees are former Caltrans employees.
SANDAG and Caltrans Relationship Creates Synergies

The successes and track record of the original TransNet seem to have set the stage for the unique partnership between SANDAG and Caltrans that continues today at the onset of the TransNet Extension Ordinance—a much larger scale and scope program. Over the years, SANDAG has hired several key design and construction management executives who previously worked for Caltrans; thus, bringing on intimate experiences and systems knowledge that becomes critical in delivering projects that are often co-delivered by SANDAG and Caltrans. Management and staff from both agencies operate as a cohesive team focused on a shared goal, rather than exercising parochial decisions benefiting one entity over another. This synergy seems related both to the specific entrepreneurial spirit of the individuals involved as well as to practices developed to guide delivery of the program.

While the California Public Utilities Code mandates that the Caltrans San Diego District 11 coordinate with SANDAG for all projects where the entities have common planning or programming responsibilities, SANDAG could enlist other public or private contractors to undertake project development activities. This state and local commitment and enduring relationship was formalized in the 2005 Ordinance that states all state highway projects, including project development and overall project management, are determined as a “joint responsibility of Caltrans and the Commission.” For instance, within the TransNet program, all major decisions regarding project scope, budgets, and timelines are agreed upon by both SANDAG and Caltrans before moving forward to seek Board approval. Alternatively, our reviews of the similar regional transportation programs, such as the Arizona Department of Transportation’s regional transportation sales tax program, show that other regional programs outsource much of the highway construction to private consultants, whereas the existing SANDAG delivery model involves heavy reliance on the Caltrans construction expertise in project delivery. This reliance appears to create a synergy between the entities and a strong collaborative environment with other regional transportation partners.

Generally, the Caltrans and SANDAG management work closely together in coordinating efforts on TransNet projects. There are frequent formal and informal meetings among staff at both entities and at various executive and project management levels that provide multiple opportunities for exchange of information, ideas, and problem solving. Formal meetings are documented with action items and records of agreements reached. Although the vast majority of design and construction on the current EAP projects has been delivered by Caltrans project managers, SANDAG also employs design and construction staff. Together, the two entities strive toward achieving TransNet goals by following similar project management techniques and approaches.

Corridor Director Structure Enhances Accountability

Over the last three years, a key component of the TransNet project delivery strategy is a concept using Corridor Directors responsible for the development, implementation, and delivery of projects located within a defined freeway corridor. While the TransNet program requires the collaboration of many individuals and entities with varying levels of authority and project involvement, each Corridor Director is charged with ultimate accountability to ensure the project is delivered per the scope, within budget, and on schedule.
Our review revealed that the Corridor Director approach employed helps streamline coordination of efforts among various project managers and functional teams and other municipal entities on a given corridor. For example, the Corridor Director on the I-15 corridor serves as a single point contact for Caltrans and SANDAG project managers and staff. While the I-15 highway project has a transit component, SANDAG has a Transit Project Manager who reports to the Caltrans Corridor Director to ensure closer monitoring and oversight of all projects within the corridor. Detailed and specific responsibilities of Caltrans Corridor Directors and Transit Project Managers are outlined in the joint SANDAG-Caltrans supplemental amendment to its Master Agreement guiding TransNet projects. Currently, three of the four Corridor Directors are Caltrans district employees and one is employed directly with SANDAG.

The performance of Corridor Directors is motivated by higher salaries subsidized by SANDAG. Specifically, provisions of the position include a salary step increase financed by SANDAG based on an annual performance evaluation. The evaluation form has a self-assessment feature along with opportunities for SANDAG’s Mobility Director to document areas for improvement. Executives from both SANDAG and Caltrans review Corridor Directors’ performance and provide feedback in management areas such as:

- Controlling costs and economical utilization of staff time, resources, and equipment;
- Developing and maintaining resource-loaded project schedules and meeting milestones;
- Coordinating team member roles and responsibilities and communicating objectives clearly;
- Identifying issues that can affect deadlines, scope, or budget and resolving them timely; and
- Ensuring plans are effectively carried out.

Included in the reporting structure for monitoring EAP project deadlines and budget schedules, TransNet project management and functional teams from both entities convey project status directly to the Corridor Directors empowered to make binding decisions regarding the project activities which facilitate timely and efficient progress of projects. This single point of responsibility structure appears to be good business practice, particularly combined with the high level of cooperation and coordination of efforts among the Caltrans and SANDAG project managers and executive team. Further, a consistent flow of communication between the Corridor Directors and executive management teams at SANDAG and Caltrans through weekly, monthly, and quarterly meetings and written reports allows for adequate review of issues and proactive issues resolution approach.

Over the past decade, national trends in the transportation industry have moved more toward integrated approaches to transportation solutions, both as they relate to the inclusion of various stakeholders in project development, as well as with regard to the phases of project development. Specifically, we found that SANDAG’s Corridor Director structure conforms to a significant degree to two of the industry’s best practices—cradle-to-grave or single-point project management, and the integration of various disciplines and stakeholders in project...
development and management. Having a single person, or team of persons, responsible for managing the project from inception to completion results in improved understanding of total costs and impacts of proposed projects, and enables timely tracking of concurrent activities and monitoring of project schedule.

TransNet Program Overseen at the State, Federal, and Local Levels

All TransNet funded projects undergo standard programming, budgeting, and prioritization cycles as part of the regional short-term and long-term transportation planning processes mandated by State and Federal statute. Specifically, the TransNet project programming documents prepared by SANDAG staff in coordination with local entities and reviewed by the SANDAG governing board and transportation committee at least annually and incorporated into the following transportation plans to meet various state and federal statutory requirements:

- SANDAG annual Capital Improvement Program
- Local five-year Regional Transportation Improvement Plan
- State five-year State Transportation Improvement Plan
- Federal four-year Federal Statewide Transportation Improvement Program (FSTIP) and Federal Transportation Improvement Plan
- Local 30-year Regional Transportation Plan
- Local Regional Short-Range Transit Plan

The project programming process requires various levels of careful preparation, management, and administrative oversight by SANDAG and its local jurisdictional partners to meet state and federal provisions prior to receiving funding authorization. Many of these requirements demand project elements with typical internal controls, effectiveness in outcomes, quality products and practices, and solid business practices. For instance, state and federal funding for programs related to regional surface transportation and traffic congestion relief include requirements related to traffic congestion studies, air quality conformance, tracking and reporting of allowable activities and expenditures, and public notice of planning document amendments to name a few provisions—all features that promote greater accountability.

Because all TransNet transportation and transit projects are funded through a combination of state, federal, and local excise tax sources, project activity is subject to oversight and audits from state and federal entities to ensure money is spent in accordance with funding provisions and projects are carried out as prescribed in state and federal legal requirements. For instance, federal funded projects are subject to periodic reviews by the Federal Transit Administration and the Federal Highway Administration as well as required to undergo independent annual financial audits. Additionally, as part of its funding allocation process, the California Transportation Commission reviews project data including support costs and changes to project costs, scope, and schedule as reported by SANDAG and Caltrans.
Moreover, both SANDAG and Caltrans are subject to internal and external audits of operations, project delivery, and program expenditures. The various audit requirements are described as follows:

- **Federal Transit Administration**—Recipients of federal transit grants must obtain annual audits to assure grant funded projects are delivered in accordance with federal requirements. On a triennial basis, the Federal Transit Administration audits the grantee on their performance on planned project implementation and compliance with statutory and administrative requirements.

- **Federal Highway Administration**—This federal identity mandates recipients of Transportation Infrastructure and Innovation Act funding to acquire annual financial audits that are reviewed by the federal team.

- **SANDAG Internal Audits**—Established in 2007, the Internal Audit function performs reviews on an as-needed basis as well as under an annual defined audit plan. During Fiscal Year 2007-2008, the Auditor reviewed pre-contract award activities, task order solicitation processes, and project specific financial activity.

- **Caltrans Internal Audits**—Caltrans’ Audits and Investigations Division reviews SANDAG’s Indirect Cost Allocation annually, as well as conducts internal audits of the Caltrans San Diego district’s internal controls over local procurement practices and use of state, federal, or local funding streams.

- **Bureau of State Audits**—Responsible for the Single Audit of California, the Bureau of State Audits review encompasses Caltrans’ compliance with federal program provisions over activities such as land acquisition practices, right of way, indirect costs, resident engineer activities, procurement and contracting, use of transit equipment and facilities, and allowable activities and project expenditures.

- **Annual Financial Audits**—Contracted by the ITOC, annually an external Certified Public Accounting firm conducts a financial statement audit of SANDAG that includes reviews of financial activity, operational internal controls, and separation of duties.

- **Triennial Performance Audits**—Under provisions of California Public Utilities Code, SANDAG is subject to a triennial independent performance audit of its role administering state transportation development act funds as the regional transportation planning agency. These audits evaluate the effectiveness and efficiency of SANDAG with respect to transportation planning and regional coordination, fund administration and management, grant applications, and claimant oversight. Additionally, the ITOC contracts for a separate triennial performance audit of the TransNet program.

- **Periodic Local Audits**—SANDAG is also subject to other periodic audits. For instance, in March 2008, the County of San Diego Office of Audits and Advisory Services conducted a Grand Jury Audit of SANDAG’s internal control over the TransNet program grants and whether TransNet program administration was properly designed and implemented.

Thus, throughout a project’s lifecycle, state and federal staff will audit, review, question, and investigate SANDAG’s and Caltrans’ practices, delivery, and expenditures. While these
inquiries may not be isolated specific to local TransNet sales tax funding, the oversight of transportation and transit development projects would encompass TransNet funded projects. In addition to the annual financial audit of SANDAG overseen by ITOC as well as the triennial TransNet performance audit process, the activities and performance of SANDAG and Caltrans are being overseen and reviewed at various levels.

To ensure that the ITOC stays informed and abreast of all related audits in progress and completed, SANDAG and Caltrans could provide status updates outlining existing audit requirements, scope of audit work, results of audit efforts, corrective actions planned or taken, and outstanding findings and unresolved issues as they relate to the TransNet program.

Management Reports Would Strengthen Oversight and Enhance Decision Making for All Partners

As part of its program practices and focus on transparency, SANDAG and other regional transportation and transit entities routinely prepare and provide vast amounts of detailed data, reports, and graphs describing individual project status of expenditures, schedule, scope, tasks, and issues. At monthly meetings, these oversight groups receive a multitude of data and graphics discussing project funding, budget amendments, finance status, and right-of-way acquisition approaches to maximize resources. While this wide array of detailed, competent, and reliable project data is valuable, the vast volume and breadth of these materials makes assimilating and using such information challenging especially for advisory board members. SANDAG could assist by gathering such raw data and converting it into management reports for the Board, Transportation Committee, and ITOC to aid decision making. Specifically, additional data needed by management includes the following:

- Project and Program “Report Cards”
- Performance Indicators and Targets
- Financial History and Status Data
- Administrative Tracking Tools

While ITOC does not have a direct role to manage TransNet projects, its responsibilities as outlined in the Ordinance suggest that it continuously review and track TransNet performance progress and recommend ways to improve program effectiveness and efficiency—responsibilities that could also be implied to the SANDAG Board and Transportation Committee. The ITOC relies on the information provided by SANDAG staff related to project performance; thus, the quality and type of information made available to the ITOC is critical to reaching sound decisions with meaningful impact on program performance monitoring. Although the ITOC had to rely extensively on SANDAG staff during its formation, it should now determine the type of data it needs to provide appropriate oversight. Building upon the examples of management data we believe is important for those charged with program oversight, the ITOC should identify the requisite information it would like to see from SANDAG and project partners within reason. Moreover, the ITOC should identify and select the specific individuals or other entities to provide them with regular status reports and data.
A Report Card Feature Could Provide a Quick Snapshot of Project Status

For instance, SANDAG could provide a one-page high level summary, or “Report Card,” on each transportation project describing project budget and schedule by phase, project performance measures, financial assumptions and highlights of project changes to scope, schedule and cost. Other transportation entities provide similar project status reports to their oversight entities; for instance, the Nevada Department of Transportation provides a one-page summary for each project as shown in Figure 4, describing elements such as:

- Project scope and description
- Schedule, highlighting major milestones and progress toward each
- A “What’s Changed Since Last Update” feature in terms of scope, schedule, and cost
- Project benefits which tie to region-wide performance measures such as improving travel times, land use, and environmental mitigation efforts as well as progress toward meeting the goals
- Cost ranges for project showing acceptable or planned ranges for each project phase, including engineering, right-of-way, constructions, and total anticipated project costs
- Project risk, including potential price escalation and construction delays
- A “Financial Fine Points” section describing financial assumptions on an existing project

Providing similar summarized data for the ITOC and other decision makers into a “Report Card” would help in assimilating the disparate details into a quick snapshot of individual projects in a centralized location that could be combined and viewed for the TransNet program in its entirety. In addition to the data suggested on the Report Card example in Figure 4, valuable management data that should be provided includes budget-to-actual detail, project funding sources, and project performance indicators as discussed in the next section. After considering project specific details as they do now, the ITOC and others could monitor multi-faceted project activities and decisions against the higher-level project blueprint. Thus, the ITOC and other oversight bodies should work with SANDAG to identify the desired information to be included to provide a valuable resource and tool to better fulfill oversight responsibilities.

While SANDAG prepares and distributes quarterly reports to the ITOC and other oversight bodies in accordance with the Ordinance that summarizes status of TransNet projects and provide some Report Card-type elements, our review revealed that the level of project detail is incomplete and insufficient to evaluate cumulative effects of project budget and schedule changes or identify possible trends or reoccurring issues. Several projects included on the reports, such as the SR-52 high occupancy vehicles and managed lanes project, did not identify projected completion dates or project schedule status. Moreover, although project documentation indicated the project was shelved and funding was reallocated to a different SR-52 project, the quarterly report did not summarize the evolution from the Ordinance through project decisions made over the last three years to the current project budgets in place. SANDAG should work its oversight bodies and provide on-going and historic budget information for projects included in the TransNet program that summarize key project-
specific decisions made that impact or revise scope, funding, or schedule. This data would better allow those charged with oversight to track current program status with original Ordinance direction.

Figure 4: Example of a “Report Card” Format Used in Nevada

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I-15 North – Phase 1
I-15/US-95/I-515 Interchange to Craig Road

**Project Sponsor:**

**Project Manager:**

**Project Description:**

- This is the first phase of the I-15 north corridor improvements between US-95 and Apex interchange.
- Widen I-15 from six lanes to ten lanes from US-95 to Lake Mead Boulevard, including re-alignment of on and off ramps for the US-95, Washington and D Street Interchanges.
- Widen I-15 from eight lanes to ten lanes from Lake Mead Boulevard to Craig Road.
- Reconfigure the Lake Mead Boulevard Interchange.
- A new connector road linking D Street and F Street between I-15 and Bonanza Road.

**Schedule:**

- Planning: Complete
- Environmental Clearance: Complete
- Final Design: 2007-2008
- Construction: 2008-2010

**Project Cost Range (Construction Level Estimates):**

- Engineering: $5.1 million
- Right-of-Way: $1.2 to $5.1 million
- Construction: $252 million
- Total Project Cost: $258 - $263 million

**What’s Changed Since Last Update?**

- Scope – No change
- Schedule – No change
- Cost – No change

**Financial Fine Points:**

- Total Expended: $25 Million
- Funding Source Breakdown:
  - $114 Million State General Funds, $72 Million State Funds
  - $6.5 Million STP
  - $23 Million Minimum Guarantee
  - $25 Million Federal Earmark
  - $317 Million NHS, $7 Million Public Lands Highway Discretionary
  - Inflation escalation (4%) is to 2009, approximate midpoint construction.

Source: Nevada Department of Transportation
Overall, the data elements key to a Report Card are currently available in a variety of disparate project files, reports, and locations throughout SANDAG and Caltrans—as a result, compiling the detailed project information into a Report Card format should not prove overly burdensome.

**Project Performance Statistics should be Tracked and Communicated**

Additionally, data reflecting key project milestones and performance statistics could be summarized or put into matrices for tracking period-to-period for the program overall, as well as at a corridor or segment level. These key milestones may include schedule adherence and budget status on projects by phase and key performance goals and target milestones for the year. By establishing and consistently reporting these simple project delivery indicators, the ITOC members could better evaluate program accomplishments from a global position as well as at a more detailed perspective for projects as necessary. Further, summaries of project status reports, including budget and schedule targets compared to actual performance, could be provided on an ongoing and updated basis allowing the ITOC to monitor overall program adherence to the Ordinance and assess the overall program impact from compiled project budget and schedule deviations. Such statistics could better allow oversight bodies to filter through the multitudes of detailed data currently provided and make oversight decisions based on ultimate TransNet goals such as cost-effective congestion mitigation rather than getting diverted on decisions at the project activity level.

ITOC members indicate interest in receiving such management information such as program summaries as evidenced by a recent request to have a comparison between budgeted costs per the Ordinance with project expenditures to date that could be placed in ITOC’s annual report. Trending this data as well as developing and tracking robust performance data could assist various interested parties in identifying schedule and budget changes as well as allow tracking of such activities throughout the year. Moreover, SANDAG should develop specific program-wide performance measures that would help underscore SANDAG’s progress towards meeting program objectives such as levels of reduced congestions, project cost per mile, and percentage of projects completed on time and on budget. Adopting meaningful performance measures would help create greater transparency and visibility among responsible Caltrans and SANDAG parties in charge of program implementation strategy. Improvements to performance measures and summary data that could enhance accountability are discussed in more depth in Chapter 2 of this report.

Existing SANDAG information technology systems currently capture key project and program data, including major capital construction schedules, budgets and actual expenditures. Coordinating and tracking this from project cradle-to-grave at a high level would provide valuable budget to actual comparisons that would reflect original milestones and revised schedules.

**Financial History and Status Information is also Needed**

In addition to project specific Report Card data, budgets, actual expenditures, and cost efficiency performance indicators, we believe oversight would be enhanced by providing management data related to the history or evolution of a project’s budget over time that could
be used to track key project changes in scope, schedule and budgets. Because of the frequent movement and reprioritization of projects and sub-projects to accommodate funding constraints, a document summarizing changes made against original Ordinance projections would assist with oversight. A more detailed discussion of this document is presented in Chapter 3 of this report.

Moreover, to assist the ITOC and other oversight entities in monitoring whether TransNet revenues are appropriately spent and tracking how projects are performing, it would be valuable for the ITOC to receive quarterly data related to sales tax revenues collected during the quarter, collected to date, and amounts distributed to the various Ordinance projects (e.g. major capitol corridor I-805), programs (e.g. bicycle projects), and entities (e.g. individual cities’ local road projects). Although our audit found that SANDAG diligently tracked sales tax revenues expected and received as well as appropriately distributed the revenues in accordance with Ordinance provisions, it currently does not provide that data to the ITOC.

**Better Administrative Tools Could Enhance Decision Making**

Combined with the multitude of detailed information provided, the additional Report Card and performance measure data should also be tracked and managed on a quarterly and annual basis. To assist the ITOC and other entities, the project specific Report Card or other management data could be summarized monthly and annually to identify trends or issues. Comparisons between years could provide tools for stronger oversight through the use of these overarching indicators of TransNet program progress and success as well as serve as the framework against which the ITOC could weigh individual project activity decisions to be made.

As the TransNet program continues to launch other Ordinance features including smart growth, environmental mitigation, and grant programs, useful tools to track data and decisions will become more critical. To better track ITOC decisions or issues resulting from monthly discussions, one or more matrices summarizing items resolved as well as those action items carried forward to subsequent meetings could be developed and maintained as part of the monthly meeting minute format. With owners assigned as well as timeframes for completion, action items could be tracked and progress updated at subsequent meetings. The administrative tool memorializes prior months’ discussions, decisions, and oversight provided into a convenient table that can be referenced and shared with new ITOC members as they join the committee. Other tracking documents could be implemented that would assist the ITOC in tracking outstanding concerns or issues and monitoring resolution. Each ITOC member currently tracks prior dilemmas or decisions on an individual basis or through the review of past meeting minutes.

Additionally, at monthly meetings, standard agenda categories could be established to ensure all critical TransNet areas receive the oversight focus needed in addition to project-specific activities. Suggested categories could include those presented in Figure 5.
Moreover, the ITOC may want to establish protocols providing specific time allocations allowing for adequate deliberation prior to decisions rendered for the more critical areas with high-dollar or high-profile impacts.

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<th>1. Sales Tax Revenue Collection and Distribution</th>
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<td>✓ TransNet dollars collected and spent</td>
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<td>✓ Quarterly and To-Date Collections</td>
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<th>2. TransNet Program-wide Areas of Interest</th>
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<td>✓ Other Funding Sources Available for Projects</td>
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<td>✓ Regional Transportation Plan Items</td>
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<td>✓ Program Performance Statistics</td>
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<td>✓ EAP Project Performance Statistics</td>
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<td>✓ Funding Recommendations Needed</td>
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<td>✓ Smart Growth Incentive Program</td>
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<td>✓ Local Cities and County Projects</td>
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<td>✓ Triennial Performance Review</td>
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<td>✓ Other On-Going External Audits</td>
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**Figure 5: Suggested ITOC Agenda Areas**
Chapter 2: While Solid Management over TransNet Exists, Greater Performance Monitoring and Reporting Would Further Promote Accountability

Although efforts on the Ordinance have only been underway for a little more than three years, SANDAG and its partners have already implemented many solid controls and practices to help ensure the delivery of major corridor highway and transit projects promised on schedule and on budget. Specifically, SANDAG has demonstrated through the TransNet Extension program activities:

- An accountable environment set by management’s “tone at the top;”
- Defined tools and processes to monitor program and project development, performance, and results; and
- A robust public accountability structure reporting on project results, including progress made on freeway segments and budget to actual expenditure comparisons that are available online for public view.

Throughout all highway and transit project efforts, management attitudes and actions at both SANDAG and Caltrans have created a culture providing a coordinated flow of information between and within SANDAG and Caltrans for overseeing program-wide finances and administration, consistent communication and information sharing between executive management teams at SANDAG and Caltrans, deliberative processes employed to consider critical elements, and staff openness to continual improvements and constructive criticism. Executive management’s “tone at the top” embodies practices encouraging review, controls, justification, buy-in, and accountability of actions and outcomes.

To assist in controlling overall program as well as individual project performance, SANDAG and Caltrans utilize several processes and automated tools to track budgeted costs and schedule data against actual results. Moreover, reliable management information is provided through the use of automated schedule software that tracks individual tasks, effort, and milestones for all projects at the discrete task level as well as for the critical path elements. Financial systems, databases, and spreadsheets following a common project numbering scheme between SANDAG and Caltrans systems provide critical budget and expenditure data to monitor project performance.

Project data from SANDAG and Caltrans is consolidated through a data warehouse concept created by SANDAG that efficiently streamlines data collection by interfacing with individual systems to summarize program and project status. This database, known as the Dashboard, is an automated project budget, schedule, and progress reporting tool used by internal project teams and members of the public as well. Not only is the Dashboard used to track schedule progress and budget to actual expenditures, but it also increases transparency and controls with the public’s availability to performance data and their need to ensure project decisions are prudent, justifiable, and in the public’s best interest.
Generally, financial and schedule related data maintained in the Dashboard is reliable and supported by underlying source documentation. Yet, our review also found that while the Dashboard provides a good framework for online reporting of project status, older budget and expenditure data included for certain projects may skew data. Additionally, while SANDAG designed the Dashboard to function as an integrated budget and schedule tool where EAP project performance and progress could be monitored, not all early projects are included within the Dashboard data. Thus, SANDAG should revisit its intent and vision for the Dashboard to determine whether it should report on all Ordinance programs such as non-capital construction projects including transit operator funds and environmental mitigation efforts. Other enhancements could be made to the Dashboard including defining and consistently applying percent of completion estimations as well as summarizing some performance indicators that could be used to monitor progress—such as percent-of-work completed compared to expenditures to date or percent of support costs to capital construction.

Finally, SANDAG could enhance accountability and transparency by incorporating concrete performance goals and targets to measure project outcomes as well as performance efficiencies into a defined performance monitoring system. While SANDAG has established general goals as part of its Regional Mobility Plan and regional transportation plans that it is starting to track through its performance monitoring system, TransNet program goals could be more clearly defined through objectives linked with specific performance measures. For instance, a broad goal to “improve mobility” could be redefined by an objective “to increase transit ridership by 10 percent by 2010.”

In addition to more clearly defined effectiveness measures, SANDAG should establish goals, strategies, and performance measures to track program and project delivery efficiency indicators related to hitting targets on meeting delivery milestones, staying within certain percentages of cost estimates, and reducing support costs and overhead by set amounts. We believe that setting meaningful goals and tracking performance against those goals can help highlight potential areas in need of improvement, hold project owners accountable and economical, and demonstrate performance to the public. Once program-wide performance data is collected by SANDAG, it should be made available to Corridor Directors and their project management team as well as communicated to governance boards and the ITOC.

Management Structure and Tone Provides Coordination and Control

To guide and manage TransNet program and project delivery over the EAP major corridor capital highway and transit projects, SANDAG has created an effective structure between its own executive management, internal SANDAG program officers, and Caltrans executives and managers that demonstrates control and coordination over activities and information.

Specifically, the Executive Directors from both SANDAG and Caltrans empowered each project team member to make appropriate decisions, based on assigned responsibilities and authority provided, and operate under a documented conflict resolution process to address and elevate any project issue that cannot be solved at a low level. Another designated SANDAG employee, the TransNet Program Manager (Program Manager), is
responsible for managing and coordinating the efforts of various entities involved with planning, development, and implementation. On both an informal and formal basis, the Program Manager regularly communicates and coordinates with SANDAG executives on program and project implementation status. Standard meetings are held on a monthly and quarterly basis, as well as more informally as needed, to share actual performance against budgeted plans and discuss project detail with other functional departments in SANDAG such as Finance and Mobility Management and Project Implementation.

Because SANDAG and Caltrans practice a cooperative and coordinated “tone at the top,” both agencies work well together to create solid budgets and schedules, obtain adequate buy-in and approvals, and require strict record-keeping to document staff decisions made and related justifications. Because of the far reaching regional approach to the transportation planning and project implementation that permeates the SANDAG organization, Caltrans is a fully vetted partner in programming and executing the Regional Mobility Plan. Additionally, as shown in Figure 6, the TransNet program also operates two Project Offices—one at SANDAG and one at Caltrans—both syncing efforts in coordinating the flow of information between the entities to oversee program-wide finances and administration.

**Figure 6: Program Management Structure**

Specifically, each TransNet Project Office Manager is responsible for developing and implementing tools and techniques to monitor the program-wide budget and schedule as well as report progress and delays to executive management, SANDAG Transportation Committee, and the ITOC. In this role, the TransNet Project Offices work closely with
Corridor Directors and individual project managers to track project budgets and ensure that all resources necessary as identified by the Corridor Directors are available at the program and project levels. Staff from these offices participates on and support individual project teams in weekly meetings where information on budget and schedule is discussed, as well as program-wide meetings with SANDAG executives and functional staff from other SANDAG departments. These frequent meetings provide additional controls whereby management can review underlying data, buy-into project approaches, and provide approvals where necessary.

While executive management is closely involved in overseeing and guiding the program, management also relies on a Corridor Director approach for ultimate accountability and management of individual project delivery. This approach streamlines coordination of efforts among the various project managers and functional teams as well as with the other municipal entities and consultants working on a given corridor. Each of the five Corridor Directors functions as a central point of responsibility and contact for projects along a particular corridor and together provide a high level of cooperation and coordination between the directors, their project managers, and the executive team. Frequent daily communications and both weekly and monthly project development team meetings are part of the project delivery framework provide on-going project status updates, deliberation of practical approaches to ensure projects stay on schedule and on budget, and open communication for solutions to mitigate issues when they do arise.

Further, there is a consistent flow of communication and coordinated information between executive management teams at SANDAG and Caltrans through weekly, monthly, and quarterly meetings in addition to written reports allowing for review of issues and a proactive issue resolution approach. Additionally, there are weekly project development team meetings that include project managers, Corridor Director, project consultants, and Project Office representatives from SANDAG and Caltrans in addition to weekly team meetings between project managers and functional managers regarding areas such as environmental, right of way, or design matters. Control features of these meetings include management’s review of budget and schedule status, involvement in evaluating contract selection, monitoring of project tasks, and approval of project activities. More informal meetings are held with Caltrans and SANDAG executive and management staff on an as needed basis to discuss and resolve any project issues as they arise. Thus, several controls are in place to ensure management is aware of budget and schedule issues to direct the quality of project activities.

As part of the tone at the top and collaborative spirit embraced on the TransNet program, we found that both SANDAG and Caltrans appear focused and open to continual improvements and constructive criticism. For instance, in 2005, SANDAG and Caltrans jointly embarked on an initiative to have an external consultant conduct an analysis of existing processes.
currently in place at the two entities. Several recommendations were made to better ensure the successful delivery of the TransNet program. Specifically, the consultant prioritized and recommended actions in areas including organization structure, scope and cost estimates, external reporting system, project expenditures, schedule management, quality assurance and quality control including value analysis, earned value, and document control.

In the two years since the completion of the external consultant’s review, SANDAG and Caltrans have made significant progress to incorporate nearly all of the recommendations—many of which required considerable efforts and innovation to secure buy-in of approach and implementation. For instance, the assessment suggested the entities alter their typical project delivery organization structure into the new corridor director approach that currently is employed. Additionally, SANDAG and Caltrans defined roles and responsibilities for all TransNet related staff and documented a formal decision-making process outlining a change management and conflict resolution framework.

SANDAG implemented another noteworthy accomplishment in 2006 with the development and application of the “Dashboard” web-based concept that offers on-demand access to summary snapshots of the TransNet program, corridors, and segments related to budget, cost, schedule, progress, and status. In conjunction with an external vendor, SANDAG designed this system for increased public transparency as well as use by internal project managers in their project level oversight to help identify potential risks and needed changes to budget, scope, or schedule. SANDAG and Caltrans also embraced a recommendation to use an automated middleware solution to translate the different scheduling tools used by the entities—Primavera and Microsoft Project—onto a common platform allowing for cross-project integration and analysis. Additionally, both entities created a shared project numbering system to map financial data from Caltrans’ accounting system and SANDAG’s fiscal system into a consolidated project number and incorporated into the Dashboard.

Moreover, previously implemented recommendations are now being reassessed and enhanced to provide additional levels of value to the program framework. As part of its reassessment, SANDAG should revisit 2005 recommendations made, but not yet incorporated into TransNet. For instance, one recommendation we believe has merit relates to the need for document control and using automated tools. Applying a “data warehouse” concept for controlling and sharing all critical project data would be useful to track key project performance indicators and serve as a data repository system containing information to assist in the project planning in the future. Additionally, SANDAG and Caltrans should continue working together to improve the Dashboard system functionality ensuring that meaningful and reliable data are gathered as part of the daily management processes.

**Automated Tools and Practices Improve Management and Assist in Monitoring Project Performance**

Similar to other transportation development entities, both SANDAG and Caltrans rely on automated tools to track and analyze budget and schedule data to manage TransNet projects. For fiscal information, SANDAG relies on its Integrated Financial and Administration Solution (IFAS), while Caltrans mines its data using its Financial Data to Oracle (FIDO)
intermediary to interface with its Transportation Accounting and Management System (TRAMS) accounting system. Both databases provide real-time project level fiscal data that project managers use to monitor project costs. Additionally, project managers use industry standard automated project management scheduling tools—either Primavera or Microsoft Project—to track and manage project phases, critical path, sub-project tasks, and milestones. Thus, while TransNet projects are delivered collaboratively by SANDAG and Caltrans with project management teams at both controlling various fiscal and schedule aspects of a larger project, the two entities employ slightly different or unique project management, data recording, and reporting tools. Recognizing that these differing tools could potentially cause difficulties in sharing electronic project data, SANDAG contracted with an outside consultant who developed the Dashboard system to achieve efficiencies and compile the TransNet project data from both entities.

Monthly, project fiscal and schedule data are consolidated into the Dashboard—online viewers can access the data warehouse to obtain budgets, actual costs, schedules, and key milestones at the TransNet program, corridor, and segment level. Data from each entity is extracted via a custom-developed automated interface that uploads information into the Dashboard, thereby reducing the need for manual preparation of reports to summarize activity by project.

Although the Dashboard provides the public information at the overall program level, by corridor level, or at the individual segment level, the Dashboard also contains an internal project team feature allowing users to drill down into detailed expenditure data at a project level or pull up detailed Primavera schedules for a project to better understand summarized results. For instance, while the public will see an expenditure amount for design, internal users can get more specificity such as design costs broken into individual project elements such as consultant charges, project management expenditures, and permit fees. Thus, the Dashboard allows project managers to access consolidated TransNet project data from various entities and sources in one single database; record project events and milestones as they occur; update budget and schedules as necessary; identify remaining time and budget on projects; and provide funding information updates.

Dashboard Concept also Enhances Focus on Accountability

Using a concept employed by the State of Virginia, SANDAG’s “Dashboard” not only provides transparency to the public, but also promotes greater accountability within its organization. This interactive tool allows the public to obtain timely information about corridor or individual project status, budgets, and schedules at a level of detail commensurate with their personal interest. Generally, the vision and goals of the Dashboard system are two-fold—to provide current information on TransNet projects to the public and to develop an internal project management tool in a variety of project functions. The Dashboard consolidates data from various sources, records project events and milestones as they occur, and identifies remaining resources including time and budget needs to deliver the projects.

One of the Dashboard’s central features is a project performance indicator tool divided into three distinct colors or sections—green, yellow, and red. If a TransNet project is over-budget by 10 percent or unlikely to meet schedule milestones, the dashboard arrow in the particular
gauge will be in the yellow zone. Budget variances greater than 20 percent or missed schedule deadlines would change the indicator to red. If all project indicators are on target, the indicator will register in the green zone.

Generally, these project performance indicators provide a quick view of status and highlight where budgets or key milestones appear to be in jeopardy. Yet, our review found that project managers, corridor directors, and Executive Management were aware of project status and risks well before the data appeared in the Dashboard.

Another project performance indicator maintained in the Dashboard shows project phases in a “donut” graphic. Clicking on the graphic provides data on the percent of expenditures incurred compared to the percent of project completion. When the expenditures exceed the expected amount for the percentage of completion, a different dashboard indicator turns yellow or red depending on the amount of discrepancy. These features may also serve as valuable project monitoring tools for both project managers and executives overseeing TransNet from a more global perspective. Presenting this type of data on the public Dashboard site provides another layer of accountability in that all project development deliverers are aware that they need to justify overruns and delays.

Another section of the Dashboard provides cash flow data that depicts budgeted or anticipated expenditures as compared to actual expenditures to-date at the program-wide, corridor, or segment level, depending on view selected by the user. Expenditures are summarized by project development phase including environmental, design, right-of-way, and construction. This area in the Dashboard also presents data on the financing plan, with details of projected state, federal and local revenues planned for the life of a specific segment.

While the information residing in the Dashboard system may help the ITOC and other decision-makers in tracking project progress and other critical program-wide data, we believe these data should be better summarized and presented to the ITOC on a regular basis. For example, the Dashboard data could be utilized to prepare a “Report Card” type summary by project, as described in Chapter 2. Another Dashboard section relays information on emerging trends, risks, and issues surfacing from the construction industry that could impact the cost, schedule, or scope of a project. Data provided could be used to identify key industry trends, explain reasons for industry-wide construction cost increases, or highlight scarce supply of the construction materials, for example.
Expenditure and Schedule Data in Dashboard is Generally Current, Reliable, and Complete

Keeping detailed cost and schedule information for the multitude of projects in the Dashboard current and up-to-date is certainly a challenge. Yet, we found that most of the data presented is current for the previous month and is reliable in that it traces back with underlying fiscal system data and Primavera schedule data.

Generally, Dashboard data is 30-days old as it is automatically uploaded at the end of each subsequent month period using a middleware interface. Specifically, the data transfers occur with a one month lag between the “real-time” expenditure data and the accounting reporting cycle for a closed month. Budget fiscal data is loaded into the Dashboard when the SANDAG Board approves new budgets for the TransNet projects. Actual expenditure updates occur automatically via an interface that downloads expenditure data from the SANDAG and Caltrans accounting systems. Budget and actual schedules are uploaded using a Primavera Electronic Scheduling Utility Tool that collects project schedule data from both SANDAG and Caltrans. Some SANDAG managers use Microsoft Project for scheduling and must forward their schedule information to the TransNet Project Office for manual entry into the interface before uploading the schedule into the Dashboard.

In addition to the timely data reported through the Dashboard, our review revealed that the tool’s expenditure and schedule data is generally reliable based on source system information. Using an internal view feature, we traced a sample of September 2008 Dashboard project expenditures and schedules into the underlying data contained in SANDAG’s and Caltrans’ financial systems and project management systems and found no material variances—although some discrepancies existed. Additionally, cost data uploaded into Dashboard is reconciled by accounting staff at SANDAG and Caltrans prior to the monthly interface and upload process. For instance, staff at Caltrans review expenditure data against staff timesheets and invoices for reasonableness and reconcile data to be imported against Caltrans Headquarters data as part of its monthly reconciliation and closing process. Similarly, SANDAG accounting data is reconciled and posted by mid-month of the subsequent month. Both SANDAG and Caltrans data is also subject to financial audits conducted annually by external auditors that assess the appropriateness of transactions, recoding of expenditures, controls in place, and general accuracy and reliability of financial data. Moreover, both SANDAG and Caltrans TransNet Project Office staff monitors the monthly data transfers and updates to ensure accuracy and reliability.

Improvements Could Increase Dashboard’s Functionality and Value

While SANDAG’s Dashboard is a very robust system, the tool could become more valuable by incorporating some slight modifications to address items related to data consistency and related budget data, inclusion of all projects, budget and schedule history, and performance indicators as described in more detail below. As the Dashboard continues to evolve, SANDAG should revisit its overall vision and goal of the system and determine whether it is intended to be an “in-progress” tool for only current projects or should be a comprehensive historical data warehouse for the 40-year duration of the TransNet Extension Ordinance.
Once that direction is determined, the resulting vision should dictate the specific approach employed to address the following items revealed by our audit:

- **Costs incurred prior to the 2005 Ordinance are included in the Dashboard**
  While designed to provide information on the EAP projects identified after the 2005 Ordinance, our review identified at least five projects that reflected expenditures and schedules incurred before the Extension Ordinance was effective. For example, the Mid-Coast Light Rail transit project started in the 1990s and was incorporated into the Ordinance as it remained uncompleted in 2005. Instead of the Dashboard presenting expenditures incurred only after the launch of the Ordinance, data for this project reflects costs reaching back to 1997. While such expenditures relate to the project, including these costs may misrepresent costs incurred under the Extension Ordinance. Similarly, other projects started prior to 2005 also reflect expenditure data from earlier periods as well. SANDAG’s current approach shifts a project’s entire cost history into the Dashboard when the project transitions into the TransNet program resulting in distorted total program costs.

Even though some projects were already in development prior to 2005 and were carried-forward, only the budgets and costs of the remaining work to be completed should be included under the TransNet program to reflect a more accurate picture of TransNet activity. However, because past expenditures are automatically included in the Dashboard through the simplified annual budget upload, it would be more cumbersome to separate out the pre-2005 expenditures prior to upload. Rather, SANDAG could consider adding an explanatory note to better explain the data or isolate and remove the pre-2005 expenditures to more accurately reflect the TransNet Extension Program costs.

- **Historic schedule data could easily be disclosed**
  Currently, TransNet project schedules are generally incorporated into the Dashboard based on the underlying detail maintained in the Primavera system. Whenever an authorized and approved schedule revision occurs, Dashboard will reflect an updated “current plan” for the schedule effectively replacing the prior information. As a result, the Dashboard data does not provide a complete picture of a project’s evolution. According to the Dashboard system developer, the system is designed to keep track of the original baseline schedule regardless of the subsequent revisions—thus, still includes the historic data currently. SANDAG should develop the Dashboard to report the key schedule changes that occur over the course of each project.

- **Percent of completion data is not accurate or complete**
  While most Dashboard data is reliable, estimates of percent of project completion do not seem accurate. When we attempted to verify the percent of completion shown in the Dashboard with underlying project manager information, we found errors and discrepancies. In some instances, the percent of completion was not tracked for each project phase—specifically, in the areas of administration and right-of-way support, the Dashboard did not always reflect actual completion data even when expenditures were incurred. Rather, these categories were often marked with a “not applicable” in the percent complete category. As such, SANDAG should ensure assumptions and
definitions behind percent of completion calculations are clearly and consistently communicated if this data provided by project managers is deemed important for the Dashboard reporting. Moreover, the SANDAG TransNet Project Office could monitor these indicators for reasonableness and accuracy.

- **Clarifications are needed on whether all EAP projects should be included**
  Although most of the major corridors EAP projects are reflected in the Dashboard, not all projects designated as EAP are included. Specifically, project specifics related to the SPRINT project that was added in 2007, Mid-City rapid transit bus, and the orange and blue lines of the trolley are not currently reflected in the Dashboard. While these transit projects may have different project delivery structures, each has budget and cost data that could be tracked, reported, and made transparent to the public. Moreover, as other non-EAP projects or programs commence such as the Environmental Mitigation Program, the Dashboard could reflect the project and related cost and schedule data in some form. According to SANDAG’s TransNet Project Office, management discussions have occurred surrounding the best approach to use for these inclusions. According to management, SANDAG is planning to launch a data reporting component for the Environmental Mitigation Program in Dashboard early in 2009.

- **Trends, risks, and issues could be updated**
  Additional data in the Dashboard provides narrative description of the trends, risks, and issues identified by corridor directors or their designated representatives related to a specific corridor or segment. We were informed that some of the intent behind this feature was to describe the overarching issues facing the construction industry and help in understanding of the construction price increase circumstances surrounding the escalating project cost issues in the early 2000s. However, most of the narrative in the Dashboard is not kept current, with data not updated since 2006. Thus, SANDAG should reassess the need and use of this narrative data and either ensure full and timely completion of project specific data or eliminate the section and capture and report data through a different venue.

- **Data should be used to measure and track performance against targets**
  With the breadth of valuable project data contained within the Dashboard, SANDAG should use the information to develop performance measures related to project efficiencies. For instance, data currently exists that could be translated into statistics such as “percent of project costs within 10 percent of budget” or “percent of projects within 2 months of schedule” or other meaningful measures and monitored as part of a robust performance measurement system.

Performance Outcome Goals should be Established
When TransNet projects were considered during regional transportation planning processes, potential project impacts were considered against overarching outcome goals for mobility, accessibility, reliability, efficiency, and environmental sustainability. With travel outcomes affected by many factors such as demographics, economy, and work patterns, SANDAG has begun developing a baseline system to benchmark progress towards meeting these
overarching goals on an annual basis. Our audit efforts reveal several enhancements that should be incorporated into measures of performance for a more competent and robust system. Importantly, the system should set clear and specified goals, establish clearly defined targets, measure project effectiveness, and be tailored to the TransNet program.

Currently, SANDAG uses data captured in the web-based Performance Measurement System (PeMS), jointly developed by the State of California and the University of California at Berkeley (UC Berkeley) to monitor the region’s freeway system. In-pavement and above-ground automated detection devices transmit data related to traffic speed and volume to the PeMS online performance monitoring analysis application. SANDAG Technical Services combines the PeMS information with data collected from other sources such as daily transit ridership counts from the NCTD and MTS operators to analyze and evaluate traffic volume, travel times, and transit usage. SANDAG also gathers other data and performance measures from other local jurisdictions as part of its Congestion Management Program. Working with Caltrans and UC Berkeley, SANDAG has begun tracking outcome measures such as:

- Hours of traffic delay
- Daily accidents and fatalities
- Cost per trip traveled
- Daily vehicle miles traveled

These performance indicators are beginning to be tracked in particular for the SANDAG “Regional Comprehensive Plan Annual Performance Monitoring Report.” Most of the data analyzed and reported by SANDAG in December 2008 covering the 2007 year was focused on the Regional Transportation Plan versus impacts of the TransNet program specifically. Nonetheless, such measures are valuable and as the data becomes available, SANDAG should use it to calculate month-to-month and annual changes to identify trends and patterns. The data could also be correlated with various project completion dates to identify potential impacts derived from the TransNet projects within specific corridors.

More detailed corridor monitoring was envisioned in a 2005 State of the Commute report issued by SANDAG that discussed performance indicators developed jointly with other project partners—Caltrans, MTS, and NCTD—related to improving mobility, expanding freeway capacity, and managing roadway demand. Yet, the one-page document only provided a nexus between “travel time” and certain corridors; specifically, the document depicted “hours saved per person” for three of the six TransNet major corridors. Other indicators were presented for hours of travel, traffic delays, and vehicle trips, but this data was summarized by year and not available at a corridor or project level.

While SANDAG has set some general goals as part of its Regional Mobility Plan and regional transportation plans, TransNet goals could be more clearly defined through objectives and linked with specific performance measures. For instance, a broad goal to “improve mobility” could be defined by an objective “to increase transit ridership by 10 percent by 2010.” Measures tracking ridership numbers by line or route could be maintained and compared against TransNet projects. In delivering regional capital construction projects, Caltrans has linked its effectiveness goals with specific objectives as part of its entity-wide Caltrans Performance-Based Management System. For instance, to track outcomes related to a mobility goal to maximize transportation system performance and accessibility, Caltrans has set an objective to “by 2012, reduce daily vehicle hours of delay by 30,000 hours.”
throughout the transportation system.” While these objectives and data measured are not set specifically for the TransNet program, data from the San Diego Caltrans District 11 operations feeds into the entity-wide tracking system that could be mined and provided to SANDAG in its development for a system specific to the TransNet program.

Other potentially useful data captured and models developed by Caltrans include a California Life-Cycle Benefit/Cost Analysis Model that SANDAG used in the past to estimate benefits of advancing the EAP projects. This model considered benefit categories such as travel time savings, accident reduction benefits, reduced vehicle operating costs, and reduced emissions—all potential outcomes and benefits to be realized directly by San Diego residents. We believe SANDAG should incorporate these “baseline” benefits or goals into our suggested revised performance monitoring system whereby expected savings could be compared against actual results once projects are completed.

**Indicators of Project Efficiency should be Measured**

In addition to more robust effectiveness measures, TransNet should have established goals, strategies, and metrics to track program and project delivery efficiency indicators as well as link strategic planning with resource allocation. At the current time, it seems that only Caltrans is using performance efficiency measurement concepts although data tracked is at the statewide level and not specific to TransNet. Yet, we believe that setting meaningful goals and tracking performance against those goals can help highlight potential areas in need of improvement, hold project owners accountable and economical, and demonstrate performance to the public.

Specifically, since 2005, Caltrans has been reporting a select set of performance measures to its state oversight agency on a quarterly basis. Performance measures relating to efficiencies presented in its Quarterly Report are generally compiled from the data provided by San Diego Caltrans District 11 and the various project managers. Targets tracked by Caltrans include items such as the following:

- Meet 100 percent of project delivery milestones for each fiscal year
- By 2012, reduce the support-to-capital ratio to 32 percent or lower and reduce overhead cost to 13 percent
- Each year, keep the total of all low bids within 5 percent of the engineers’ estimates

Not only do these measures require the gathering and tracking of quantitative useful data, but they are enhanced by setting specific and defined targets and goals for efficient performance SANDAG could build on these specific measures and also collect data to measure and track:

- Percent of projects that exceed programmed budget
- Number of change requests for cost changes
- Number of change requests for schedule changes
- Average construction support costs, engineering support costs, etc.
To ensure such performance measures are useful and inspire efficiency, targets with challenging yet attainable numbers should be set to assess the timeliness and cost-effectiveness of the TransNet highway construction and transit projects. In April 2007, SANDAG began implementing a quarterly monitoring program to track indicators such as operating cost per passenger, passengers per revenue mile, reliability, and ridership for transit specific projects. Yet, we found that targets, goals, and related outcome objectives were not defined.

Moreover, SANDAG should also track its performance against quantitative criteria and calculations used during the regional transportation planning process whereby projects are ranked and prioritized based on estimated cost per person-miles traveled and cost per travel time savings calculations. A useful activity could be to also perform these calculations after project completion to identify variances from anticipated cost-effectiveness, discuss reasons for the differences, and use results to adjust future modeling or trend and compare projects against each other.

Other transportation entities across the country are finding that efficiency and effectiveness performance measurement is a critical tool used at both the project level and the policy level allowing stakeholders to evaluate the benefits of highway and transit improvements. A 2007 report by the State of Virginia Transportation Accountability Commission describes key objectives as the “desired outcomes” of programs and reflects the key measures associated in meeting those performance goals. The targets include both short-term and long-range milestones and performance measures are tracked by quarter. Following such a model, SANDAG could establish meaningful goals and targets and associate at least one measure with each thus setting forth tools for SANDAG to directly gauge the efficiency and effectiveness of transportation improvements in the region. For example, if the objective is to manage congestion, the measure would be to contrast the annual hours of delay before and after the roadway improvement.

Lastly, as part of a robust performance measurement and monitoring system, staff should be designated to follow-up on missed targets, assure corrective actions where needed, or assess impact of any shortfalls to the overall TransNet program. Thus, to make the process meaningful and value driven, SANDAG should develop performance measures and routinely follow-up on the impact of performance not meeting targeted goals.

Performance Data Should be Used by Management and Shared with Oversight Bodies

Once performance data is collected by SANDAG, it should be made available to TransNet Corridor Directors and their project management team as well as communicated to governance boards and the ITOC. These entities could use the data to quickly monitor the effectiveness of operational strategies and assess the success of SANDAG and Caltrans in achieving targets or benchmarks. Combined with the detailed project information already provided to these oversight bodies, the summarized performance data could enhance decision making. Given that much of the performance data already exists in either the Dashboard system or Caltrans databases, compiling and communicating the data should be plausible.
As mentioned in Chapter 1, the ITOC and other oversight bodies could use performance measures focused on budget, schedule, and scope to more closely monitor overall program adherence to the Ordinance and baseline cost and schedule goals. Additionally, future quarterly reports could also communicate program level milestones and success at meeting performance benchmarks when discussing TransNet program accomplishments or areas needing improvement.

Providing this statistical data and performance measures tied to targets and outcome objectives, SANDAG would also create greater transparency and visibility among the various responsible partners in charge of program implementation strategy. Moreover, this type of reporting also assists in answering the public’s questions such as, “what are we getting for our investment” and “is the spending of our investment as efficient as possible.”
Chapter 3: Revenue and Cost Models are Practical, But Project Budget and Schedule Reprioritizations Should be Better Chronically

With the 2008 projections estimating that the TransNet program will reach nearly $41 billion over the next 40 years, like its peers across the nation, SANDAG utilizes a complex structure for financing highway transportation and transit development projects with a variety of funding sources from federal, state, and local programs. As part of the blueprint established over the last three years, our audit revealed that SANDAG has established sound financial plans and reasonable revenue and cost estimates in cooperation with Caltrans, and these efforts had undergone appropriate levels of review and rigorous deliberation.

SANDAG’s approach to TransNet financial planning is often referred to as a Plan of Finance and consists of a series of continuously updated revenue and expenditure projections for the TransNet projects covering the 40-year program lifecycle. Local sales tax revenues and related bonds issued fund only forty percent of the TransNet EAP projects, as the majority of projects are financed using state and federal sources. Consequently, project financing deliberated for the SANDAG Regional Transportation Plan is driven largely by state and federal program requirements. Strict state and federal regulations generally mandate that SANDAG use a “revenue constrained” program planning scenario whereby governmental revenues are projected using the most conservative approach based on committed or pledged dollars, and assumes that no additional funds will become available. Since provisions require SANDAG to match project estimated costs with available projected revenues, projects are annually reassessed and reprioritized to meet funding requirements.

Because SANDAG generally has limited control over the amount of revenues it receives from state and federal sources, it has employed innovative financing strategies using TransNet local revenues to expedite delivery of the EAP projects. Specifically, SANDAG issued commercial paper and bonds totaling approximately $635 million in outstanding debt as of December 2008 under the assumption that benefits from spending money on construction projects today would outweigh financing costs and increased construction costs in the future. SANDAG’s financial leveraging of the TransNet local sales tax dollars is consistent with the financing strategy employed by other similar programs we identified.

In San Diego, the SANDAG Board has dedicated nearly all of future TransNet, federal, state, and local resources to the EAP major corridor projects believing these projects would best address regional transportation needs. While the risk to this approach includes the uncertainty of whether future TransNet funds will be available to complete non-EAP projects, other alternatives and ultimate decisions underwent a deliberative and public process to determine that the EAP projects selected best fit the regional needs.

As funding challenges are inherent in the government transportation project arena, SANDAG continuously monitors financial risks and updates cost estimates and revenue projections to determine the amount of money available to complete projects. Actual funding for projects is generally allocated on a year-to-year basis at the beginning of the annual budget cycle.
when anticipated federal and state allocations are authorized. In consultation with its transportation and transit partners, SANDAG must continually designate, shift, or reallocate scarce funding towards TransNet projects in alignment with the highest priority at that time, given the typical changes that evolve on long-term projects and the conflicts resulting from multi-year project cost estimates and the limited funds to cover such expenditures. This continual need to reassess projects based on available funding is not unlike other transportation planning agencies we reviewed. We found that SANDAG’s decisions are vetted through deliberative processes to ensure that funding is maximized while minimizing significant impacts on individual projects or to the regional transportation system as a whole. Further, the SANDAG Board’s continual reprioritization is consistent with its authority as the Regional Transportation Commission as re-emphasized in the Ordinance.

Because funding is an ongoing challenge and projects are continually shifted and reprioritized to stretch limited resources, the TransNet program could benefit from creating and memorializing a budget history document that would track the funding and scope changes for individual projects as identified in the Ordinance to reduce confusion and increase accountability to promises made to the voters.

Plan of Finance is Rational, Reasonable, and Approved by SANDAG Board of Directors

While securing adequate funding for the TransNet transportation projects is a critical requirement of the program, our review of the SANDAG’s financial strategy to deliver the TransNet projects found that the assumptions behind programming techniques to secure funds, as well as the revenue forecasts for the TransNet half-cent sales tax revenues, appeared reasonable and reliable.

When the TransNet Ordinance was initiated in 2005, SANDAG’s Finance Department worked closely with SANDAG and Caltrans project managers, financial advisors, SANDAG and Caltrans executives, and program stakeholders to prepare a financial plan, which is also referred to as the Plan of Finance. The Plan of Finance is a systematic process employed to match the TransNet project estimated costs with available or anticipated revenues, and determine the best financing option. Project cost data are prepared by SANDAG and Caltrans project managers, and designated SANDAG staff at the TransNet Project Office compiles project cost summaries working in conjunction with the SANDAG Finance Department. SANDAG Technical Services and Finance Planning groups work together in analyzing project cash flow needs, reviewing available funding sources for each specific project, identifying funding gaps, developing funding alternatives, and creating a finance model for the TransNet program including short- and long-range plans.

In December 2005, the SANDAG Board approved the Plan of Finance for a ten-year timeframe between 2005 and 2015 with a total cost for the period of more than $2.8 billion to complete the EAP projects identified. In subsequent years, SANDAG developed and the Board approved a long-range financial plan covering the entire TransNet 40-year program. As part of the deliberation processes, external experts, such as Public Financial Management Incorporated, review and provide input into SANDAG’s models and plans including
assessing strategy for bonds and commercial paper issuance as well as mitigating exposure risks, particularly in the current fluctuating financial market.

The underlying concept behind the existing Plan of Finance is to ensure that funding is available for the accelerated delivery of the EAP projects, including those projects that remained uncompleted from the original ordinance. While the project costs and anticipated revenues may change year-to-year, SANDAG has established a sound process to review the finance plan and make the necessary modifications. In 2008, when estimated funding requirements for the EAP projects grew from $2.8 billion to nearly $5 billion due to various factors including increasing construction and labor costs, project scope changes, and unforeseen time delays, the SANDAG Board considered several options to maintain the momentum on these EAP projects. For example, one less costly option was to extend the project schedules until 2020 on the Mid-Coast Transit, I-805 Bus Rapid Transit, SR-76 Widening, and Blue and Orange Lines improvement that would effectively release allocated funds in the short-term. After reviewing these alternatives, the Board made a decision to maintain project schedules unchanged and issue $600 million in long-term variable rate debt in April 2008. This action was to increase cash flow and revise SANDAG’s commitment of state and federal funds for the TransNet program from 85 percent to nearly 94 percent of amounts authorized for all regional projects. This authority to prioritize TransNet and dedicate future sales tax revenues to address current regional priorities and bond repayment is explicitly granted in the Ordinance.

Other entities and transportation authorities tasked with the implementation of regional transportation programs funded through an excise tax have employed similar financing models such as issuing bonds against future revenues to expedite the delivery of projects. For example, the Maricopa County Regional Freeway System financed through various sources including local excise tax, state, and federal funding, had nearly 37 percent of its total program resources generated with bonds and government loans.

Although SANDAG’s decision to dedicate the vast majority of the TransNet program funding from local sales tax revenues, state funds, and federal sources to EAP projects appears to be a significant commitment of future funds, the underlying process to establish cost and revenue projections appears reasonable. Moreover, external financing agencies have conducted detailed analysis of SANDAG’s financial information opining that it has the ability to cover its Plan of Finance and a reasonable expectation of fulfilling the Ordinance. Additionally, the Plan of Finance is vetted with a multitude of project stakeholders, and is reviewed and approved by the ITOC, SANDAG Transportation Committee, and SANDAG Board. The TransNet financial strategy is reviewed and revised at least annually as part of the SANDAG regional transportation plans and annual budget processes.

Key Assumptions of Plan of Finance Include:

- Nearly all of TransNet Major Corridor Funding will be dedicated to EAP projects
- 94 percent of state, federal and other local funds will be dedicated to TransNet program
- EAP projects are accelerated and slated for completion by 2015.
Current Debt Model Seems Appropriate

As of June 30, 2008, SANDAG had nearly $635 million in outstanding debt in commercial paper and bonds issued against the Ordinance half-cent sales tax revenues. Specifically, starting in November 2005, SANDAG entered into several agreements with major banking institutions to borrow capital funds against future sales tax revenues as part of the SANDAG Board-approved Plan of Finance. The debt financing model was developed by SANDAG in conjunction with external financial consultants, such as Public Financial Management Incorporated hired by SANDAG to help link projected cash flows through 2048 with the accelerated cash flow requirements of the EAP projects. Public Financial Management Incorporated also provided advice reviewing the bond structure and identifying opportunities to minimize financing costs by locking in low interest rates through hedging agreements.

As a result, SANDAG entered into three interest rate swap agreements that could allow SANDAG to lower interest payments with the goal of holding total program debt service costs at four percent. Because the interest rate payments under swap agreements are pegged to variable London Inter-bank Offer Rates, interest payments may still fluctuate significantly. Although the agreements were executed in 2005 and captured the forward rate to start in 2008 when the bonds were issued, the interest payments made by SANDAG since April 2008 have varied significantly from month-to-month. Currently, the SANDAG Finance Department has designated a team to review weekly the actual payments and compare them with the projected financing costs. However, at the time of our review, insufficient time has elapsed to make any conclusive statements regarding the financing cost trend.

While the recent depressed market conditions necessitated SANDAG to lower its sales tax revenue projections by 4.63 percent in November of 2008, thus, slightly increasing its debt to revenue ratio, SANDAG has employed a similar debt model in the past where commercial paper and bonds were issued against the original Ordinance’s local revenues, and has been successfully meeting those obligations and repaying its debt. However, in light of the recent economic downturn, SANDAG must continually monitor and review the debt to revenue ratio as well as total financing costs to ensure it meets short- and long-term obligations. On a go-forward basis, at a minimum, SANDAG should also continue carefully analyzing projected debt service costs and compare planned program financing costs to track any higher than expected bond issuance and debt services costs. Further, SANDAG should determine whether the Plan of Finance strategies should be modified in the long-term, and report to the ITOC and the SANDAG Board on the status of the debt-to-revenue ratio on a regular basis.

Revenue Projections and Assumptions are Reasonable

Critical to the success of the Ordinance, like other long-term, large-scale transportation improvement programs, sound and prudent methodologies for estimating revenues cash flow to cover project costs. Our review found that SANDAG’s estimate assumptions and methodologies employed appear reasonable and generally conservative. When developing revenue projections for the TransNet program, SANDAG’s Finance Department begins with project finance needs based on project costs developed by SANDAG and Caltrans managers. Because TransNet projects receive allocations from
three major funding sources—state, federal and local sales tax monies—projects undergo the same programming processes that are in place for all SANDAG major corridor construction projects. While Caltrans is responsible for preparing and submitting project cost estimates for the highway projects, SANDAG is responsible for developing project cost estimates for the transit capital projects. Once combined, project budgets are annually programmed into the SANDAG Capital Improvement Program and the Regional Transportation Improvement Plan based on available federal, state and local funding sources. Figure 7 depicts TransNet anticipated revenues by funding source.

**Figure 7: EAP Projects Funding, Proposed for Fiscal Years 2009-2010 through 2017-2018**

![Pie chart showing funding sources](image)

Source: SANDAG’s Capital Improvement Program authorized budget, Fiscal Year 2009

According to the Ordinance, 50 percent of all program revenues are anticipated from state, federal, or other funding sources. The funding composition tends to fluctuate, however. For example, through 2008 due to the SANDAG Board’s decision to commit the vast majority of available state and federal funds to the TransNet program, such state and federal sources provide 60 percent (approximately 30 percent equally from each) and the related half-cent local sales tax funds comprising less than half, at 40 percent. As shown in Figure 7, future projections reflect that the other funding sources will provide about half—still achieving the forty percent expectations. While the revenue projection and programming methods for these funding streams vary due to slightly different processes employed in the fund appropriation process, we found the underlying assumptions and approaches were reasonable.

- **TransNet Local Sales Tax Revenues**

  Projections are developed based on SANDAG’s Demographic and Economic Forecasting Model that has been in existence for several decades. SANDAG Finance Department staff use the model as a predictor of economic and population growth region-wide and trend expected sales and project the amount
of sales tax revenues expected to be generated. Model results are reviewed and evaluated on an ongoing basis by SANDAG Finance Department and the SANDAG Chief Economist. Additionally, SANDAG has an advisory committee that oversees the half-cent sales tax projections consisting of local experts in the area of municipal finance, economics, housing, real estate, and utilities, as well as academic researchers. Since 1980, the sales tax revenue projections-to-actual results have been monitored and reviewed on a quarterly and annual basis, and have been within 8 percent of targets. In the past, to correct for minor discrepancies and improve accuracy and reliability of data, SANDAG made adjustments to the model, and since 2000, resulting in revenue projections generally fall within two or three percent of estimated amounts. Because sales tax revenues have been impacted by the past year’s economic conditions, the SANDAG Board lowered its Fiscal Year 2008-2009 projections to reflect an expected 4.63 percent decline for the EAP projects. SANDAG is committed to review the TransNet list of projects on an ongoing basis to consider and re-prioritize funding and potentially “shelve” projects as needed due to lower than expected sales tax revenues. During our review, SANDAG was in the process of revising its long-term projections for the TransNet revenues; however, the results were not yet available for our review.

- **State and Federal Funding**
  These funds are programmed into the TransNet program based on currently committed level of funds incorporated in the SANDAG’s short-term and long-term regional transportation planning documents. Generally, the state and federal revenue projections are developed through the project programming plans, such as statewide State Transportation Improvement Program and the Federal Transportation Improvement Plan. While SANDAG is not a direct recipient of these funds, SANDAG’s financial managers work closely with Caltrans to incorporate state and federal dollars into the regional and TransNet program. The SANDAG Finance Department develops short-term and long-term projections based on the existing state and federal requirements as well as amounts authorized. For example, SANDAG relies on the statewide “Fund Estimate” released by the California Transportation Commission which outlines state authorized funding sources by county, including the San Diego region. In this programming process for near- and long-term state revenue projections, SANDAG applies a conservative five percent escalation factor. Fund Estimate dollars are matched with the project cash flow needs for the TransNet programs.

- **Federal Grants**
  These sources, including the Federal Transit Administration New Starts Program, Regional Surface Transportation Program, Traffic Congestion Relief Program, and Congestion Mitigation and Air Quality programs, are generally guided at both the state and federal level with SANDAG and Caltrans staff ensuring timely submission of funding requests and grant applications to maximize regional transportation dollars. For instance, New Starts Program funds are formula-based allocations for the region’s transit operator capital improvement projects; in San Diego; these funds are primarily used to fund the Mid-Coast and South Bay Bus Rapid Transit.
Although Caltrans is the direct recipient of some of these federal grants, SANDAG works closely with Caltrans to incorporate the estimates and programming of these funds into the regional transportation provisions of the federal Safe Accountable, Flexible, Efficient Transportation Equity Act which reflects a steady program growth of two percent on an annual basis.

**Program Cost Estimates and Budgets Appear Supported by Underlying Detail**

While project cost estimates for the TransNet Ordinance were developed based on project budgets created for the 2003 Regional Transportation Plan, these estimates require annual budget revisions to account for project scope changes and cost inflationary factors. These changes, however, are reviewed and approved by the SANDAG Transportation Committee and the SANDAG Board as part of the annual budget process.

Our audit analyzed TransNet project costs outlined in the Ordinance and compared them to authorized EAP project budgets in the December 2005 Plan of Finance, as well as traced the budget history from Fiscal Year 2005-2006 to Fiscal Year 2008-2009. Generally, we found that project budgets were well defined, and SANDAG and Caltrans had a sound process in place to develop and modify project budgets throughout the project life. Further, budget changes were properly approved and a process was established for proper authorization. Moreover, we found that TransNet program budget documents traced to the underlying supporting documents maintained by SANDAG and Caltrans project managers.

To arrive at cost estimates used in the Plan of Finance project budgets in 2005, SANDAG utilized the Ordinance project costs and applied a price escalation factor based on the Caltrans construction cost index and right-of-way escalation elements. SANDAG and Caltrans project managers worked closely together to review specific budgets for the EAP projects to develop accurate cost estimate with the precision of project estimates varying based upon the stage of the project. For instance:

- Design and construction estimates generally represent well-defined costs that are likely to hold true;
- Feasibility study estimates for projects that are planned, but not yet developed, are generally less accurate than the estimates calculated during the design stage;
- Projects planned several decades in the future often do not have feasibility studies and are estimated by SANDAG and Caltrans engineers using a “rule of thumb” formula and assumptions based on historic data of similar transportation project cost per mile.

Overall, SANDAG and Caltrans generally have sound processes to develop project cost estimates that are currently reflected in the Plan of Finance. Project development methodologies employed at both entities include establishing baseline budgets for each phase, including administration, environmental, design, right-of-way support, right-of-way capital, construction support, and construction capital costs. Cost estimates are generally refined throughout the project development process, and become definite at the construction
contract award stage where project managers monitor cost to keep within a 10 percent contingency. Project environmental and design budgets vary greatly based on the complexity and magnitude of the project. Construction cost estimates are developed based on unit costs, material and labor estimates. Project costs for administration support are determined at an entity-wide level, and costs are allocated to specific projects based on the total management and administration hours each incurs. Generally, project costs are updated at least annually to reflect current market conditions that are tracked through various cost indexes and comparable bids data. Between 2001 and 2006, Caltrans construction cost index increased nearly 60 percent, and TransNet project costs were revised upward to account for the rising price trend. To reflect the anticipated price increases, SANDAG applied various price escalation factors to project costs program-wide, which appears consistent with the project budget and financial planning processes used by other transportation entities.

To better understand the nature of project budget changes from the time of the Ordinance to most recent years, we attempted to trace project cost for all EAP projects from Fiscal Year 2003-2004 to Fiscal Year 2008-2009. Even though the project dollar amounts outlined in the Ordinance varied from year to year, demonstrating steady increases in project budgets, our review found that, generally, budget changes were well documented and supported by project files maintained by project managers or through board documents. For the most part, the budget changes were explained by inflation, authorized project scope changes, and other modifications. While Caltrans and SANDAG maintained records of budget approval authorizations in project files, SANDAG and Caltrans should establish a better mechanism to link and track the Ordinance planned projects amounts with current plans and budgets for all TransNet projects as described in greater detail later in this chapter.

**Anticipated Revenues are Matched Against Project Costs**

SANDAG short- and long-range transportation planning documents, as required by statute, reflect project authorized budgets based on the anticipated revenues matched with project cost estimates. Although part of the financial planning process involves generating overall program budget estimates, every project is reviewed and evaluated for funding priority on an annual basis, as required by state and federal regulations. Moreover, project annual budgets as mandated to be consistent with the Regional Transportation Plan and Regional Transportation Improvement Program. Revisions to revenues from state, federal and local funds occasionally occur due to a shortfall of authorized resources which necessitates additional revisions and reprioritization of projects. Additionally, cost overruns and scope changes also inevitably occur in the transportation industry with the susceptibility of project costs to the volatility of economic markets that often result in scope changes when funds are reduced. For instance, the rise in the construction prices in the early 2000’s set a new precedent in SANDAG’s planning approach where an unusually high inflationary factor had to be considered for the short-term cost projections to reflect unexpected market changes.

As revenues are realized on an annual basis, project budgets need to be revised to account for discrepancies between updated revenue projections and costs. Towards this end, SANDAG has an established process to make mid-point budget adjustments to match anticipated revenues with project costs allowing project stakeholders and SANDAG Finance Department staff to reassess available cash flow and determine project-specific plans of action. As a
result of the cash flow review, projects are reprioritized and those with lower priority are occasionally shelved based on the project’s stage or percent of completion unless additional funds can be made available.

In addition to annual budget drills to fund project costs with forecasted revenues, SANDAG staff develops short- and long-range planning documents for Board approval as shown in Figure 8. Based on available funding to meet estimated costs, projects are prioritized by the SANDAG Board according to the Regional Transportation Plan’s criteria established under its authority as the Regional Transportation Commission. In 2006, criteria for evaluating highway, transit, freeway connectors, and high occupancy vehicle connector projects was updated and strengthened by a working group comprised of representatives from SANDAG, Caltrans, MTS, NCTD, bicycle-pedestrian groups, and housing experts.

**Figure 8: Transportation Programming Plans and Approval Process**

Cost Estimates
Caltrans and SANDAG engineers prepare project cost estimates

Revenue Estimate
SANDAG Finance Department develops funding projections of Sales Tax Revenues, State, & Federal Funding

TransNet EAP project costs estimates

Regional Transportation Plan (RTP)
30 year project planning document

Approved by SANDAG Board of Directors

Regional Transportation Improvement Plan (RTIP)
5 year project cost planning document

Approved by SANDAG Board of Directors

State Transportation Improvement Plan (STIP)
5 year project planning document

Approved by California Transportation Commission

Federal/Statewide Transportation Improvement Program (FTIP & STIP)
4-5 year project planning document

Approved by Federal Government

Caltrans incorporates SANDAG approved RTIP into FTIP

Approved by California Transportation Commission
Projects are assigned points based on technical models considering such elements as congestion relief, crash statistics, habitat and residential impacts, transit integration, and travel time savings as well as qualitative factors assigned percentages for serving goods movement and being compatible with smart growth. Projects are also prioritized based on regional goals to serve travel needs, develop network integration, and be cost-effective. In setting regional transportation priorities, SANDAG also reviews individual projects in light of the entire regional system elements of mobility and travel time, reliability and accidents, accessibility from home and work, and environmental sustainability. These priority methods were deemed reasonable and sound by a State Legislative Analyst’s Office review conducted in 2006.

While the SANDAG Board initially matches prioritized project costs with available revenue based on a quantitative evaluation and ranking system through these short- and long-term planning efforts, a project with a lower ranking may take precedence if the project is more in line with the long-term regional transportation goals, considered “shovel ready”, or has non-local funding sources available for use. Moreover, despite the Ordinance prescribing certain projects as priority, the Ordinance also authorizes the SANDAG Board to “amend the programming of projects as necessary” following the Regional Transportation Improvement Program amendment procedures. Thus, SANDAG Board can add, remove, or modify projects listed in the Ordinance to accommodate the region’s transportation needs.

Financing Uncertainty and Volatility Generate Challenges for SANDAG as Current Plans Show Future Funding Shortfalls

As a result of current economic conditions, projections for available sales tax revenues have been reduced; this situation is just one example of the volatility of transportation financing that the TransNet program could face over its 40-year lifecycle. Compounding news of the recession is the State of California’s budget crisis and discussions of cancelling more than $5 billion worth of infrastructure projects statewide unless there is a comprehensive budget solution. Yet, at the same time, speculation of a federal economic stimulus package brings promises of the largest public works construction program since the creation of the interstate highway system a half-century ago. With so much uncertainty and funding decisions entirely outside of SANDAG’s control, one of its biggest challenges for the TransNet program remains securing the necessary funds to cover projected long-term shortfalls of more than $2.8 billion by the year 2026.

However, it is important to note that SANDAG’s short- and long-range plans are generally based on conservative projections of revenues and include only those state and federal programs that were available at the time the long-range plans were developed, thus assuming no additional sources or programs would become available. Throughout the years, SANDAG has experienced both the inflow of additional funds from statewide Proposition 1B monies, as well as shortfalls due to statewide budget cuts. Thus, maintaining a budgeting and financing structure that allows for flexibility while ensuring accountability is an important element in a successful transportation planning organization. Clearly, market volatility dictates caution and continuous review and update of the revenue estimates used in the
development of the TransNet program’s financial model as well as diligence in tracking fiscal conditions and making timely decisions as situations warrant.

While the changing financial environment is complex and difficult to manage, the SANDAG Board made conscious decisions to deliver the EAP projects within the first quarter of the Ordinance lifecycle rather than stringing the projects out over the full 40 years. The existing Plan of Finance was based on assumptions representing key policy decisions of the SANDAG Board to dedicate significant amounts of future funding presumed available for the entire TransNet program for the completion of just the EAP projects. Specifically, the Plan of Finance identifies the following key assumptions:

- Nearly all of TransNet major corridor project funding is dedicated to completing EAP projects;
- 94 percent of the state and federal funding will be dedicated to the TransNet program as matching funds. While this is a departure from past historic practice whereby similar major highway and transit projects received approximately 77 percent of state and federal matching funds, additional funding from local Proposition 42 monies were available to fund street and roadway improvements making other monies available for direction to major highway and transit projects.

Subscribing to an informal philosophy of using federal and state monies before drawing on local funding pools as well as the approach of “not leaving any money on the table,” SANDAG is able to utilize local resources to leverage other funding sources. Occasionally, state and federal authorities adjust the annual authorized program amount based on overall statewide and federal priorities. Thus, SANDAG is often required to review and revise funding plans for individual projects and the entire TransNet program. As certain federal and state grants become available only for projects that are ready to advertise, SANDAG and Caltrans have an incentive to remain flexible in managing projects and shift priorities as necessary to meet the external funding requirements and secure such funds. Instilling in its project managers a “use it or lose it” motto has encouraged all partners to utilize available funds as soon as money becomes available—thus promulgating a more speedy project delivery and timely funding application process.

For instance, SANDAG ensured projects were “ready to go” when the California Transportation Commission (CTC) allocated nearly seven percent, or $490 million, of total funding available from statewide Proposition 1B monies to SANDAG capital construction projects. Additionally, SANDAG projects were often ranked highest compared to other transportation entities statewide as determined by the CTC in the Corridor Mobility Improvement Account revenues allocation process. Specifically, only four statewide projects received the highest score of 14, with three of these projects designated as SANDAG projects. While the projects were evaluated based on delivery times and value, SANDAG’s high performance rating in 2007 allowed it to secure nearly $430 million in funding. While many funding sources contain legal and grant-related restrictions or provisions, SANDAG’s ability to manage and oversee the spending to ensure compliance with various statutory requirements continues to be an important aspect of managing the TransNet program.
Moreover, faced with uncontrollable impacts on capital construction projects from the current economic recession and lower than expected sales tax revenues that could ultimately delay the delivery of both EAP projects and non-EAP projects, SANDAG appears to have taken reasonable actions over the last three years to secure funding, control projects, and oversee the TransNet program. Much uncertainty still exists with the TransNet program in preliminary stages. With current SANDAG projections calling for TransNet project costs to reach amounts greater than $41 billion, the key is to continually focus on bringing in new and steady financing—as SANDAG seems to have been successful in doing up to this point of the program.

Projects are Continually Reassessed and Reprioritized based on Available Funding, but Decisions are Vetted and Approved through SANDAG Board

Because the availability and estimates of funding is critical to the success of the TransNet program, SANDAG continuously monitors financial risks, updates cost estimates and revenue projections, reviews project status, and communicates with those charged with governance. Available funding and project status can change significantly over the course of a year, thus, SANDAG and Caltrans meet frequently to reconsider the budget and schedule of major corridor highway and transit projects. As the designated Regional Transportation Commission, the SANDAG Board possesses the requisite authority to adjust TransNet project budgets and reprioritize them to maximize benefit for the transportation system of the entire region as referenced in the Ordinance. Other transportation entities have taken similar approach to the regional planning requiring the use of local funds to support transportation objectives of the entire region. For instance, Orange County and Riverside County jointly financed the expansion of a SR-91 project that impacted commuters traveling between the two counties for employment. Similarly, El Dorado County committed its local funds to a SR-50 High Occupancy Vehicle lanes project within Sacramento County boundaries to improve travel times for its residents traveling on SR-50 into Sacramento County for employment purposes.

While SANDAG and its Caltrans partner have employed sound models of estimation that appear reasonable, variances naturally occur requiring a review of status and priorities on an as needed basis or, at a minimum, during the annual budget cycle. Because actual costs or revenues that miss estimated targets have cascading effects on other projects, detailed cost and project activity data is discussed with the ITOC and SANDAG Transportation Committee on a monthly basis as well with the SANDAG Board on a quarterly basis. When funding is scarce or lower than projections, SANDAG staff provides the governing and oversight bodies with a range of alternatives and impacts of each option based on factors such as project priority as outlined in the Ordinance, readiness to enter construction, status in terms of addressing regional transportation goals, and ranking based on quantitative and qualitative scoring criteria used as part of the regional transportation planning process. Thoughtful questions are asked, data is vetted, and projects are reprioritized based on the Board’s deliberative and transparent process.

For instance, the SR-52 project has undergone various reprioritization discussions vetted through the established processes. In Fiscal Year 2008-2009, the Corridor Director requested
additional resources due to cost overruns on the SR-52 Extension project as a result of escalating construction pricing. Although the members of the Transportation Committee required additional information about the underlying reasons for the request, Caltrans offered different alternatives for consideration. Both the Transportation Committee and Board decided to shift project priority from the SR-52 managed lanes project to the SR-125 to SR-67 Extension to maintain momentum on the project. Although the decision required that the environmental phase of the SR-52 High Occupancy Vehicle Managed Lanes project be postponed until additional funding became available, the process of evaluating project alternatives in light of potential scope and schedule options appears sound and demonstrates effective disclosure, deliberation, and decision-making allowing for consensus of critical funding issues at the highest level when necessary.

Due to the state budget deficit crisis, SANDAG and Caltrans have had to reassess and reprioritize many of the TransNet projects on a more frequent basis, as the crisis poses a significant risk to ongoing transportation projects including several major EAP projects that are funded using statewide Proposition 1B funds. While SANDAG does not expect the funds to be permanently eliminated, the State’s current inability to issue bonds to fund statewide transportation projects is creating a cash flow shortage affecting the progress of EAP projects. Specifically, SANDAG identified approximately $177 million of projects ready to start and $557 million in projects currently under construction that may be at risk of delay or suspension. For instance, discussions are underway that could see EAP projects on the SR-52 and I-15 corridors worth more than $435 million, absorbing some of the impact by being placed on hold and possibly pushing completion schedules out several years. With the state funding not yet authorized for Fiscal Year 2009-2010, Caltrans’ potential inability to proceed with several of the TransNet projects could ultimately result in a domino effect wherein one project delays subsequent work as well as increased costs related to the suspension of projects. According to SANDAG and the Caltrans TransNet Project Office, staff is tracking the delay of programmed funds and finding alternative solutions to backfill for the Proposition 1B funds such as monies from the proposed federal stimulus package.

Given the recent economic volatility and concerns amid growing variances between the estimated and actual revenues and expenditures over the last few years, more frequent focus has been directed at the list of TransNet projects to re-prioritize funding and potentially “shelve” projects. Currently, the SANDAG Board is reevaluating the potential risk that some of the projects outlined in the Ordinance may not be completed at all due to a lack of funds. Specifically, at a November 2008 board meeting, SANDAG executives and its Board discussed the possibility of reviewing the list of currently authorized TransNet projects and identifying those that may be removed. However, the SANDAG executive team cautioned such action as the budget shortfall could be short-term and may be overcome through increased future cash flows.

With the TransNet program mandated to be in place 40 years, SANDAG’s current wait-and-see approach before formally eliminating non-EAP projects also envisioned in the Ordinance seems appropriate as the financial turmoil from the past few years may not yet provide enough evidence to revise such long-term plans or the overall approach to financing projects. A meeting is anticipated in early 2009 between TransNet program management and the governance team to revisit and reassess project delivery priorities once again. In the
meantime, SANDAG continues to monitor its projections, actual receipts, and models to adjust as appropriate and afford the best information and data available for decision-making.

While Certain Projects may be Shelved in the Future, Other Projects Have Been Blended into the TransNet Program

Although certain TransNet projects originally anticipated for completion may ultimately be cancelled at some future point, it should also be acknowledged that more projects than originally envisioned have been provided or are in the final stages of completion using TransNet-backed funding. For instance, both the SPRINTER Rail System and I-15 Middle Segment Managed Lanes were added through SANDAG Board action that expanded upon the Ordinance’s vision.

According to SANDAG and Caltrans, options for including additional projects or phases into the TransNet program originate from discussions among individual project teams, Corridor Directors, and SANDAG’s Finance Department. Factors considered include priority status identified by the Ordinance, whether projects are “shovel ready,” project ranking from the Regional Transportation Plan modeling process, availability or allowable use of state or federal funding sources, and impact to other currently programmed projects. For example, a weekly project team could raise an issue that one project in the final stages of completion might be in jeopardy because it needs local matching dollars to leverage greater amounts of state or federal funding to finish the project. After meeting with SANDAG Finance Department and SANDAG executive management to deliberate the impact of the project on the region’s transportation system, a recommendation could be crafted to use available TransNet monies on the project as well as other options if TransNet monies are not provided.

For instance, the I-15 Middle Segment Managed Lane project was initiated through this process. Although not designated as a TransNet project, the I-15 Middle Segment was halfway through construction in 2005 when project scope and higher-than-expected construction bids compelled Caltrans to seek additional funding sources to complete the project as planned. In Fiscal Year 2008-2009, SANDAG Board approved an additional $5 million of TransNet sales tax revenues for the project, thus allowing completion of the project in September 2008 when the I-15 Middle segment was open for public use. While these projects only received a small portion of TransNet funding when compared to the entire project budget, their related accomplishments are encompassed under the Ordinance umbrella.

Decisions to allocate TransNet monies to these projects underwent significant discussion and data review by SANDAG and Caltrans staff, the ITOC, Transportation Committee, and the Board. SANDAG’s project prioritization criteria are generally stated and reviewed in the Regional Transportation Plan and Regional Transportation Improvement Program. Because all of the projects described in this report are included and authorized in these regional plans, it appears that the prioritization process was followed. Thus, the projects added to the EAP program between 2006 and 2008 clearly benefited from the funding available from local sales tax money, which helped accelerate these projects and enhanced the regional transportation system—the explicit intent of Proposition A ballot language passed by the San Diego voters in 2005, and the TransNet Extension Ordinance.
Creation of Budget History Documents to Track Project Movement Would Provide Strengthened Accountability

With continued reprioritization of projects based on available funding, there is frequent and significant movement occurring with some projects being temporarily shelved while others are accelerated based on annual budget discussions or meetings with governance bodies. Also, as project scopes are more refined in more detailed design plans or project costs increase more than expected, levels of funding are shifted among projects or within phases. We found that these constant shifts can be difficult to follow and track, although SANDAG has not implemented some type of institutionalized method for tracking the budget history and funding evolution for the EAP projects. Specifically, the complexity of project funding, prioritization, and scoping change between project budgets and original cost estimates presented a challenge to our audit.

While SANDAG and Caltrans project managers met our requests with a tremendous sense of cooperation and willingness to assist us in our tasks, we believe that SANDAG and Caltrans would benefit from creating protocols to better track and document all changes to project budget, scope, and schedule. Data regarding project reprioritization, cost estimate changes, and funding reallocations are shared and approved by governance bodies as necessary which is an important step in the process. However, SANDAG does not maintain a history of changes made against original Ordinance estimates. Best practices dictate that year-to-year project budget changes should be tracked, and the documents supporting reasons for the change and the proper authorization should be easy to access to assist in future decision-making purposes. Thus, we believe budget history documents would allow SANDAG to better explain and justify to the public how project promises from the 2004 Ordinance were amended to result in actual projects delivered. Accountability could be further strengthened by analyzing the changes to identify whether they were based on need, priority, or bad decisions. Moreover, the data could be used to help the ITOC oversee and understand the cumulative impact of their recommendations related to TransNet funding as well as statistics showing how the local sales tax revenue is leveraged and maximized to address regional transportation needs.

Although it appears that the SANDAG Board authorized scope and budget modifications and project files contained disparate evidence surrounding project changes, SANDAG and Caltrans generally did not have a centralized tracking to memorialize project evolution. When we endeavored to compare the original budgets approved in the Ordinance with the project budgets data authorized by the Board for Fiscal Year 2008-2009, generally, we found significant variation on all EAP projects. Our detailed review of project files revealed that all budget changes were appropriately reviewed and authorized, although the link between the project budgets in the Ordinance and current project budgets could not be easily established without going through the specific project detail. For example, one of the challenges was to determine how a project defined in the Ordinance evolved into several project components over the years. Moreover, due to the project reprioritization process that takes place annually, certain TransNet projects budgeted in previous years were not always included in the most recent SANDAG budget. These inconsistencies seem inherent to the existing planning approach where the funding and project scope may change year-to-year based on competing funding priorities and regional transportation needs. Thus, reasons for omissions
could include situations where projects with similar scope were combined under one project as well as where projects were placed on hold pending further development of environmental or concept design plans. For instance:

**I-15 Bus Rapid Transit Direct Access Ramps:**
Although we found records tracking back to Fiscal Year 2002-2003 Plan of Finance documents showing project scope and budget for the I-15 Bus Rapid Transit project to add direct access ramps at Hale and Hillary Streets, the project was omitted from the SANDAG’s Fiscal Year 2008-2009 approved Capital Improvement Program. Upon further research, we found that the project was re-scoped and re-prioritized, whereby the Hillary Street direct access ramp was folded into the I-15 South Managed Lanes segment and the Hale Street direct access ramp was merged into the North Managed Lanes segment.

**SR-52 Middle Lane from I-15 to SR-125:**
In another example, we found that the SR-52 Middle Lane from I-15 to SR-125 project was identified as one of the EAP projects and had incurred costs, but was not currently included in SANDAG’s Fiscal Year 2008-2009 program budget. According to the TransNet Project Office Manager, the project was placed on hold due to a reallocation of funds between SR-52 Managed Lanes and the SR-52 Extension Project. Based on project team discussion, the initial SR-52 Middle Lane project currently held a lower priority compared to other sub-projects on the same corridor and also had experienced cost overruns related to cost increases in design modifications.

**I-805 Corridor:**
While only an I-805 Middle Managed Lanes Environmental Phase project was identified to be completed as part of the Early Action Program, the budget priority was reassigned to the I-805 South Managed Lanes Environmental project instead as that project is moving forward with design and construction. Moreover, because of the availability of additional state bond monies, funds were budgeted for another project—the I-805 High Occupancy Vehicle/Carroll Canyon Direct Access Ramp—currently scheduled for completion by June 2012.

Thus, due to the complexity of project budget development and funding re-prioritization process, it is often difficult to track the various project scope and budget changes. Also, as previously mentioned, TransNet projects could likely face continued challenges such as increasing construction materials costs, evolving project scope, and growing contingencies that alter budgets and scope. From a project design point of view, it is important to understand that projects identified in the TransNet program may likely continue to experience changes in scope and cost due to various circumstances such as changing priorities, escalating costs, and changing market conditions. However, the general public, as well as future decision-makers, may not be aware of all these issues or the history behind changes and, thus, not fully understand their effects on the bottom-line budget and schedule. While changes and modifications are Board approved and follow an open, transparent process, our view is that a project by project budget history should be maintained to represent all significant changes over the life of the TransNet program. Table 2 provides one possible
example of a budget history document that could be developed to track key project changes throughout a project’s lifecycle.

**Table 2: Example of Proposed Format of a Project Budget History Document Summarizing Major Project Changes**

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Description: Brief summary of project (e.g. transit, highway, location, completion date)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Project Changes</strong></td>
<td>2005</td>
</tr>
<tr>
<td><strong>2005 Ordinance Amount</strong></td>
<td>$$$</td>
</tr>
<tr>
<td><strong>Market Adjustments</strong></td>
<td></td>
</tr>
<tr>
<td>- Cost Escalation/Inflation/Deflation</td>
<td></td>
</tr>
<tr>
<td>- Additional Changes &amp; Description:</td>
<td></td>
</tr>
<tr>
<td>- Project-Wide</td>
<td></td>
</tr>
<tr>
<td>- Environmental</td>
<td></td>
</tr>
<tr>
<td>- Design</td>
<td></td>
</tr>
<tr>
<td>- Right-of-Way</td>
<td></td>
</tr>
<tr>
<td>- Construction</td>
<td></td>
</tr>
<tr>
<td>- Other</td>
<td></td>
</tr>
<tr>
<td><strong>Scope Change Impacts</strong></td>
<td></td>
</tr>
<tr>
<td>- Scope Reductions</td>
<td></td>
</tr>
<tr>
<td>- Additional/Expanded EIS/EIR</td>
<td></td>
</tr>
<tr>
<td>- Realignment Work</td>
<td></td>
</tr>
<tr>
<td>- New Lanes</td>
<td></td>
</tr>
<tr>
<td>- Stakeholder Design Changes</td>
<td></td>
</tr>
<tr>
<td><strong>Major Project Redefinitions</strong></td>
<td></td>
</tr>
<tr>
<td>- Project/Segment/Phase Merger</td>
<td></td>
</tr>
<tr>
<td>- Project/Segment/Phase Split</td>
<td></td>
</tr>
<tr>
<td><strong>Schedule Change Impacts</strong></td>
<td></td>
</tr>
<tr>
<td>- Rework Needed</td>
<td></td>
</tr>
<tr>
<td>- Accelerated Opening</td>
<td></td>
</tr>
<tr>
<td>- Suspension Items</td>
<td></td>
</tr>
<tr>
<td><strong>Other Adjustments</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Current Authorized Project Budget** | | | | | $$$

Note: Category/details can be added or modified to address particular nuances of project.
Chapter 4: Project Management and Delivery Methods are Sound; However, Some Practices Could be Enhanced

Over the last three years, SANDAG and Caltrans have been following established project management practices and sound project delivery techniques and methods for planning, implementing, and monitoring the EAP projects. Generally, we found that the management structure employed was sufficient to ensure:

- Roles and responsibilities were established;
- Milestones, budget and timelines were well defined and communicated;
- Key project action items and project decisions were memorialized in project files; and
- Project status was tracked weekly, and budget and schedule changes were communicated to executive management on a monthly and quarterly basis.

Compared to other public works and transportation programs and entities, the TransNet program appears to have similar or better project management practices in place over project documentation, monitoring and oversight, conflict resolution protocols, and on-going formal and informal feedback from project team members to senior and executive level management. These aspects all help expedite problem-solving and provide opportunity for discussion and buy-in on project direction from staff at all levels. Other sound project controls are in place to ensure cost estimates are reasonable, expenditures are contained, schedules are adhered to, and quality of work is appropriate.

Nonetheless, we identified a few areas where SANDAG should strengthen its practices as well as tighten project documentation. For instance, while budget changes appeared reasonable, project files did not always maintain consistent documentation to support cost items as key data was not always centrally located or maintained and took some time to gather. Additionally, several policies and practices should be memorialized in a more formal project delivery manual to guide project managers and staff involved in the day-to-day project. Although we found SANDAG and Caltrans’ exercised sound project delivery practices, the TransNet program could be enhanced by consistently completing project evaluation forms and documenting lessons learned. In addition, there are several control features and practice tools to be gleaned from the NCTD’s SPRINTER Rail project that should be considered on future SANDAG transit projects—as well as for highway construction projects and the TransNet program overall.

Because the TransNet is in its infancy, many of the EAP projects were in preliminary scoping or early design stages. Thus, not enough time has passed or efforts undertaken for us to draw conclusions on project performance. While our review found that EAP projects in general appear to be on schedule and within authorized budgets, we noted several instances of project cost overruns and schedule delays within certain phases. While budget or schedule revisions were substantiated or documented, we found that SANDAG and Caltrans operated sufficient processes to track, monitor, and address budget and cost changes on the projects we reviewed. However, we cannot determine the impact of these cost and time changes on the overall program outcome until TransNet projects are closer to completion.
For instance, our review revealed that both SANDAG and Caltrans project managers, resident engineers, and task managers all closely monitor task orders and related amendments as well as contracts and resulting change orders. Although the project team could improve documentation of reasons for time extensions on task order amendments, task order amendments and change orders were generally well documented. Additionally, construction change order amounts were monitored against a 10 percent benchmark to ensure that the changes did not exceed the stated contract amount. These project and contract monitoring techniques appeared consistent with industry best practices and existing procedures noted at other peer entities.

**Current Project Structure Seems to Work Well**

While most of the current TransNet EAP projects are jointly conducted by Caltrans and SANDAG, Caltrans is primarily responsible for highway construction projects and SANDAG plans, develops, and monitors transit improvement projects. We found that over the last three years a coordinated project level structure exists between the two organizations that appears well managed. Specifically, the TransNet program has to date on EAP projects enjoyed a strong project management and delivery structure as shown in Figure 9 that works well and has been followed diligently. Key project managers’ and Corridor Directors’ roles and responsibilities are defined to ensure sufficient review and monitoring of project costs, quality management, scope changes, resource management, risk planning, and financial management. Interviews with both entities reveal that the structure allows for frequent communication, detailed tracking of work-in-progress, continuous flow of information, and feedback and support from all team members across agencies. Moreover, we found that:

- Throughout project phases, Corridor Directors and their project managers work on multidisciplinary teams to consider various aspects of each project—members of any particular project could include Caltrans staff, SANDAG staff, external consultants, stakeholders, and representatives from the MTS or NCTD, and city or county staff.

- While each corridor can contain multiple segments and each segment may contain multiple projects, each project has its own series of project managers with defined responsibilities over schedule and budget, design, and construction—all of whom meet on a weekly basis to resolve any project issues. Others on the project team attend as well including consultants, advisors, and invited stakeholders. Any deviations from the budget or schedule are discussed in the team environment during various meetings, one of which is the monthly Project Development Team meeting.

- To ensure the communication channels remain open and all stakeholders have a chance to discuss concerns and issues on a regular basis, each transit-related project team meets with transit operators NCTD and MTS, at a regional Project Development Team meeting. In addition to these meetings, the division also has a monthly half-day meeting on projects that are in construction.
**Figure 9: Current Project Management Structure Example**

* Project structure below the Corridor Director level can change and evolve to fit individual project needs.

- Corridor Director and project managers hold weekly “progress meetings” with all team members and consultants where schedules, deliverables, technical issues, and action items are discussed. Every few weeks, the team also conducts risk-based discussions where each project is reviewed from a more broad perspective and factors that impact the overall delivery are considered in “what-if” scenarios. These meetings are memorialized with meeting minutes that are prepared by the consultant, reviewed by project managers, and approved by the Corridor Director.

Enhancing this structure are two additional SANDAG executives involved in the planning, development, management, and implementation of the transit projects. These two directors oversee functional areas at SANDAG—namely, the Land Use and Transportation Planning Department and the Mobility Management and Project Implementation Department—and provide guidance, supervision, and general coaching to the TransNet project managers. However, the project managers report to, and are overseen by, a specified Corridor Director who is directly accountable for schedules, budgets, and scope of assigned corridors and projects.

**Effective Project Management Tools are Employed**

Currently, both SANDAG and Caltrans are exercising several tools allowing for effective project management over resource planning, cost estimation and budgeting, cost and progress monitoring, scheduling, and reporting areas. Although both entities use separate automated systems such as Primavera and Microsoft Project for developing project schedules and
milestones, these systems are merged together through a middleware tool that feeds into the Dashboard system. Project accounting data from both SANDAG and Caltrans, including authorized budgets and actual expenditures also are input into the Dashboard. The Dashboard displays critical project milestones, including budgets, expenditures, schedules, and progress, for each individual project as well as for the overall TransNet program. The system serves as a project monitoring tool internally as well as externally, for the general public.

Additionally, our review found strong project management and documentation throughout a highway project’s life cycle. At both SANDAG and Caltrans one or more project managers are responsible for all aspects of project planning, including budget projections by phase, schedule development, decisions to outsource work or conduct work in-house. Project documentation generally memorialized significant decisions and illustrated various types of monitoring tools and spreadsheets in addition to the automated Primavera and Microsoft Project scheduling tools. Moreover, financial records are also used to manage projects. For instance, for our sample of projects, SANDAG and Caltrans project manager regularly reviewed, maintained, and used the following project documentation to manage projects and tasks:

- Environmental documents, design plans, and status;
- Results of project coordination meetings with stakeholders and communications with external parties involved;
- Proposed transit operating plans and ridership counts;
- Detailed schedules and budgets for work orders and amendments;
- Transit financing requests and financial grant applications;
- Cost estimates and projections at various project phases;
- Construction status, bid, award reports, and construction progress payments;
- Contracts and task orders including amendments and change orders;
- Data from SANDAG’s cost management system used to track contract working days, quantities of items used, and change orders;
- Payment vouchers for contractors and invoices for consultants prior to authorization;
- Responses to contractor or vendor questions related to billing discrepancies;
- Evidence of verification of labor surcharges and equipment rates, tentative agreements, and time and material for daily extra work reports submitted by contractors;
- Internal resource staffing assignments for each project; and
- Detailed spreadsheets tracking historic revenue sources, budgets and actual costs by phase, and burn rate calculations.

As a result, day-to-day project activities appear well-managed and monitored, with project decisions and action plans readily available to the project team, Corridor Directors, and
public through vehicles including formal quarterly reports, various governance and oversight committees’ public meeting minutes, project development team meeting minutes, informal daily and weekly discussions, and Dashboard data. For instance, project meetings and decisions are documented with action items to enhance institutional memory and transparency. Although well managed overall, some historic project data, such as documentation of critical changes to project budgets and schedules as discussed in Chapter 3 of this report, were not easily located in project files.

Project Delivery Methods and Schedules Appear Reasonable

Guided by extensive project management and oversight techniques employed by project managers as well as several Caltrans project manuals, TransNet projects undergo sound and consistent delivery methods intended to track progress against scheduled milestones and ensure appropriate tasks are completed at each phase—with some slight deviations to fit specific project circumstances and individual project manager style. Project managers as well as Corridor Directors continually reiterated to us that delivering projects on budget and on schedule throughout the various project phases is one of the key project objectives jointly identified by SANDAG and Caltrans.

While each project phase as shown in Figure 10 may require different techniques and skills, our audit revealed that, generally, both SANDAG and Caltrans employed similar processes to develop and manage both transit and highway construction projects. Project delivery phases are as follows:

**Figure 10: Typical Project Delivery Phases**

![Diagram of project delivery phases](image)

In general, both entities consider and track work in six different phases—environmental, design, right-of-way support, right-of-way capital, construction support including the bid and award process, and construction capital. Additionally, Caltrans seems to monitor its development and construction projects against eight critical milestones as shown below:

1. Project Analysis and Environmental Document
2. Projects Plans, Specifications, Estimates
3. Office Engineer Verification of Complete Plans, Specifications, Estimates
4. Right-of-Way Certification
5. Ready to List for Bid
6. Construction Advertising
7. Contract Award
8. Contract Acceptance

For highway construction projects, these key milestones are tracked on a monthly, if not more frequent, basis. Specifically, the Caltrans District 11 Director has a performance contract with the Caltrans’ Executive Director to meet estimated schedules and targets for delivery. Justifications for any variances must be documented, and the District Director’s performance evaluation is directly tied to district performance. To ensure all key dates are considered and interim project delivery milestones are closely monitored, the Caltrans District 11 Director identified additional delivery targets in the environmental stage and design stage to be tracked by Corridor Directors. These supplemental dates include:

- Begin Environmental Document
- Circulate Environmental Document
- Presidential Permit Approval
- Encroachment Permit Approval

Moreover, in each project phase, it appears that appropriate tasks take place. For instance, project development team meetings held early in the environmental stages include all project stakeholders such as the MTS, NCTD, cities, and County whenever appropriate or whenever the project crosses multiple municipal boundaries. Often, environmental studies are performed by an external consultant hired by either SANDAG or Caltrans. Highway regulations mandate that a Final Report study including the environmental study and the value analysis are performed on all projects receiving over $25 million in federal funds. All TransNet highway construction projects receive some level of federal funding and thus, according to Caltrans executives, all projects are built to meet federal specifications for the environmental and design requirements. Work is managed by task order, consultants are held accountable to a task, and costs are only reimbursed based on work performed and invoiced. A designated project manager is responsible for monitoring consulting work and authorizing consultants’ reimbursements for the work performed.

In the design and environmental stages, SANDAG and Caltrans have an option to outsource the work or perform engineering designs in-house. Both entities have sophisticated resource allocation planning processes to match the available resources with the project needs. For instance, SANDAG utilizes an Overall Work Plan detailing projected resources allocated to each project task at a high level, while Caltrans establishes and monitors its Resource Plan detailing project budget and staff resources available. A designated project manager is responsible to ensure that the decision to outsource work is thoroughly evaluated, reviewed and approved. Further, the decision to outsource is generally due to lack of available in-house resources to complete the job and meet the planned schedule. While the project
manager is charged with monitoring work, both SANDAG and Caltrans have policies and procedures to monitor engineering and design work performed by external consultants.

Additionally, in the design stage, project managers facilitate and monitor those project activities performed by other transportation partners—such as permit issuance—that are incorporated into overall project schedules. For instance, SANDAG and Caltrans often must coordinate with local cities to review project design plans for compliance with city codes and regulations and to issue necessary permits. Because the review and permit process can take longer than expected to meet city requirements, the project manager’s role is to minimize any potential delays. Each city has unique administrative codes and permit requirements, resulting in unique review processes dependent upon individual project specifics and location. According to SANDAG senior management, SANDAG is currently working with city officials to identify better protocols to maximize the benefit of the city plan reviews and minimize time needed to secure permits.

In all transportation and transit programs, timing of right-of-way acquisition can be a tricky venture—buy land too soon, and one could end up managing the property; buy land too late and project delivery may experience added costs and possible delays from contested acquisitions. For the EAP projects we reviewed, Corridor Directors informed us that only limited amounts of right-of-way land will be needed since many of the projects relate to improvements and expansions of existing corridors. However, for the parcels identified by SANDAG or Caltrans to be purchased, each entity must follow rigorous and standard federal requirements.

Once a typical project enters the construction phase, costs are more defined and plans more concrete. Construction contracts are awarded through a competitive bid and award process that spanned a four to eight month time frame—between the engineer’s estimate that forms the basis of bid requests, and the receipt and opening of the bids—for the 21 contracts entered into thus far for EAP projects. The competitive procurement process for Caltrans construction contracts takes slightly more time than at SANDAG, since once completed, plans and specifications at the District also have to be reviewed by Caltrans Headquarters, which is also responsible for advertising the bids and awarding the contract. Since this additional layer does not exist at SANDAG, the bids, depending on the size and complexity of the project, contracts are awarded within about six months. Best practices and controls are in place to ensure competitive processes seek the best bid price, and contractor performance is monitored on a daily basis by resident engineers in the field.

Project Evaluation Forms should be more Consistently Employed and Used during Various Project Phases

Several strong practices are in place to plan, develop, deliver, and manage TransNet transit and highway construction projects, including the availability of post evaluation forms available for highway construction projects. These forms and resulting evaluation reports compare initial costs to actual expenditures within various phases, as well as request input on lessons learned and recommendations for improvements. However, these forms are not used with consistency or on a real-time basis to garner meaningful insights.
In part, the uneven use of post evaluation forms is a result of past practices of waiting until a highway development project was formally closed-out with all claims, settlements, disputes, and final project costs known so that Caltrans staff could perform a true budget-to-actual comparison. Yet, with some claims resulting in litigation and keeping projects open for years, any benefits gleaned from a post-project evaluation would grow stale and be forgotten. However, the benefits of such tools could be realized by Caltrans completing post-evaluations after each phase to enhance its existing project monitoring tools and ensure needed changes are made mid-stream on a project—further, SANDAG may want to incorporate its own similar protocols.

Moreover, as Caltrans and SANDAG pioneer various project delivery approaches to meet the EAP schedule, TransNet project managers and Corridor Directors would benefit from a close review of the lessons learned on these projects. For instance, the unique design sequencing approach implemented on the I-15 Corridor warrants further analysis of actual costs incurred, including staff and support costs to ascertain whether the practices employed should be applied to future projects. Furthermore, conducting cost benefit and risk analyses including reviews of project delivery options and associated costs should be considered on all future projects prior to making a decision between project delivery methods, such as a design-sequencing or design-build, for example.

Although post evaluations are not always performed on completed projects, SANDAG and Caltrans staff hold informal discussions on lessons learned and improvements proposed on future projects or even subsequent project stages. SANDAG and Caltrans also employ value analyses on projects and quality control items to improve design features that have been identified and serve to enhance projects. Various process improvements and tools are now available on Caltrans’ intranet, including a database containing design specification updates and improvements.

SANDAG Should Strengthen Transit Project Development Practices

Prior to the passage of Senate Bill 1703 in 2003, SANDAG was not involved in the project development or construction aspects of transit projects. Senate Bill 1703 transferred responsibility for the planning, development and construction of regional transit projects from MTS and NCTD to SANDAG. While the vast majority of TransNet early action transit projects currently underway were primarily planned and developed by MTS or NCTD prior to SANDAG’s assumption of development responsibilities, SANDAG is in progress of establishing practices and structure to plan, develop, and managed future transit projects. Many of the current SANDAG project managers, consultants and executives have previously worked at Caltrans, MTS, or NCTD and collectively bring unique insight, experience, and knowledge of project delivery methodologies and tools used by these other entities. In several areas, these project managers stated that they rely on Caltrans or other project manuals to aid in their own transit project development efforts.

With much of the project development knowledge “transferred” to SANDAG from these other transit and transportation agencies, SANDAG should build upon, improve, and formalize its documentation of current processes and procedures to better ensure long-term
continuity of in-house expertise. There are several areas that SANDAG could strengthen as it moves forward with future transit projects including memorializing its policies and procedures into project delivery manuals, and implementing consistent project performance monitoring tools to capture and assess key data on transit projects.

To assist in its new transit roles and responsibilities, SANDAG hired several staff members from MTS and NCTD to oversee and manage project planning and development of the transit component of the regional transportation system. Of the current 17 EAP projects, seven are transit-specific projects in addition to the I-15 Middle that incorporates bus rapid transit components. Specifically:

- **Mid-Coast and Super Loop (2 projects)**  
  These two projects were initially developed by MTS, with environmental reports prepared jointly by MTS, United States Department of Transportation, and the Federal Transit Administration.

- **Blue Line and Orange Line Trolley (2 projects)**  
  While the initial trolley lines were built by MTS, these two TransNet projects on the Blue and Orange lines involve improvements only. Currently, SANDAG is in the early planning stages with the environmental study not expected to clear until December 2010.

- **I-805 South Bus Rapid Transit**  
  This project was started by MTS, with former MTS employees joining the SANDAG team to continue planning and early design work.

- **SPRINTER**  
  SANDAG provided oversight of this project beginning in 2007, but NCTD was responsible for the planning, development, and delivery of the rail line.

- **Mid-City Rapid Bus**  
  SANDAG completed the conceptual engineering work in December 2008 and will be entering early design stages, pending approval of additional federal funding.

Because most of the SANDAG’s ongoing TransNet transit projects were developed and planned by other entities and are still in preliminary environmental or early planning stages, SANDAG has not yet developed or formalized all the needed protocols since subsequent design and construction phases have yet to be started. For instance, while interviews with SANDAG project managers reveal that development protocols are similar to those used at Caltrans, we did not find documented comprehensive procedures memorializing these processes and practices. Although the SANDAG Board adopted several policies outlining SANDAG’s responsibilities over transit project delivery, these directives are geared at a higher policy level and do not provide sufficient “hands-on” guidance for project managers and staff involved in the day-to-day project management and delivery. Towards this end, SANDAG should consider establishing working-level policies and procedures to ensure the uniform application and documentation of practices, controls, and preferences and make such guidance available to staff for reference and training purposes.
Additionally, SANDAG could implement more rigorous protocols to augment its effectiveness in planning, developing, and overseeing TransNet transit projects. For instance, while SANDAG project managers employ good project management and monitoring techniques, SANDAG lacks entity-wide comprehensive guides and procedures for the application of consistent project management techniques on all projects to ensure quality. Up to this point, many TransNet transit projects were originally scoped and designed while under the authority of MTS and NCTD. Yet, because SANDAG’s role over the planning and project delivery has increased dramatically over the last five years, we believe more formal protocols are needed to ensure the process and established practices continue as envisioned and planned to achieve the desirable outcomes.

At a minimum, SANDAG should consider consolidating board policies into a single project delivery manual where further defined procedures could be established and practices memorialized. Policies, procedures, and protocols should then be available to SANDAG staff for reference and training purposes. More importantly, with project development and project delivery staff transferring from other transit agencies and municipalities to SANDAG as part of its growing responsibilities over transit projects, consistency in processes and procedures would better ensure continuity of SANDAG’s expertise relative to transit planning and development.

However, while SANDAG may lack detailed transit development policies and procedures, SANDAG’s existing project delivery practices appear to be sufficient. For instance, our review of project files for the I-15 Bus Rapid Transit Stations and the Mid-Coast Super Loop suggest that processes followed were generally similar to those applied on highway construction projects in terms of establishing key project milestones and budgets, establishing a process to monitor performance, track project status, and documenting project delivery actions and issues to ensure ongoing communication and frequent updates to Corridor Directors and executive management. Moreover, many of the TransNet EAP projects with a transit component are also subject to Federal Transit Administration requirements. Based on our cursory review of Value Analysis Reports and Congestion Impact Studies that were performed jointly by the MTS and Federal Highway Administration, adherence with federal requirements was part of the deliberate project delivery processes.

Another feature that would strengthen transit project management is the creation of a uniform filing system where critical project documentation such as cost estimates, project budget history, project development team meetings, change orders, and other data are organized and located under a similar numbering system to ensure consistency and availability of important project data. Further, SANDAG may want to consider creating a shared database to house the electronic copies of project documentation. For highway construction projects, Caltrans organized project files on an automated shared drive and electronic documents followed as the physical files. However, while most critical project data seems to have been retained in SANDAG and Caltrans, project historic data, such as important changes to project budgets and schedules, were not always easily located in project files.
Lessons can be Learned from SPRINTER Project

In 2006, the SANDAG Board approved approximately $24 million in TransNet Extension funding to pay for cost increases on NCTD’s SPRINTER transit project. At that time, the project was approximately 70 percent complete and the Federal Transit Administration and SANDAG required a number of best practices and cost controls to be implemented on the project that could prove valuable to employ on future SANDAG transit projects.

Initially started and planned in the late 1980s under the original TransNet ordinance, the SPRINTER Rail project involved the conversion of a 22-mile existing older freight line built in the 1880’s into a new light rail transit line running between Oceanside and Escondido. Using diesel multiple unit light-rail vehicles that are self-propelled and known for being more fuel efficient and quieter than traditional commuter rail counterparts, the new generation vehicles are only the second of their kind used in the country. Acquiring and launching a new type of rolling stock for the light-rail project required significant review and approvals from federal, state, and local authorities, which took significantly longer to obtain than was originally anticipated based on experience with past “traditional” light-rail projects. In fact, NCTD reported that federal approval to enter into the final design phase was not granted until 2000—nearly a decade after the first right-of-way acquisitions began.

Subsequent state budgetary problems and funding freezes between 2002 and 2004 forced NCTD to explore bridge financing and bonding options, adding unanticipated increased costs and additional administrative efforts. Additionally, like other regional and statewide transit and highway construction projects, the SPRINTER project was faced with unprecedented construction industry cost escalations between 2003 and 2006. The initial 1987 TransNet ordinance funding of $60 million in 1990 dollars rose to today’s $484 million level and pushed the development timeframe out more than 20 years; it should be noted, however, that the $60 million funding was intended to be matched by other funding sources. Nonetheless, NCTD reports that the SPRINTER is the lowest cost-per-mile new rail project in the state and country, at $22 million per mile when compared to similar rail projects in Los Angeles, Charlotte, Denver, Pasadena, and Pittsburgh among others.

The NCTD had secured funding from federal and state sources to cover the increases, but it ran short in 2006 when an additional $42 million in funding sources were authorized by the NCTD Board in order to cover project cost overruns due to a number of factors, including—time lags between initial design and vehicle authorization process that resulted in overall project delays; significant design issues partially due to the need for redesign to accommodate technical specifications of newly acquired trains; the inability to remove freight operations from the line during construction necessitating the use of construction “work windows” and an added year of construction; and, the resulting overall work remaining to complete construction. Decision makers believed the project to be an integral part of the regional transit network and part of the region’s transportation solution and realized that the Ordinance plan to extend the SPRINTER line could not be achieved if the line was not constructed. While the SPRINTER project began service in March 2008 and continues to close-out construction claims, there are several lessons and practices that SANDAG could consider and incorporate into TransNet transit and highway construction projects where applicable. Some of these best practices include:
✓ Adopting the Federal Transit Administration’s process for evaluating individual project elements and risks related to cost, scope, and schedule and formalize the results in risk mitigation registers including descriptions, cause, potential impact, likelihood of impact materializing, mitigation strategy and costs to mitigate. Data from these documents form the basis for developing a risk mitigation and management plan as well as a means for tracking the success of mitigation efforts and the responsible staff assigned. In addition to project risk tracking, SANDAG could employ a risk based approach to the TransNet program as a whole to capture overarching risks to the program’s success such as available funding and adequate resources as well as document approaches taken to minimize any negative consequences that could occur.

✓ Continuing existing SANDAG and Caltrans techniques employing similar risk assessment practices and ensuring the risk assessment approach is performed consistently on all projects. Moreover, SANDAG could merge risk assessment results from Caltrans highway construction projects with its own transit risk results, once identified, into an integrated risk plan as well as ensure lessons learned on the SPRINT project are incorporated and memorialized into SANDAG policies and procedures.

✓ Ensuring project risk assessment processes include a periodic review and reassessment of project cost risks at contract milestone achievements. This requires a systematic risk analysis to continuously track progress and evaluate the risk exposure based on current factors.

✓ Assessing technical capacity and adequacy of staff resources as part of a risk mitigation and management plan that could identify gaps in resource levels, training needs, additional staff needs, or staff reassignments.

✓ Consistently using schedule forecasting techniques that allow evaluation of staff burn rates, anticipated completion time, and budgets to more closely monitor project costs against plans.

✓ Using earned value calculations and percent of work complete to date, update monthly project forecasts of costs to complete. Although SANDAG has made strides toward implementing these methodologies in its Dashboard system that captures project percent of completion, the SPRINT project employed efficiency analysis, manpower analysis, payment application analysis, trend analysis, and other analytical techniques to provide monthly forecasts and status.

✓ Developing detailed sub schedules and report on all critical activities on key system components that are combined into an integrated schedule for all project activities. While similar project scheduling and reporting practices appear to be successfully employed and ongoing at SANDAG, it should ensure these practices are consistently employed on all projects, and formalize these procedures for continued agency-wide implementation.
While several of these practices may have been informally shared, we suggest that SPRINT project management conduct intensive, hands-on workshops with SANDAG and Caltrans executives where critical tool employed and practical experiences could be formally shared, specific implementation details deliberated, and benefits versus cost analysis reviews could be employed. These meetings could result in the establishment of more stringent project delivery tools and written policies and procedures to assure best practices are implemented.

**Construction Cost Budgets Estimates were Generally Accurate**

Construction cost budget estimates are influenced by various factors including construction price index fluctuations, local market conditions, demand for contracted labor, economic conditions, project scope, and underlying assumptions used by estimators. The accuracy of these cost estimates are tested during the bid process where the engineer’s estimate is ultimately compared to bid estimates prepared by independent contractors. Comparing a contractor’s bids to the engineer’s estimate serve as a litmus test of the quality of the engineer’s estimate and how well the estimate reflected current market conditions, material costs, and the labor market. Our review revealed that both SANDAG and Caltrans have developed sound cost estimation practices and techniques for highway transportation projects that have proven generally accurate for the 21 contracts related to EAP projects totaling over $658 million put out to bid over the last three years.

Specifically, in developing construction estimates, Caltrans engineers use various cost estimating techniques and assumptions to ensure that during the design phase of a project’s development cycle, construction cost estimates are continuously updated and refined to track market conditions. Engineers use industry indices for estimating materials costs and rely on experience and historical data for best approximating quantities needed. Other factors considered include such things as prices of crude oil, asphalt concrete, labor cost, equipment rental, and mobilization—all elements typically considered in the transportation industry. All construction estimates are reviewed by the Office of Engineer at Caltrans’ headquarters in Sacramento. Major construction projects also undergo additional cost review conducted by Federal Highway Administration.

Even with several layers of reviews, construction cost estimates may still be significantly affected by unexpected fluctuations in market conditions which occurred in California, between 2001 and 2005. During this period, Caltrans and others in the industry reported unexpected construction cost increases exceeding 60 percent more than expected costs according to statewide data. Variances were so extreme during this period that Caltrans hired a third party to review construction cost estimates on all projects during that period.

We compared engineer’s estimates to bids received for the 21 contracts advertised for bid over the last three years. On average, variances were 2.2 percent across all the contracts. Yet, our review revealed 13 of the engineer’s estimates were significantly different than bids received on individual projects as shown in Table 3.
Table 3: Percent Difference between Engineer’s Estimate and Lowest Bid

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Segment</th>
<th>Engineer’s Estimate</th>
<th>Lowest Bid</th>
<th>Percent Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I-5 HOV (High Occupancy Vehicle) Ramp</td>
<td>$1,446,481</td>
<td>$1,842,913</td>
<td>27 %</td>
</tr>
<tr>
<td>2</td>
<td>I-5 HOV (High Occupancy Vehicle)</td>
<td>$39,548,558</td>
<td>$32,821,953</td>
<td>(17 %)</td>
</tr>
<tr>
<td>3</td>
<td>I-15 South Unit 1</td>
<td>$67,607,450</td>
<td>$48,380,250</td>
<td>(28 %)</td>
</tr>
<tr>
<td>4</td>
<td>I-15 Middle Soundwall</td>
<td>$3,543,735</td>
<td>$4,902,615</td>
<td>38 %</td>
</tr>
<tr>
<td>5</td>
<td>I-15 Middle Unit 2</td>
<td>$57,858,000</td>
<td>$67,837,529</td>
<td>17 %</td>
</tr>
<tr>
<td>6</td>
<td>I-15 Middle Unit 3</td>
<td>$96,435,000</td>
<td>$81,952,560</td>
<td>(15 %)</td>
</tr>
<tr>
<td>7</td>
<td>I-15 Middle Unit 4</td>
<td>$36,201,000</td>
<td>$32,228,492</td>
<td>(11 %)</td>
</tr>
<tr>
<td>8</td>
<td>I-15 Middle Unit 5</td>
<td>$35,628,960</td>
<td>$39,592,936</td>
<td>11 %</td>
</tr>
<tr>
<td>9</td>
<td>I-15 Middle Unit 1 Landscape</td>
<td>$2,793,515</td>
<td>$2,446,027</td>
<td>(12 %)</td>
</tr>
<tr>
<td>10</td>
<td>SR-52 Ops East/ West Bound Auxiliary Lanes</td>
<td>$25,160,521</td>
<td>$17,748,749</td>
<td>(30 %)</td>
</tr>
<tr>
<td>11</td>
<td>SR-52 Ops West Bound Truck Lane</td>
<td>$4,220,645</td>
<td>$3,074,324</td>
<td>(27 %)</td>
</tr>
<tr>
<td>12</td>
<td>SR-52 Extensions Unit 4</td>
<td>$72,797,532</td>
<td>$56,821,094</td>
<td>(22 %)</td>
</tr>
<tr>
<td>13</td>
<td>SR-52 Extension Unit 5A</td>
<td>$96,381,600</td>
<td>$66,359,459</td>
<td>(31 %)</td>
</tr>
</tbody>
</table>

Source: “Bid Summaries” from Caltrans Office Engineer Website

While there were four contracts where the lowest bid was more than 10 percent greater than the engineer’s estimate—in one instance the lowest bid was over 38 percent greater—we found these variances to be consistent with the condition of the construction market at the time the bids were advertised during the unusual construction cost inflationary period of 2004 to 2007. Other causes included contractors associating a higher complexity with these construction projects and consequently incorporated potential contractor error costs in their bid proposal.

By contrast, we also noted instances where the bid was significantly lower than the engineer’s estimate—specifically, four bids were received that were at least 27 percent under engineer’s estimates. Again, the timing of those bids (three of them were received in 2008), suggest that the price fluctuations are closely tied to the trends in the economy overall. It appeared that when the economy was slow and work was scarce, contractors were more willing to lower profits in order to obtain work and, thus, bid at lower rates than they would in a thriving economy. When comparing the numbers of bids received during favorable construction industry times to bids received in slower economic times, we found that the number of bidders decreased when the economy was doing well. Specifically, for contracts awarded between 2004 and 2007 where the bids were much higher than the engineer’s estimate, there were typically only two or three contractors submitting a bid on each project. Of those three bids received in 2008 that came in much lower than the engineer's estimate, there were seven contractors bidding on each project during the economic slowdown.
Further, estimates can be significantly impacted by the length of time between the estimates and receipt of bids—much of which is largely under control of the estimating entity. However, we found the time lapse between the engineer’s estimate and bid receipt was not significant on any of the projects reviewed, and ranged from four to eight months. Specifically, for the seven construction contracts awarded in 2008, more than half of the contracts took seven months to award.

Table 4: Comparison of Timeframe between Engineer’s Estimate and Bid Opening

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Segment</th>
<th>Length</th>
<th>Difference in Low Bid and Engineer’s Estimate (Under)/Over</th>
<th>Number of Bids Submitted</th>
<th>Low Bid Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I-15 South Unit 2</td>
<td>7 months</td>
<td>(8 %)</td>
<td>3</td>
<td>$60,545,000</td>
</tr>
<tr>
<td>2</td>
<td>I-15 South Unit 3</td>
<td>7 months</td>
<td>(9 %)</td>
<td>6</td>
<td>$66,868,627</td>
</tr>
<tr>
<td>3</td>
<td>SR-52 Extension Unit 5A</td>
<td>7 months</td>
<td>(31 %)</td>
<td>6</td>
<td>$66,359,459</td>
</tr>
<tr>
<td>4</td>
<td>SR-52 Ops East/ West Bound Auxiliary Lanes</td>
<td>7 months</td>
<td>(30 %)</td>
<td>6</td>
<td>$17,748,749</td>
</tr>
<tr>
<td>5</td>
<td>I-15 South Unit 1</td>
<td>7 months</td>
<td>(28 %)</td>
<td>7</td>
<td>$48,380,250</td>
</tr>
<tr>
<td>6</td>
<td>I-15 North (BM Facility)</td>
<td>8 months</td>
<td>4 %</td>
<td>4</td>
<td>$5,464,905</td>
</tr>
<tr>
<td>7</td>
<td>I-15 North Unit 2</td>
<td>8 months</td>
<td>(3 %)</td>
<td>7</td>
<td>$47,420,115</td>
</tr>
</tbody>
</table>

Source: “Bid Summaries” from Caltrans Office Engineer Website & Project Schedules from Dashboard Website

As shown in the Table 4, the bid variance on one $66 million project was approximately 31 percent less than estimates, while the bid variance was not much lower (approximately 29.5 percent) for a $17 million project. Thus, there appears to be no direct correlation between the value of the project and the length of the bid process or the bid variance. Similarly, the bid variance for the two projects taking eight months to award ranged from less than 2.87 percent of estimates to nearly 4 percent over estimates. According to Caltrans, when bids started getting out of sync with engineer’s estimates in 2008, new policies were established to update estimates more frequently.

Individual Project Cost Overruns and Delays Seemed Reasonable

To assess EAP project performance, we reviewed Dashboard data summarized at the corridor segment level for comparing budget to actual costs and baseline to actual schedules. At the summary level, projects seemed to be within authorized budgets. For instance, between 2006 and 2008, SANDAG and Caltrans had only expended approximately 12 percent of the total TransNet budget approved to date. However, since the vast majority of these projects were still in the early environmental and design phases, full projects costs have not yet been realized that would have allowed us to more conclusively assess whether projects will ultimately meet budget and schedule goals.
Additionally, we examined performance on 22 highway and transit segments as well as assessed performance by project phase including environmental, design, right-of-way, and construction. Our review revealed 4 of the 22 segments had experienced cost-related or schedule delays in the right of way support area and another 5 of the 22 segments experienced similar issues in the environmental phase. In addition to historic construction cost increases in the early 2000s, causes for the overruns and delays included subpar consultant work, unexpected or unforeseen site conditions requiring rework, and additional unplanned activity to complete environmental studies. Nevertheless, reasons for the issues were tracked, vetted with management, and the processes to manage and address these changes were reasonable.

For instance, the Mid-Coast project experienced delays of more than 12-months and required Board approval of $11 million to cover cost overruns in the environmental stage. Because the Mid-Coast project was initially envisioned for development and construction in the early 1990’s, an environmental study was completed at that time. Upon subsequent reprioritization processes, the project was placed on hold until 2005 when the TransNet extension program was launched. Because the initial environmental study had been completed more than 15 years prior, SANDAG had to revisit the concept plans to address changed conditions along the I-5 Corridor and adjust alignment design plans to accommodate appropriate train speed level. Although the project technically experienced budget overages, the reasons were justified and documented in project files and steps were taken to minimize the total impact of the overruns.

In another example, we found budgeted costs were exceeded on the I-15 Middle Segment project when the adjacent Lake Hodges flooded after a storm covering the entire construction area including equipment underwater. Because a portion of the freeway extends across Lake Hodges, the additional work required after the flooding appeared unavoidable and was necessary to complete the project. While initial budgets on both of these projects were exceeded, the excess costs related to rework needed was justified based on project file documentation.

Moreover, as described throughout this report, SANDAG and Caltrans have several processes in place to monitor costs and schedule against planned targets and to minimize these overruns and delays and ensure projects and activities remain on schedule.

SANDAG and Caltrans Generally Employed Adequate Procurement Practices to Supplement Staff and Complete Project Activities

For the EAP projects commenced over the last three years, SANDAG and Caltrans have primary responsibility for the majority of the TransNet program’s $160 million in contracting activities that are used to supplement limited staff and provided needed expertise. Based upon a cursory review of activities, we found that practices employed were adequate to afford sufficient competition to attract good prices and quality services, objectively select contractors, track and approve allowable contract expenditures, and monitor contractor skills and performance.
Specifically, Caltrans relies on its contract compliance offices at Caltrans headquarters that have established contract solicitation, selection, and award processes that provide controls, objectivity, and fair competition. The contract award process is centralized, and all TransNet contracts awarded by Caltrans require approval of its Contract Monitoring Office and appropriate headquarters executives. Similarly, SANDAG’s procurement of consultant contracts follows a typical competitive procurement process whereas SANDAG’s Contracts Unit advertises and receives requests for proposals from different consulting firms. The responsive proposals are reviewed and scored based on pre-determined criteria by an independent review panel generally consisting of staff familiar with the solicited work. If warranted, the panel will conduct interviews before the final selection is made and the contract is awarded. We found SANDAG contract files to be well-organized and containing appropriate documentation to support a competitive process such as requests for proposals, responses, scoring sheets, and correspondence.

To achieve synergies and avoid duplication of efforts in contracting, both entities utilize SANDAG’s established list of more than one dozen on-call consultants for engineering and architectural services. Each of the consulting on-call contracts had an initial value of $10 million with options for renewal of the term and increase of contract value— with a not-to-exceed cap of 25 percent of the contract value. Before work is performed on a contract, a task order must be issued detailing the scope of work as well as deliverables, costs, and deadlines. SANDAG’s TransNet Project Office tracks all task orders against the contract on a summary level and monitors the remaining contract amount in relation to the consultant’s commitments on other project task orders. Additionally, SANDAG and Caltrans have established project level processes to monitor and track procurement and contracting processes, including contract award and monitoring. Contract amendments, task orders, and change orders on construction projects are reviewed by designated staff, with project task managers having the responsibility for monitoring contractor performance by initially developing task orders and then managing against task orders and work deliverables. Moreover, project managers review consultant timesheets and invoices as well as approve payments.

As part of SANDAG’s monitoring process over its consultants, mechanisms have been established for the early identification of contractor problems and to ensure that the most qualified consultant has been selected. Specifically, in using consultants as extension of in-house staff, project managers interact and supervise consultant work on a daily basis which allows for early detection of performance deficiencies or other obstacles that may affect the project delivery. For instance, project managers on the Mid-Coast project became aware of a problem related to the quality and effort of a consultant. During the consultant performance

<table>
<thead>
<tr>
<th>Procurement Controls Include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Competitive procurement practices to ensure objectivity and fairness</td>
</tr>
<tr>
<td>➢ Detailed scope of work</td>
</tr>
<tr>
<td>➢ Well-organized contract files</td>
</tr>
<tr>
<td>➢ Close interaction with consultants and contractors</td>
</tr>
<tr>
<td>➢ Monitoring of consultant work and invoicing</td>
</tr>
<tr>
<td>➢ Contract performance evaluations completed</td>
</tr>
<tr>
<td>➢ Internal audit function reviews contract and procurement area</td>
</tr>
</tbody>
</table>
monitoring process, SANDAG project managers’ review of an invoice revealed inadequate work performed as compared to the amounts billed. After trying to resolve differences with the consultant, it was mutually decided to terminate the contract, and procure services from another firm. Currently, SANDAG has protocols in place to select and monitor engineering and architectural services work performed by outside consultants. Specifically, SANDAG relies on an on-call list of pre-selected firms who are authorized to perform work as needed basis. The consulting firm with a prior poor performance record, as indicated by the project manager, is no longer on the list of SANDAG’s on-call consultants. On a go-forward basis, to employ lessons learned from this experience, SANDAG may wish to consider establishing a formal project risk assessment analysis where cost impact is considered as part of the on-going efforts monitoring progress on a project. For example, the information about a consultant’s poor performance would be logged and considered as additional cost or risk factor that would be reviewed at a higher project, or potentially corridor level.

Moreover, performance evaluations are completed on design consultants and contractors used by SANDAG or Caltrans at the close-out of the task order. Specifically, project managers and Corridor Director complete a “Quality Assurance” document which serves as the basis of the discussion between the Corridor Director and consultant/contractors. The Quality Assurance document is intended to provide constructive feedback to the consultants/contractors to improve their performance on future projects. If necessary, it would also state reasons that could prevent the consultant/contractor from being utilized again on TransNet projects.

Construction contracts follow similar strong protocols although all individual projects are put out for competitive bid rather than selected from an on-call listing. Caltrans staff also monitors contractor performance. Besides the day-to-day interactions with contractor staff on a project or construction site, consultants are also part of the individual project development team meetings where SANDAG and Caltrans staff can closely monitor expertise and performance. Additionally, Caltrans’ online database of current contractors allows instant access to progress payments, contract amendment data, and other contract-related information.

A final control in place over contract and procurement activities centers around SANDAG’s Internal Audit function established within the last year. Currently, there is one Principal Management Internal Auditor, reporting directly to the Deputy Executive Director, who is in charge of developing risk-based audit plans, conducting day-to-day audit activities, and working on assignments addressing the needs of the SANDAG executive team. A large portion of the audit year was consumed by efforts on a comprehensive audit of contract pre-award activities and task order processes. However, because the work was still in process and report still in development, we were unable to obtain the internal audit results.

As a result, we would recommend that SANDAG report to the ITOC on its audit findings that relate to the TransNet program either directly on a project-specific basis or more globally through SANDAG general operations. The ITOC may want to consider using its newly formed Audit Subcommittee as the information portal for these audit findings—especially those of a more sensitive nature—that could report back to the ITOC at large in the more public setting. Further, since SANDAG’s Internal Auditor anticipates conducting future
additional audits on contract pre-award activities and general contracting practices and processes, the ITOC may want to have the Internal Auditor regularly appear before the Audit Subcommittee to share any TransNet related audit issues and corrective actions taken.

Task Order Amendments and Change Orders are Tightly Controlled, Although Minor Enhancements Could be Incorporated

While the dollar value of task orders and construction contracts are significant for most if not all of the TransNet projects, it is typical in the industry to need amendments and contract change orders to increase the value or extend time. These modifications that can easily result in formal requests for budget increases, may be caused by unforeseen circumstances, weather, emergencies, inadequate service or quality, or insufficiently defined scope of work. While generally our review revealed that the task order amendments and change orders were properly managed and approved in a reasonable manner, SANDAG and Caltrans could improve its task order approval process by modifying delegated authority thresholds and improving documentation supporting reasons for granting time extensions on projects.

Task Order Amendment Process Seems Reasonable; However Improvements are Needed

Since 2005, the SANDAG has issued nearly 377 task orders with 263 related task order amendments with a total value of nearly $100 million to 16 different architectural and engineering consulting firms, as shown in Table 5. According to SANDAG staff, over 90 percent of these task orders relate to TransNet funded projects.

Our review of sampled amendments revealed that the procurements appeared to be justified, properly approved, and tracked. Based on our desk review of the sample of 12 task orders and 43 related amendments from seven different contracts, we found the scope, roles, responsibilities, project deliverables, and schedule milestones appeared to be reasonably defined in the task order—thus, insufficient scope did not seem to be the cause behind the needed amendments. Rather, we found that task orders were often amended to add funds for subsequent phases released and approved for work, due to unforeseen circumstances, or to account for additional required work or time needed to complete the deliverable.

For instance, on the Super Loop EAP project, one task order reviewed was to design a bus transit project to the 60 percent design for the construction phase. When the designs were presented to stakeholders, they requested a modification to the stations which required a task order amendment to account for the additional costs associated with the re-design of those stations. Similarly, on the I-805 Managed Lane EAP project, only the current year budget was funded on the task order even though the money would only cover a portion of alignment studies needed for a particular segment. Thus, as more funding became available, the task order was amended to add additional scope and money to complete the studies.
Table 5: Consulting Contracts Issued Since 2005

<table>
<thead>
<tr>
<th>Contract Number</th>
<th>Number of Task Orders</th>
<th>Value (incl. amendments)</th>
<th>Number of Task Order Amendments</th>
<th>Amendment Value</th>
<th>Amendment Value %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental On-Call</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5000261</td>
<td>29</td>
<td>$7,342,570</td>
<td>27</td>
<td>$1,120,377</td>
<td>15.3%</td>
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<tr>
<td>5000262</td>
<td>21</td>
<td>$12,189,350</td>
<td>37</td>
<td>$2,886,463</td>
<td>23.7%</td>
</tr>
<tr>
<td><strong>Construction Management On-Call</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000304</td>
<td>39</td>
<td>$6,399,439</td>
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<td>$663,443</td>
<td>10.4%</td>
</tr>
<tr>
<td>5000305</td>
<td>40</td>
<td>$6,232,682</td>
<td>22</td>
<td>$1,996,355</td>
<td>32.0%</td>
</tr>
<tr>
<td><strong>Engineering On-Call</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5000401</td>
<td>26</td>
<td>$11,331,969</td>
<td>13</td>
<td>$372,905</td>
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<tr>
<td>5000402</td>
<td>77</td>
<td>$11,079,392</td>
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<tr>
<td>5000403</td>
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<td>$11,936,314</td>
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<td>5000404</td>
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<td>$12,249,762</td>
<td>22</td>
<td>$524,301</td>
<td>4.3%</td>
</tr>
<tr>
<td>5000405</td>
<td>27</td>
<td>$6,272,938</td>
<td>17</td>
<td>$1,365,052</td>
<td>21.8%</td>
</tr>
<tr>
<td><strong>Engineering/Environmental On-Call (Highway/Transit)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000921</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>5000922</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>5000923</td>
<td>25</td>
<td>$5,749,734</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>5000924</td>
<td>3</td>
<td>$2,721,733</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>5000925</td>
<td>1</td>
<td>$987,602</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>5000931</td>
<td>3</td>
<td>$218,620</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>5000932</td>
<td>2</td>
<td>$3,421,048</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td>377</td>
<td>$98,133,153</td>
<td>263</td>
<td>$13,454,743</td>
<td>14%</td>
</tr>
</tbody>
</table>

Note: While the vast majority of the on-call consultant task orders were issued for TransNet funded projects, there is a number of task orders that were for other projects. However, since the number and value of task orders for non-TransNet projects was minimal, we did not separate those task orders as they do not affect the overall analysis.

In each instance, we found reasons and justifications for the increased budget to be well-documented and that the amendment was properly approved by several different SANDAG staff including the Contract Manager, Director of Engineering and Construction, Finance Director, and Office of General Counsel as well as Caltrans Corridor Directors and Caltrans Headquarter staff, where appropriate. With the large amount of people involved with task order approvals, we were informed that amendments can take two weeks to two months to process adding potential delays to a project. Thus, SANDAG should consider revising its delegated authority amounts for appropriate levels of staff where shorter timelines could be achieved when revising task order amendments of lesser value.

Further, for the amendments that only extended time and did not increase task order funding, written justification of need did not have sufficient detail. Specifically, the standard task order amendment template used only requires checking a box indicating a “no-cost extension of time with no change to the scope of work.” In discussion with task order managers, we
learned that although there were valid reasons for time extensions such as unforeseen events delaying the project or funding not readily available to complete the task within the originally allotted timeframe, such detail and justification is not provided in the amendment request. Without explanations why a project needs additional time to provide deliverables, information is insufficient for proper approvals, which may cause additional delays in the approval of the amendments and the start or continuation of scheduled work. Yet, both SANDAG and Caltrans task order managers did not appear overly concerned with the delay for time extension only amendments. In fact, they indicated that the time extension are easiest to process and usually are much quicker than requests for more funding that require modifications to the scope of work.

Ultimately, while amendments processed increased initial task order amounts by approximately 14 percent and extended time beyond several months in some instances, it appears that SANDAG and Caltrans have the requisite processes in place to control unwarranted or unnecessary increases. One Task Order Manager indicated that it can be difficult to determine how large a task order should be—if a task order value is too low and covers individual discrete activities, there could be numerous task orders or amendments needed which is time-consuming; however, if a task order value is too high and encompasses many activities, then it could be difficult to manage. Thus, Task Order Managers must strive to reach a balance in the number of task orders and amendments that are created.

As mentioned in the previous section, SANDAG’s internal auditors are in process of conducting an in-depth review of the task order process. Although those efforts have not been finalized and made available to us, the Internal Auditor should report findings and corrective actions planned to the ITOC.

**Construction Change Orders Follow a Similar Controlled Process and Were Justified**

Caltrans typically anticipates a five to ten percent contingency range for roadway construction projects that is consistent with targets used at other public works department in San Francisco, Los Angeles, Long Beach, and Oakland.

Over the three-year period of our review, SANDAG and Caltrans awarded 21 construction contracts for EAP projects worth over $658 million, and processed 920 contract change orders valued at approximately $44.5 million. Of those, 511 change orders worth $24 million were issued for projects that have been fully completed. In total, these change orders were 13 percent of total construction payments or 14 percent of the original contract bid value. While the 13 to 14 percent range is higher than the 10 percent target total, in the end, contractors were only paid 7.6 percent more than the initial contract bid amount. Thus, while the change order reporting by itself appears somewhat higher than benchmarks, it is not as significant if put in perspective with the overall payment amounts.

Generally, both SANDAG and Caltrans follow similar procedures to control and monitor change orders. For transit projects, SANDAG maintains change order data in its cost management system and informally uses Caltrans procedures as a guide in handling change orders. Similarly, Caltrans employs a statewide, public database known as “Major Construction Payment & Information System” or “Progress Pay.” While the system allows contractors to track progress payments, it also provides detailed information regarding
payments resulting from change orders, total extra work paid to-date, and details of the original contract such as approval date, start of construction, and estimated completion dates. Based on this information, the system also calculates the percent completed and percent time elapsed to determine whether the project is on time and on budget. The Progress Pay system eliminates the need for contractors to submit invoices to Caltrans for their monthly progress pay since Caltrans employees or Caltrans-hired field inspectors determine the project progress and the associated payment amounts each month.

To examine reasonableness of construction contract change orders and adherence to procedures, we reviewed a sample of change orders from four construction contracts where work was either complete or nearing completion, total payment amounts exceeded the original contract value, and change orders constituted at least 11 percent of the contract value. The contracts were from three different corridors where construction work was most advanced and reported a total of 288 change orders worth $21 million as shown in Table 6 below.

Table 6: Analysis of Change Orders Reviewed

<table>
<thead>
<tr>
<th>Segment/Project</th>
<th>Contract Number</th>
<th>Contract Bid/Value</th>
<th>Total Payment</th>
<th>% Paid Over Contract Value</th>
<th>Work Complete Status</th>
<th>No. of COs</th>
<th>Total CO Value</th>
<th>CO % of Total Payment</th>
<th>CO % of Contract Bid/Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-5 HOV (High Occupancy Vehicle) Ramp Modification</td>
<td>11-279604</td>
<td>$1,842,913</td>
<td>$1,861,914</td>
<td>1.0%</td>
<td>100%</td>
<td>7</td>
<td>$331,076</td>
<td>17.8%</td>
<td>18.0%</td>
</tr>
<tr>
<td>I-15 Middle (Unit 1)</td>
<td>11-080904</td>
<td>$51,545,000</td>
<td>$56,708,928</td>
<td>10.0%</td>
<td>100%</td>
<td>154</td>
<td>$9,883,933</td>
<td>17.4%</td>
<td>19.2%</td>
</tr>
<tr>
<td>I-15 Middle (Unit 3)</td>
<td>11-080924</td>
<td>$81,952,560</td>
<td>$89,131,356</td>
<td>8.8%</td>
<td>96%</td>
<td>114</td>
<td>$10,140,504</td>
<td>11.4%</td>
<td>12.4%</td>
</tr>
<tr>
<td>SR-52 Ops (West Bound Truck Lane)</td>
<td>11-270204</td>
<td>$3,074,324</td>
<td>$3,812,917</td>
<td>24.0%</td>
<td>100%</td>
<td>13</td>
<td>$656,236</td>
<td>17.2%</td>
<td>21.4%</td>
</tr>
<tr>
<td>Totals:</td>
<td></td>
<td></td>
<td>$138,414,797</td>
<td>$151,515,115</td>
<td>9.5%</td>
<td>288</td>
<td>$21,011,749</td>
<td>13.9%</td>
<td>15.2%</td>
</tr>
</tbody>
</table>

Overall, our review revealed that these change orders were reasonable, properly approved, and diligently tracked. For instance, one change order on a contract to extend a freeway lane was needed to relieve increased levels of congestion for commuters while construction was on-going that was greater than initially envisioned. In another example, concrete barriers had to be modified after the completion of the design, since due to the design-sequencing delivery approach employed, the design was not fully complete at the time the contract was awarded.

In each instance, we found reasons and justifications for the increased contract amounts to be well-documented and that the amendment was properly approved by several different Caltrans staff including the construction engineer, project engineer, project manager, and Corridor Director if needed. Moreover, the overall anticipated impact from these amendments and change orders on the continuation of a corridor segment or entire project is informally considered and discussed— project managers at both SANDAG and Caltrans meet regularly with consulting staff to communicate any budget, schedule problems, or delays and discuss impacts at the weekly project development team meetings. Any significant budget or schedule changes affecting the critical path are elevated to Executive
Management, who presents the issues and alternative solutions along with Corridor Directors to the SANDAG Board.

While the amendment and change order process employed has integrity, practices could be enhanced by SANDAG tracking change orders and contract amendments overall for the TransNet program to facilitate management and oversight functions at the program level. This data could be used to develop and trend performance indicators and provide another tool to gauge project and program status or level of success. A more detailed discussion of performance measures as well as our recommendations can be found in Chapter 2 of this report.
[PAGE INSERTED FOR REPRODUCTION PURPOSES ONLY]
Chapter 5: Conclusion and Recommendations

Because the TransNet program is in its preliminary stages with many projects in the early environmental or design planning phases, project data were not yet available at the time of our audit to allow a full assessment of project performance for overall conclusions to be drawn. For example, although it is reasonable that cost overruns in an early design phase could be managed and brought back in line with the overall project budget through cost containment activities in subsequent project phases, we could not conclude with certainty whether appropriate steps were taken since these projects were in progress. As such, while this audit could only focus on the framework and foundation established by SANDAG and Caltrans to guide project efforts, there may be other improvements needed that will be revealed as more projects are completed.

Nonetheless, SANDAG and its partners have taken strong initiatives and aggressive steps to create many practices and tools over the last three years allowing for the acceleration of promised projects and achievement of early program success. Based on our review of progress on the EAP projects, the TransNet program operates with well-defined processes to plan, develop, and deliver projects. Good working relationships have also been established between SANDAG and Caltrans to coordinate their efforts among multiple stakeholders and other transportation and transit entities in addition to strong project management practices to track and discuss project cost, schedule, and scope. Other elements necessary for a successful program delivery are in place including governance and oversight as well as project monitoring and accountability.

Over the last three years, SANDAG and Caltrans have built a solid foundation and should continue to ensure that actual practices follow established procedures as well as focus post-project discussions on maximizing benefits and cost savings for future projects. Moreover, SANDAG and Caltrans need to maintain integrity of the program controls with a flexible structure to accommodate different situations that will occur over the successive decades that cannot be foreseen at this time. Toward this end, we recommend a series of actions that would strengthen and enhance the groundwork for future development. Specifically:

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Report Reference</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>To assist management and oversight bodies in deliberating project activities, weighing options before making decisions, and strengthening general levels of oversight, SANDAG should work in conjunction with Caltrans to:</td>
<td>Chapter 1, pages 32 &amp; 33</td>
<td>High</td>
</tr>
</tbody>
</table>

1. Develop and deliver a brief, high-level summary, or “Report Card,” to the ITOC and other oversight bodies for each transportation project describing project budget and schedule by phase, project performance, project benefits and risks, financial assumptions, project cost range, and highlights of project changes to scope, schedule and cost.
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Report Reference</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Also, consider summarizing Report Card performance on a monthly and annual basis to identify trends or systemic issues.</td>
<td>Chapter 1, page 34</td>
<td>High</td>
</tr>
<tr>
<td>Summarize and distribute data reflecting key project milestones and performance indicators where period-to-period trends for the program overall, as well as at a corridor or segment level, could be analyzed. Statistics should include budget and schedule targets compared to actual performance, as well as progress towards meeting program objectives such as reducing levels of congestion and travel times, minimizing project cost per mile, and increasing the percentage of projects completed on time and on budget.</td>
<td>Chapter 1, page 34</td>
<td>High</td>
</tr>
<tr>
<td>Provide status information regarding existing audit requirements and status updates on internal and external audits in progress or completed of SANDAG, Caltrans, or other transportation partners outlining scope of audit work, results of audit efforts, corrective actions planned or taken, and outstanding findings and unresolved issues as they relate to the TransNet program. In particular, the SANDAG Internal Auditor should report to the ITOC, or its newly formed Audit Subcommittee, once the current in-process audit of contracting and task order practices is completed.</td>
<td>Chapter 4, page 86</td>
<td>Medium</td>
</tr>
<tr>
<td>Work collaboratively with the ITOC to identify other type of oversight data needed from SANDAG, Caltrans, or other transportation partners where appropriate and within reason.</td>
<td>Chapter 1, pages 31 &amp; 35</td>
<td>Low</td>
</tr>
</tbody>
</table>

To monitor overall program adherence with the Ordinance and assess the overall program impacts resulting from project budget and schedule deviations, the ITOC should:

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Report Reference</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze suggested Report Card data and performance indicator data provided looking for trends, issues, and progress toward overall TransNet goals as well as consider the multi-faceted project performance details impact on travel time and congestion as well as project performance in terms of schedule and budget adherence.</td>
<td>Chapter 1, pages 32-34</td>
<td>High</td>
</tr>
<tr>
<td>Work collaboratively with SANDAG to identify other type of oversight data needed from SANDAG, Caltrans, or other transportation partners that can be captured in matrices or other formats enabling a period-to-period review of data and results over time.</td>
<td>Chapter 1, pages 31 &amp; 35</td>
<td>Low</td>
</tr>
<tr>
<td>Develop matrices or tracking documents to summarize critical ITOC concerns, issues, and decisions resulting from</td>
<td>Chapter 4, page 35</td>
<td>Medium</td>
</tr>
<tr>
<td>Recommendation</td>
<td>Report Reference</td>
<td>Priority</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>----------</td>
</tr>
<tr>
<td>discussions at monthly meetings, as well as to memorialize resolutions or action items carried forward to subsequent meetings complete with owners assigned and timeframes for completion established. Progress and actions taken could be tracked and progress updated at subsequent meetings, and the matrices could serve as an institutional transfer of knowledge as new ITOC members are appointed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Identify additional entities, positions, or individuals to regularly provide status reports and data to the ITOC (such as the SANDAG Internal Auditor), and incorporate standard monthly meeting agenda categories to address the new areas and ensure all critical TransNet program areas also receive an oversight focus in addition to project-specific activities. Refer to suggested categories in Chapter 1. Also, consider protocols regarding specified time allocations allowing for adequate deliberation prior to decisions rendered for the more critical areas with high-dollar or high-profile impact.</td>
<td>Chapter 1, page 36</td>
<td>Low</td>
</tr>
<tr>
<td>9. Consider using the newly formed ITOC Audit Subcommittee as the information portal for audit status updates, especially those of a more sensitive nature. The Subcommittee could report back to the ITOC at large in the more public setting.</td>
<td>Chapter 4, page 86</td>
<td>Low</td>
</tr>
<tr>
<td>To refine its existing Dashboard integrated budget and schedule tool, SANDAG should:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Revisit its intent and vision for the Dashboard to determine whether it should include all EAP projects and report on all Ordinance programs, as well as determine whether the Dashboard is meant to function as an “in-progress” management tool for current projects or should be established as a comprehensive historical data warehouse for the 40-year duration of the TransNet program.</td>
<td>Chapter 2, page 45</td>
<td>Medium</td>
</tr>
<tr>
<td>11. Add an explanatory note to better clarify cumulative data presented or isolate and remove the pre-2005 expenditures to more accurately reflect the TransNet program costs.</td>
<td>Chapter 2, page 45</td>
<td>Medium</td>
</tr>
<tr>
<td>12. Develop a mechanism to report project budget and schedule history and key changes over the course of the TransNet program.</td>
<td>Chapter 2, page 45</td>
<td>Medium</td>
</tr>
<tr>
<td>13. Ensure all Dashboard views and tables are complete and accurate such as “percent of completion” data by clearly identifying and communicating to project managers responsible for the data, the assumptions and definitions</td>
<td>Chapter 2, pages 45-46</td>
<td>High</td>
</tr>
<tr>
<td>Recommendation</td>
<td>Report Reference</td>
<td>Priority</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>behind the percent complete calculations as well as monitoring the indicator for reasonableness. Additionally, reassess the need and use of the “Trends, Risks, and Issues” section in the Dashboard to ensure complete and current information or eliminate the section and capture similar data through a different vehicle.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building upon strong existing protocols related to transparency holding project owners accountable and economical to demonstrate performance results to the public, SANDAG should work in conjunction with Caltrans to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop and define concrete performance goals and targets to measure project outcomes as well as performance efficiencies as part of a comprehensive performance monitoring system linking goals with strategic planning, specific goals, and resource allocations. Performance measures should track program and project delivery efficiency indicators related to hitting targets on meeting delivery milestones, staying within certain percentages of cost estimates, and reducing support costs and overhead by prescribed amounts. Once program-wide performance data is collected, it should be made available to the ITOC and other oversight bodies through the Quarterly Report process whereby program level milestones could be communicated and success or struggle with meeting benchmarks could be discussed to highlight accomplishments or improvements needed. Indicators that could be measured include the following hypothetical examples:</td>
<td>Chapter 2, pages 46-49</td>
<td>Medium</td>
</tr>
<tr>
<td>✓ Each fiscal year, meet XX percent of project delivery milestones</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ By XXX, reduce the support to capital ratio to XX percent or lower and reduce overhead cost to XX percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Each year, keep the total of all low bids within X percent of the total of all engineers’ estimates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consider using baseline data available in other models, such as the Caltrans California Life-Cycle Benefit/Cost Analysis Model that considers items including travel time savings and reduced emissions, to compare expected project benefits against actual results once projects are completed. Similarly, performance could be weighed against quantitative criteria and calculations used during the regional transportation planning process whereby projects</td>
<td>Chapter 2, page 48</td>
<td>Low</td>
</tr>
<tr>
<td>Recommendation</td>
<td>Report Reference</td>
<td>Priority</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>are ranked and prioritized based on estimated cost per person-miles traveled and cost per travel time savings calculations. SANDAG could perform these calculations after project completion to identify variances from anticipated cost-effectiveness measures, discuss reasons for the differences, and use results to adjust future modeling or trend and compare projects against each other.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designate individual staff follow-up on missed targets, assure corrective actions where needed, or assess the impact of any shortfalls to the overall TransNet program. Such performance monitoring should be routinely conducted to assess the impact of performance not meeting targeted goals.</td>
<td>Chapter 2, page 49</td>
<td>Medium</td>
</tr>
<tr>
<td>As funding is an ongoing challenge and projects are continually shifted and reprioritized to stretch limited resources, to monitor financial risks and availability of funds to complete projects as well as increase accountability, SANDAG should:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continue to regularly monitor and review the debt-to-revenue ratio as well as total financing costs to ensure it meets short- and long-term obligations as well as continue to consistently analyze projected debt service costs and compare planned program financing costs to track any higher than expected bond issuance and debt services costs. Further, SANDAG should determine whether the Plan of Finance strategies should be modified in the long-term, and report to the ITOC and the SANDAG Board on the status of the debt-to-revenue ratio on a regular basis.</td>
<td>Chapter 3, page 54</td>
<td>Low</td>
</tr>
<tr>
<td>Establish a mechanism to link and track the Ordinance planned projects and amounts with current plans and budgets for all TransNet projects to reduce confusion and better justify to the public how project promises from the Ordinance were amended to result in actual projects delivered. Such on-going tools should specifically identify and document all significant changes to project funding, prioritization, and scope over the life of the TransNet program. Moreover, the data should be shared with the ITOC and other oversight bodies to better oversee and understand the cumulative impact of their recommendations related to TransNet funding.</td>
<td>Chapter 3, pages 65-67</td>
<td>Medium</td>
</tr>
</tbody>
</table>
To expand and enhance the current project management and delivery practices, SANDAG and Caltrans should consider the following:

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Report Reference</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. Ensure post-evaluation forms are consistently used and completed for all highway construction and transit projects after each project phase to ensure appropriate changes are made mid-stream rather than waiting until a project is formally closed-out. Communicate key results to the ITOC as appropriate. Additionally, consider capturing various process best practices in shared databases that can be easily accessed and considered for application across all TransNet projects as well.</td>
<td>Chapter 4, pages 75-76</td>
<td>Low</td>
</tr>
<tr>
<td>20. Build upon, improve, and formalize transit project documentation of current SANDAG processes and procedures to better ensure long-term continuity of in-house expertise. Towards this end, SANDAG should consider establishing working-level policies and procedures to ensure the uniform application of project delivery and management techniques and make such documentation of practices, controls, and preferences available to SANDAG staff for reference and training purposes. At a minimum, SANDAG should consolidate Board policies into a single delivery manual where further defined procedures could be established and practices memorialized.</td>
<td>Chapter 4, pages 77-78</td>
<td>Low</td>
</tr>
<tr>
<td>21. Create a uniform filing system to strengthen transit project management where critical project documentation such as cost estimates, project budget history, project development team meetings, change orders, and other data are organized and located under a similar numbering system to ensure consistency and availability of important project data. Further, SANDAG may want to consider creating a shared database to house the electronic copies of project documentation.</td>
<td>Chapter 4, page 78</td>
<td>Low</td>
</tr>
<tr>
<td>22. Conduct an intensive, hands-on workshop in which SPRINTER project management could formally share critical lessons-learned and practical experiences with SANDAG and Caltrans executives including discussing specific implementation details deliberated and benefits versus cost analysis employed. These meetings could result in the establishment of stronger project delivery tools and written policies and procedures to assure best practices are implemented such as:</td>
<td>Chapter 4, pages 79-80</td>
<td>Medium</td>
</tr>
<tr>
<td>Recommendation</td>
<td>Report Reference</td>
<td>Priority</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>✓ Using risk mitigation registers evaluating project risks related to cost, scope, and schedule including descriptions, cause, potential impact, likelihood of impact materializing, mitigation strategy and costs to mitigate. ✓ Merging highway construction and transit risk assessment results into an integrated risk plan that can be overseen for the entire TransNet program.</td>
<td>Chapter 4, page 88</td>
<td>Medium</td>
</tr>
<tr>
<td>23. Revisit the task order approval process to identify which individuals are needed for approvals or consider implementing a higher delegated authority level for certain types of amendments wherein a streamlined process could be employed on lower value amendments to ensure approval protocols are not causing unnecessary delays on projects.</td>
<td>Chapter 4, pages 88-89</td>
<td>Low</td>
</tr>
<tr>
<td>24. Ensure task order amendments that only extend time have sufficient written justification of need explaining why a project needs the extension and assessing the impact of the delay on other project activities and downstream phases of the project.</td>
<td>Chapter 4, page 91</td>
<td>Medium</td>
</tr>
<tr>
<td>25. Enhance practices by tracking change orders and contract amendments for the TransNet program overall and developing and trending performance indicators to provide another tool to gauge project and program status or level of success.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A:
TransNet Highway Construction and Transit Projects
(Estimated Amounts in Millions, 2002 dollars)*

<table>
<thead>
<tr>
<th>#</th>
<th>Corridor</th>
<th>Segment</th>
<th>Cost</th>
<th>Non-EAP</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>North Coast (Phase 1 - Environmental Document)</td>
<td>Managed Lanes (Leucadia Blvd to Vandegrift Blvd)</td>
<td>$ 79</td>
<td>$ 291</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Managed Lanes (Merge I-5 &amp; I-805)</td>
<td></td>
<td></td>
<td></td>
<td>$ 30</td>
</tr>
<tr>
<td>3</td>
<td>Managed Lanes (SR-56 to Leucadia Blvd)</td>
<td></td>
<td></td>
<td></td>
<td>$ 400</td>
</tr>
<tr>
<td>4</td>
<td>HOV (SR-905 to SR 54)</td>
<td></td>
<td></td>
<td></td>
<td>$ 130</td>
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1) EAP: Environmental Audit Program; Non-EAP: Non-Environmental Audit Program.
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**Total TransNet Program (2002 dollars): $10,113**

*Source: TransNet Extension Ordinance, 2004; 2005 Plan of Finance; and SANDAG Capital Improvement Program (CIP) Budget, Fiscal Year 2007*

**Note 1:** EAP project designation is per the 2005 Plan of Finance and 2008 TransNet Factsheet.

**Note 2:** Mid-Coast Corridor projects were part of the I-5 Corridor in the Ordinance but then were split into a separate Mid-Coast Corridor in 2005.

*When 2002 amounts could not be clearly identified, updated amounts were used.*
Appendix B: Audit Interviews Conducted

As part of this audit, our contract required we conducted on-site and phone interviews with certain individuals and entities as identified to us by the TransNet program management. During the course of the audit, we also met or inquired about the TransNet program with other individuals and stakeholders. While we conducted at least one interview with each individual listed below, on many occasions we had follow-up conversations either in person, over the phone, or via email.

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<td>69 NCTD</td>
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**Local Jurisdictions**

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<td>Deborah Van Wanseele</td>
<td>Deputy Director, Transportation Engineering &amp; Capital Projects</td>
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<td>71</td>
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<td>Mohamad Fakhrriddine</td>
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**ITOC**

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<td>Hamid Bahadori</td>
<td>Traffic/Civil Engineering</td>
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<td>Jesus Garcia</td>
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**Transportation Committee**

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**Other Stakeholders**

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<td>Brad Barnum</td>
<td>Vice President, Government Relations</td>
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<td>86</td>
<td>Building Industry Association</td>
<td>Matt Adams</td>
<td>Vice President, Government Affairs</td>
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<td>87</td>
<td>Endangered Habitats League</td>
<td>Michael Beck</td>
<td>Planning Commissioner, EHL Board Member</td>
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<td>88</td>
<td>San Diego County Taxpayers Association</td>
<td>Gordon Lutes</td>
<td>Project Design Consultant</td>
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</table>
SANDAG Debt Program:

Proposed Amendment to Existing Interest Rate Swaps

February 2009
SANDAG Debt Structure

- $100 million commercial paper program; Citigroup
  - Dexia Liquidity

- $600 million swaps:
  - Goldman Sachs
  - Merrill Lynch
  - Bank of America

- $600 million of variable rate debt:
  - Goldman Sachs and Barclays (replacing Lehman)
    - JP Morgan Liquidity
  - DeLaRosa (replacing UBS) and JP Morgan
    - Dexia Liquidity
Existing LIBOR/SIFMA Swaps

Goldman Sachs (50%) and Merrill Lynch (50%)

65% of LIBOR Converts to SIFMA Municipal Swap Index in 2018

3.8165%

SANDAG

Series 2008 Bonds

Variable Rate
SANDAG Variable Rate Program Performance

SANDAG Variable Rate Compared to Securities Industries and Financial Market Association (SIFMA) and London Interbank Offering Rate (LIBOR)

**Interest Rate**

- 10% - SANDAG Average Variable Rate Paid
- 8% - SIFMA
- 65% LIBOR

**Week (2008)**

- 3/27
- 4/27
- 5/27
- 6/27
- 7/27
- 8/27
- 9/27
- 10/27
- 11/27
- 12/27
- 1/27 - 2009
Goldman Sachs (50%) and Merrill Lynch (50%)

Proposed Swap Amendment

Existing Swap

Basis Swap Counterparty (RFQ)

98.3% of LIBOR

SIFMA Municipal Swap Index

SANDAG

3.8165%

SIFMA Municipal Swap Index

Goldman Sachs (50%) and Merrill Lynch (50%)

Series 2008 Bonds

Variable Rate
SANDAG Debt Program:

Proposed Amendment to Existing Interest Rate Swaps

February 2009
Overview

• Annual update of financial strategy for TransNet Program
• Review key changes in last year (cost and revenue projections)
• Resulting program status is similar to last year
Early Action Projects
No Change in Last Year

1. SR 76 - Widening
2. SR 52 - Widening and Extension
3. Mid-Coast and Super Loop Transit
4. I-15 Managed Lanes and Bus Rapid Transit (BRT)
5. I-5 North Coast Corridor – Environmental Effort and HOV Lanes
6. I-805 Corridor – Environmental Effort & BRT
7. SPRINTER - Oceanside to Escondido
8. Trolley Upgrades (Blue and Orange Lines)
9. Mid-City Rapid Bus
Project Cost Updates

- SANDAG/Caltrans joint effort to update costs from 2002 to 2008 dollars
- Financial model escalates to year of expenditure
- Incorporates Recent Trends in Construction Cost Index
- Unprecedented rise 2004-2007
- Unprecedented decline 2007-2008
Caltrans Construction Cost Index

12-Month Index
## Construction Escalation Rates 2008 vs. 2009

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<tr>
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<th>2008</th>
<th>2009</th>
<th>2010</th>
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**Program Revenue Update**

- Years 2009-2013 based on funds committed and/or authorized
- Future federal, state and local funds based on historic experience and 50% federal participation in New Starts for major transit projects
- Substantial downward revision to sales tax receipts forecast (see table)
### Sales Tax Revenue Forecasts 2008 vs. 2009

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<tr>
<th>Plan of Finance Update Year</th>
<th>2008</th>
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<td>6.87%</td>
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<td>5.40%</td>
<td>4.50%</td>
<td>6.30%</td>
<td>6.37% to 4.54%</td>
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2009 POF Update
All EAP Schedules – No Change from 2008

Corridor

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Abbreviations
BRT = Bus Rapid Transit
ED = Environmental Document
LOMAS = Lomas Santa Fe Interchange
ML = Managed Lanes

Plan of Finance Schedule
Board Approved Schedule (TransNet Dashboard Schedule)
### 2008 POF Update

**Hold All EAP Schedules Cash Balance**

**Millions of Dollars**

- **EAP**
- **Non-EAP TransNet Projects**

#### Fiscal Years

- **2007**: SPRINT
- **2009**: I-5, Lomas
- **2012**: I-15 ML & BRT
- **2008**: UTC Rapid Bus (Super Loop)
- **2010**: SP 52 Ext.
- **2011**: South Bay BRT
- **2013**: Mid-City Rapid Bus
- **2014**: SR 76 Widening, Mid-Coast Transit, Orange/Blue Line Upgrades

#### Additional Matching Funds Required

#### Fiscal Years

- '08
- '10
- '12
- '14
- '16
- '18
- '20
- '22
- '24
- '26
- '28
- '30
- '32
- '34
- '36
- '38
- '40
- '42
- '44
- '46
- '48

---

**SANDAG**
2009 POF Update Scenario
Hold All EAP Schedules Cash Balance

Millions of Dollars

- $6,000
- $4,000
- $2,000
  2007 SPRINTERT
  2009 I-5 Lomas
  2008 UTC Rapid Bus (Super Loop)
  2011 South Bay BRT
  2010 SR 52 Ext.
  2012 I-85 ML & BRT
  2013 Mid-City Rapid Bus

- $2,000

- $0

- $2,000

- $4,000

- $6,000

Fiscal Years


EAP Non-EAP TransNet Projects

Additional Matching Funds Required

2009
UTC
Rapid
Bus
(Super
Loop)

2012
I-85
ML
&
BRT

2013
Mid-City
Rapid
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Rapid Bus

2011
South Bay
BRT

2010
SR 52
Ext.

2009
I-5
Lomas

2008
UTC
Rapid
Bus
(Super
Loop)

Additional Matching Funds Required

2009
UTC
Rapid
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2012
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## POF Update Comparison
### 2008 vs. 2009

<table>
<thead>
<tr>
<th>POF Update Year</th>
<th>EAP Completion (Year)</th>
<th>Negative Cash Flow (Year)</th>
<th>Additional Revenues (Escalated $)</th>
<th>Present Value of Additional Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2008 Approved</td>
<td>2014</td>
<td>2026</td>
<td>$2.8 billion</td>
<td>$1.2 billion (2006 $)</td>
</tr>
<tr>
<td>February 2009 Update</td>
<td>2015</td>
<td>2036</td>
<td>$4.1 billion</td>
<td>$1.3 billion (2008 $)</td>
</tr>
</tbody>
</table>
Summary Results

- Maintenance of all EAP project schedules yields similar results to 2008 POF Update
- Substantial downturn in revenues largely offset by lower construction costs
- Does not account for delay in Proposition 1B bond funds or federal economic stimulus
- Revised POF assessment likely in near future to address potential EAP enhancements when Proposition 1B and/or federal stimulus funding are known
Proposed Next Steps

• **Transportation Committee (Feb 20, 2009)** – Present information item on 2009 POF Update

• **ITOC/Transportation Committee (Mar 11& 20, 2009)** – Final review of POF Update and recommend approval to Board of Directors

• **Board of Directors (Mar 27, 2009)** – Request final review and approval of 2009 POF Update
Presentation of the Draft TransNet Performance Audit Report

by

Catherine Brady
Anya Fenton

to the
Independent Taxpayer Oversight Committee
February 11, 2009
Introduction

- Appreciation of ITOC, Audit Subcommittee, and Project Manager
- Received utmost levels of cooperation from SANDAG, Caltrans, & Others
- Unfettered access to records
- Requests for data met timely
“No Surprises” Approach

- Frequent discussions with SANDAG/Caltrans
- Two formal briefings in addition to Exit Conference with SANDAG/Caltrans
- Written task deliverables provided to ITOC and approved by Project Manager
- Ongoing contacts with ITOC Project Manager
- Two Briefings with ITOC Audit Subcommittee
- Followed Generally Accepted Government Auditing Standards throughout Audit
Revisit Audit Scope

- Focused solely on EAP Projects
- Primarily reviewed Major Corridor projects of SANDAG and Caltrans
- Covered FYs 05/06 through 07/08
- Reviewed Organizational Structure and Operational Procedures
- Examined ITOC and its operations
Major Areas of Focus

- Project Delivery Process
- Project/Program Cost Estimates & Controls
- Project/Program Schedule Controls
- Contracting Processes
- Construction Management
- Permitting
Additional Areas of Focus

- Technology and communication tools, including the Dashboard
- Performance Measures
- ITOC Annual Reports and actions
- Debt Structure and Plan of Finance
- Quarterly Reports (paragraph #10)
- Comparisons with peers, “Best Practices”, and industry norms
Nuances of Audit Timing

- Benefits of auditing before Ordinance 40-year start allows early identification of possible needed changes in course
- One challenge, though, is most projects are in early stages and limited project data exists to drawn upon
- Thus, audit looked at infrastructure, processes, and foundation established
Report Organization

Provides recommendations for consideration with sufficient detail to form the basis for our conclusions and recommendations:

- Executive Summary
- Introduction
- Scope and Methodology
- Chapter 1– Governance and Oversight
- Chapter 2– Performance Monitoring and Accountability
- Chapter 3– Fiscal Control and Budget Data
- Chapter 4– Project Management and Delivery
- Chapter 5– Conclusion and List of Recommendations
- Appendices
Executive Summary

- Appropriate foundation has been put in place for governance and oversight
- Solid management exists to monitor cost, schedule, and scope
- Revenue and cost models are practical
- Project delivery methods are sound
- However, several improvements would enhance program
- Recommendations relate to strengthening oversight, performance monitoring, budget change documentation, and project practices
Ch 1: Governance/Oversight

- Solid project management organization and structure to govern and oversee
- Defined roles and responsibilities with good communication and collaboration
- Sufficient review and approval processes to manage change
- Better information could be provided to oversight bodies
Ch 2: Performance Monitoring

- Project management (PM) activities aligned with best practices
- Consistent use of automated PM tools including public Dashboard to monitor project cost, schedule, and status
- Regular reviews ensure data integrity
- Better performance goals, indicators, and metrics need to be developed, used and tracked
Ch 3: Fiscal Control/Budget

- Reasonable financial planning and controls are in place
- Assumptions and process behind Plan of Finance’s revenue forecasts and cost estimates are practical and similar to those used by peers
- Mechanism is needed to better track historical changes to project scope, schedule, budget, and priorities
Ch 4: PM and Project Delivery

- Projects in early phases, but activities employed to date are aligned with industry practices
- Project team practices are effective and consistently in use
- Certain practices could be improved including use of post project evaluations and formalization of SANDAG project delivery manual
- Contracting and changes to task orders and contracts appear reasonable and managed
Ch 5: Recommendations

- Develop project Report Cards summarizing detail on budget, schedule, and scope as well as performance indicators
- Strengthen ITOC agendas, status reports, and meeting matrices on action items and decisions
- Revisit intent and vision of Dashboard, as well as refine data to ensure accuracy and clarity of information
Ch 5: Recommendations

- Define, use, and track performance goals, targets, and measures
- Continue to monitor/review debt service
- Establish a mechanism to track historic changes from planned projects and amounts to current projects & budgets
- Ensure consistent use of post-evaluation forms
- Memorialize transit practices and apply uniform filing systems
Questions???
Next Steps

- ITOC action needed for approval to send Audit Report to SANDAG Transportation Committee for review
- ITOC representative to present report at the next SANDAG Transportation Committee Meeting (scheduled for 3/6/09)
- Transportation Committee review period is maximum 60 days
- ITOC representative will present final Audit Report to SANDAG Board of Directors — possibly at the 4/24/09 board meeting
Sjoberg Evashenk Consulting would like to express our gratitude to ITOC for the opportunity to conduct this audit