



**BOARD OF DIRECTORS
DECEMBER 16, 2005**

**AGENDA ITEM NO. 05-12-11
ACTION REQUESTED - APPROVE**

***TransNet* PLAN OF FINANCE FOR THE EARLY ACTION PROGRAM** File Number 1110200

Introduction

In January 2005, the Transportation Committee and the SANDAG Board of Directors approved a set of projects for accelerated implementation, referred to as the *TransNet* Early Action Program (EAP). In May 2005, the Transportation Committee and the Board acted to include additional transit components to the EAP.

The concept of the EAP was to “jump-start” the implementation of several key projects prior to the beginning of *TransNet* Extension in FY 2009, with the objective of completing those projects within the first five to seven years of the new program. Based on the schedules developed for the EAP projects, this Plan of Finance is focused on a detailed financial analysis through FY 2015.

Staff was directed to proceed with the implementation of these projects, beginning with the development of a financial strategy for how best to fund both the early implementation of these EAP projects and the ongoing commitments from the existing *TransNet* program. This item provides a description of the key assumptions regarding costs and revenues used in this Plan of Finance and outlines key policy issues for consideration by the Board. At its November 4, 2005 meeting, the Transportation Committee reviewed the draft Plan of Finance, including several financial scenarios, and directed staff to develop the final Plan of Finance for the Board’s consideration based on the use of bonding to accelerate the implementation of the EAP projects.

The Plan of Finance is not a static planning document with a fixed set of project costs, schedules, and strategies, but rather a dynamic process to be reviewed, reevaluated, and refined continuously with the goal of implementing the *TransNet* program as expeditiously as possible. This is the first of a series of Plan of Finance updates to be brought to the Independent Taxpayer Oversight Committee (ITOC), the Transportation Committee, and the Board of Directors.

Recommendation

The Transportation Committee recommends that the Board approve the final *TransNet* Plan of Finance based on the use of bonding to complete the EAP projects on the proposed schedules, including a set-aside of 10 percent of *TransNet* Major Corridor funds for other non-EAP *TransNet* projects and a set-aside of 15 percent of future State Transportation Improvement Program (STIP), Congestion Mitigation and Air Quality (CMAQ), and Surface Transportation Program (STP) funds for other non-EAP and non-*TransNet* projects.

Discussion

Overview of Plan of Finance Development Process

Following the approval of the EAP, staff began to work with SANDAG's Financial Advisor, Public Financial Management (PFM), on the development of a new financial cash flow model that would blend the cash flow demands over the last three years of the current *TransNet* program (FY 2006 – FY 2008) with the accelerated cash flow requirements of the projects being "jump-started" from the *TransNet* Extension (FY 2009 – FY 2048). The model is based on escalated future year dollars in order to reflect the impacts of cost escalation, annual growth in *TransNet* revenues and other state and federal matching funds, bond debt service, and interest earnings over time. The key steps in this financial modeling process included:

- Updating and adjusting all cost and revenue estimates to escalated future year dollars
- Developing detailed cost estimates for each EAP project, including annual cash flow estimates based on the accelerated construction schedules
- Refining revenue forecasts for *TransNet* funds, as well as state and federal matching funds
- Analyzing various financial scenarios

A more detailed discussion of the development of the Plan of Finance is provided as Appendix A. This appendix includes a description of each of the EAP projects included in the financial analysis, the updated costs and schedules for each EAP project, the key revenue assumptions used in the analysis, and a summary of the results of the financial analysis.

Update to *TransNet* Extension Expenditure Plan

The key first step in this Plan of Finance process was to update the costs of the Major Corridor projects from the 2002 dollar basis used in both the 2030 Regional Transportation Plan (RTP) – MOBILITY 2030 – and the *TransNet* Extension Ordinance and Expenditure Plan to a 2005 dollar basis. A more detailed description of this cost updating process is provided in Appendix A.

Updated 2005 dollar cost estimates were developed for all *TransNet* Major Corridor projects based on construction cost escalation rates, while more detailed cost estimates were developed for each of the EAP projects by Caltrans and SANDAG staff. The results of this cost updating process are shown on Attachment 5. The total cost of the *TransNet* Major Corridor projects, as contained in the *TransNet* Extension Ordinance and Expenditure Plan in 2002 dollars, was \$9.623 billion. The updating process resulted in a total cost of \$12.241 billion in 2005 dollars. This increase in costs, as more fully described in Appendix A, is greater than anticipated due to a spike in construction cost escalation rates over the past two years combined with other project specific cost increases.

Staff conducted an analysis to determine the impact of the identified cost increases for the EAP projects on the overall *TransNet* program. For this purpose, the total \$12.241 billion cost estimate in 2005 dollars was compared against the updated revenue forecasts for *TransNet* revenues and State Transportation Improvement Program (STIP)/Congestion Mitigation & Air Quality (CMAQ)/Regional Surface Transportation Program (STP) matching funds (also in 2005 dollars) based on work conducted for the 2006 RTP technical update process. The estimates of future STIP/CMAQ/STP funds available to match *TransNet* funds are lower than the estimates used in MOBILITY 2030, upon which the

TransNet Extension was based, for two primary reasons: (1) a lower base level reflecting the recent cutbacks in state funding; and (2) more conservative estimates of future annual growth rates.

The table below compares these updated 2005 year costs and revenues for the total *TransNet* Extension Major Corridor program and shows the impact of these higher costs and lower STIP/CMAQ/STP matching fund estimates. The information provided below presents these impacts under two sets of assumptions regarding the availability of STIP/CMAQ/STP funds to match *TransNet* Major Corridor projects – one column reflects an assumption that 100 percent of these state and federal funds are used as match, while the other column reflects an assumption that 85 percent of these funds are used as match and that 15 percent are used for other non-*TransNet* purposes. The 85 percent is based on a historical analysis of the percentage of STIP/CMAQ/STP funds programmed for major highway and transit projects similar to the *TransNet* Major Corridor projects. These major highway and transit projects have been receiving over 77 percent of these matching funds, with local streets and roads receiving approximately 8 percent and the balance going to transit, bikeways, and other purposes. With the availability of Proposition 42 funds and the \$2,000 per dwelling unit in private funding contributions, as required by the *TransNet* Extension, for future local street and road improvements, the 8 percent of these matching funds that have been used for street and road purposes was assumed to be available to match the *TransNet* Major Corridor projects. This increased the total share of the STIP/CMAQ/STP funds assumed for *TransNet* matching purposes to 85 percent. The rationale for these two assumed matching levels is further described in Appendix A and is the basis for the financial analysis used in the Plan of Finance process.

TransNet Extension Expenditure Plan Update for the Major Corridor Program
(in millions of 2005 dollars)

	85%*	100%*
Estimated Revenues		
Dedicated State and Federal Funds	\$ 706	\$ 706
Future STIP/CMAQ/STP	<u>\$ 3,831</u>	<u>\$4,507</u>
Total State and Federal Matching Funds	\$ 4,537	\$5,213
<i>TransNet</i> Major Corridor Funding	\$ 6,667	\$6,667
Total Revenue Available	\$11,204	\$11,880
Costs		
<i>TransNet</i> Early Action Program	\$ 2,741	\$2,741
Other <i>TransNet</i> Major Corridor Projects	<u>\$ 9,500</u>	<u>\$9,500</u>
Total <i>TransNet</i> Major Corridor Program	\$12,241	\$12,241
Surplus/(Deficit)	(\$1,037) (8.5%)	(\$361) (2.9%)

* The percentages shown reflect the percentage of future STIP/CMAQ/STP funds assumed as match for *TransNet* Major Corridor funds. No *TransNet* financing costs assumed.

This analysis indicates that there is a shortfall of 2.9 to 8.5 percent based on these updated costs and revenues. It is important to point out that these revenue estimates are more conservative than those used in MOBILITY 2030 and the *TransNet* Extension Ordinance and Expenditure Plan. The revenue estimates in the table above are based on future STIP/CMAQ/STP revenues only, with no additional future state and federal funds beyond these existing revenue sources being assumed.

The Major Corridor projects in the *TransNet* Extension were drawn from the high priority regional transportation improvements identified in the recommended “Reasonably Expected Revenue” Scenario in MOBILITY 2030. The \$12 billion difference between the \$30 billion “Revenue Constrained” Scenario and the \$42 billion MOBILITY 2030 plan was assumed to be funded by revenues derived from the passage of the *TransNet* Extension through 2030 and \$3.6 billion from additional state and federal revenues based on future gas tax or other equivalent revenue increases (like Proposition 42). The approval of Proposition A turned the assumption on the *TransNet* Extension into reality. Time will tell if state and federal revenues do, in fact, increase over the next several decades on the same annual average basis as they did in the past twenty years.

Based on the shortfalls shown in the table above, the use of a portion of the additional state and federal funds assumed in MOBILITY 2030 would be required to provide the additional matching funds to fully fund the program. To provide the additional state and federal matching funds needed to reach the 50 percent match rate assumed in the *TransNet* Extension, the use of \$908 million (under the 100 percent column) to \$1.58 billion (under the 85 percent column) would be required. These figures compare to the \$3.6 billion in additional state and federal revenues assumed in MOBILITY 2030. While this involves some measure of risk, the assumption that there will be additional state and federal funds provided for transportation over the next 42 years is not too farfetched. The amount needed to bring the program back into balance is far less than the \$3.6 billion assumed in MOBILITY 2030. If these additional future state and federal funds materialize as assumed in MOBILITY 2030, then the *TransNet* projects, as well as the rest of the projects in MOBILITY 2030, would have adequate funding. This will be a key assumption to track closely over time for both the *TransNet* program and future RTPs.

Major Policy Issues

The analysis process followed in developing the Plan of Finance has highlighted several policy choices and tradeoffs. The Transportation Committee reviewed these policy choices in developing its recommendations for the final Plan of Finance.

1. **To bond or not to bond?** – The EAP project schedules cannot be met on a pay-as-you-go basis. The goal is to complete all EAP projects by 2015. Should the schedules be delayed to avoid the need to bond, or should we try to complete the projects as soon as possible so that the related benefits from putting the EAP projects into operation can be realized?

Without bonding, the EAP cannot be completed until at least 2019. The four-year average delay estimate provided to the Transportation Committee was based on an analysis of the annual costs and revenues for the EAP as a whole without considering individual project cash flow requirements. Following the Transportation Committee meeting, a more detailed analysis was conducted on a project-by-project basis. Based on assumptions regarding the order in which the projects would be implemented, a given project was assumed to be implemented only when sufficient funds were available to fund the entire annual funding requirements of that project. This project-by-project methodology resulted in a greater number of years of delay than the more simplified approach, with the full EAP not being completed until 2025 if a pay-as-you-go basis is assumed.

The four-year average delay based on the overall EAP program analysis results in additional project cost escalation of \$309 million. The project-by-project analysis results in additional costs due to escalation of \$708 million.

Based on traffic forecasts for the year 2015, the estimated benefits of completing the EAP projects total approximately \$540 million per year (in today's dollars) based on the economic values for congestion relief (person hours of travel saved), accident reductions, and vehicle operating cost savings contained in the Caltrans cost/benefit model.

These estimated benefits of delivering the program early, combined with the project cost escalation costs that could be avoided with the use of bonding, exceed the interest costs on the bonds. At \$540 million per year in estimated benefits of delivering the EAP program, a minimum four-year delay in completion of the EAP under a no bonding scenario, combined with the \$309 million in project escalation, results in a total "cost" of delaying the completion of the program of well over \$2.4 billion, as compared to the \$1.1 billion in financing costs related to the use of bonds to accelerate the project implementation schedules. The difference is even more pronounced if the financing costs are adjusted to today's dollars to be consistent with the calculation of the benefits. In today's dollars, the financing costs related to the use of bonds would be approximately \$620 million. Based on this cost/benefit comparison, the Transportation Committee recommended that the final Plan of Finance be developed assuming the use of bonding in order to proceed with the accelerated implementation of the EAP program.

2. **Should the focus on the EAP Projects be maintained or should the available *TransNet* funds be spread across additional Major Corridor projects?** – Earlier in the year, there was clear Board direction to proceed with the EAP to accelerate the implementation of those key projects and complete them as soon as possible. Recently, concerns have been raised about funding needs for other *TransNet* projects that are not part of the EAP. For example, the transit operators have identified over \$200 million in projects that appear to be consistent with the *TransNet* Extension Major Corridor projects, but are not part of the EAP. There are many other *TransNet* highway projects as well that are not part of the EAP.

The Transportation Committee recommended that the vast majority of the *TransNet* funds should remain targeted to the EAP. However, in order to provide funding for early implementation of some of the other non-EAP *TransNet* Major Corridor projects, the Transportation Committee recommended including a set-aside of 10 percent of the available Major Corridor funds for other non-EAP projects. This set-aside would provide approximately \$86 million through 2015 that could be used to initiate project development work on some of the other Major Corridor projects or to take advantage of potential leveraging opportunities that may arise.

3. **Should state and federal funds be used to match *TransNet* funds to support the implementation of the *TransNet* Expenditure Plan or to fund other important highway, transit, and local street and road improvements?** If a significant share of state and federal funds is not used to match *TransNet* Major Corridor funds, then the Expenditure Plan will not be completed as planned. The *Transnet* Extension Ordinance assumed that 50 percent of the total costs of the Major Corridor projects would be covered by state, federal, and other matching funds. The Expenditure Plan was designed to include the region's highest priority projects, so in that respect the allocation of a high proportion of future state and federal matching funds to these projects would not be unreasonable. However, there are many other potential highway, transit, local street and road, and other transportation improvements that also would be eligible for STIP, STP, and CMAQ funding. The Transportation Committee

and Board will be faced with this issue every time there is a state or federal funding cycle in the future.

At this early stage of the program with over 42 years left to go, the Transportation Committee recommended that 15 percent of the future STIP/CMAQ/STP funds be used for other non-EAP and non-*TransNet* purposes. This set-aside would provide nearly \$120 million for other non-EAP and non-*TransNet* purposes through 2015.

Major Risk Factors

In any analysis such as the Plan of Finance, numerous assumptions have to be made with some of the assumptions having greater risk associated with them than others. This report has attempted to highlight the major assumptions used in the financial modeling process. The following are the major risk factors that could cause the results of the analysis to be substantially different:

1. **Significant Cost Increases** – This could occur in two ways. The first would occur if the cost escalation factor used in the financial model is too low resulting in underestimation of the future project costs. This would mean that the recent spike in construction costs is not really a spike, but the beginning of a new higher trend line. The second would occur if project-by-project cost increases rise above the expected cost escalation rates. This could be caused by additional project features being added to the projects creating a major change in the original scope of the projects, or by unanticipated factors such as lawsuits, environmental issues, and other related problems.

What can we do about it? –

- Support the expansion or development of new construction material sites so that the material needed for major projects does not have to be transported over great distances
- Preserve right-of-way for major transportation improvements to reduce future right-of-way requirements
- Support relaxing some of the current restrictions in construction zones relating to issues such as construction work windows and staging areas so that contractors have greater flexibility as they construct major transportation projects
- Develop a cost containment process to deal with cost increases and proposed scope changes on an ongoing basis in order to keep future cost increases in check

2. **Sales Tax Revenues Falling Below Projections** – A major recession or other major changes in socio-economic trends could significantly impact the sales tax projections used in the financial model. This would have a major impact on SANDAG's ability to bond in the future and make it very challenging to complete the Expenditure Plan as approved by the voters.

What can we do about it? –

- Guard against any proposed legislation that would exclude items from the sales tax or other efforts that would erode the tax base for the ½ percent sales tax
- Review policy decisions regarding cash reserve levels and program set-asides if sales tax growth begins to decline

- Continuously monitor trends in sales tax receipts and update the model used to develop the long-term sales tax revenue forecasts on a regular basis in order to provide an early warning signal for potential issues

3. **State and Federal Fund Matching Rate Declines** – Since the *TransNet* Extension Ordinance and Expenditure Plan was based on a 50/50 match assumption for the Major Corridor projects, a major drop in the state and federal matching rate would create a significant problem. This could happen in two ways. The first would result from the state and/or federal governments cutting back on funding for transportation, as the state has done in recent years. In fact, over the long-term, state and federal funds will need to increase to provide the needed matching funds. The second would occur if the state and federal funds continue to flow, but the Transportation Committee and Board decide to allocate those funds to other non-*TransNet* purposes.

What can we do about it? –

- Maintain an aggressive legislative program focusing on protecting and expanding state and federal funds for transportation and to match the major *TransNet* projects specifically
- Allocate a significant share of available state and federal discretionary funding to *TransNet* projects, as opposed to other purposes, in order to complete the *TransNet* Extension Expenditure Plan as approved by the voters

Transportation Committee Recommendation

After reviewing the policy choices and tradeoffs as part of the financial analysis, the Transportation Committee recommended basing the final Plan of Finance on the use of bonding to meet the desired EAP construction schedules, while leaving significant funding for other non-EAP projects. The 10 percent set aside of *TransNet* Major Corridor funding provides over \$86 million for non-EAP *TransNet* projects through 2015. The use of the 15 percent of future STIP/STP/CMAQ funds not utilized for matching the *TransNet* Major Corridor funds provides nearly \$120 million for other non-EAP and non-*TransNet* purposes through 2015.

The recommendation to move forward with these set-asides in the early years of the program is based on the assumptions discussed previously regarding future increases in state and federal gas taxes and other equivalent revenue sources being sufficient to balance the overall program over time. Trends in these state and federal funding programs must be closely monitored. At a minimum, the overall balance of the entire *TransNet* Major Corridor program will be reviewed at the required comprehensive 10-year review, or earlier if required based on actual trends in state and federal funds in the near future. Depending on the results of these future reviews, any actions related to setting aside funds for other purposes may have to be reconsidered in light of the impact on the completion of the *TransNet* Major Corridor program.

This recommendation for the Plan of Finance process provides a financial strategy for the implementation of the EAP, which includes work on 20 of the 47 Major Corridor projects identified in the *TransNet* Extension Ordinance and Expenditure Plan. This work on the various corridors ranges from preparation of environmental documents to complete construction of the entire project as proposed in the ballot measure.

Next Steps

Updated costs and schedules for the balance of these Major Corridor projects will be developed through the 2007 RTP process. The next major update to this Plan of Finance will reflect these updated costs and schedules, as well as updated revenue estimates, and will extend the financial strategy further into the future.

While this would be the next planned major update of the Plan of Finance, the Plan of Finance will be updated on a continuous basis. An ongoing updating process will be used to flag any significant changes in the key assumptions used in the financial model. The Transportation Committee and Board of Directors will be advised of any major developments and will consider any recommended changes to the approved financial strategy.

GARY L. GALLEGOS
Executive Director

Attachments: Appendix A

1. *TransNet* Extension 40-Year Expenditure Plan
2. *TransNet* Early Action Program - Project Descriptions
3. *TransNet* Early Action Program Map
4. Historical Construction Cost Index Comparisons
5. *TransNet* Program Cost Estimate – Comparison of 2002 and 2005 Cost Estimates
6. *TransNet* Early Action Program – Project Cash Flow Summary
7. *TransNet* Early Action Program – Project Delivery Schedule
8. Summary Overview of *TransNet* Major Corridor Capital Program
9. PFM Memo dated December 2, 2005

Key Staff Contact: Craig Scott, (619) 699-1926, csc@sandag.org

Funds are budgeted in Work Element #11102

Appendix A

***TransNet* Plan of Finance for the Early Action Program (EAP) Summary of Plan of Finance Development Process**

Introduction

Staff has worked with SANDAG's Financial Advisor, Public Financial Management (PFM), on the development of a new financial cash flow model for the *TransNet* Extension. The new model has been developed to blend the cash flow demands over the last three years of the current *TransNet* program (FY 2006 – FY 2008) with the accelerated cash flow requirements of the EAP projects being "jump-started" from the *TransNet* Extension (FY 2009 – FY 2048).

This process required updating all costs and revenues from the 2002 dollar basis used in MOBILITY 2030 and the *TransNet* Extension Ordinance and Expenditure Plan. The model is based on escalated future year dollars in order to reflect the impacts of cost escalation, growth in *TransNet* and other state and federal matching funds, bond debt service, and interest earnings over time. Attachment 1 shows the impact of this escalated future year dollar adjustment on the *TransNet* Expenditure Plan summary table that was part of the ballot measure package.

Key inputs to the financial cash flow model are the updated costs of the EAP projects, the estimated schedules and annual cash flow requirements for each project, the *TransNet* revenue estimates for each component of the program, and the estimated matching funds available from state, federal, and other sources to help fund the major planned improvements. These inputs and key assumptions are summarized in the following sections.

The model is used to analyze, on an annual basis, how the *TransNet* funds and available matching funds can best be used to meet the cash flow requirements of the projects and to what extent debt financing will be required to maintain the desired schedules. Where debt financing is utilized, the corresponding debt service costs are included as a charge to the component of the *TransNet* program (major projects, environmental mitigation, transit services, local streets and roads, etc.) using the bond proceeds. The model provides for an analysis of each component of the program separately and for the program as a whole.

Initial Financial Strategy

Based on preliminary analysis work conducted at the early stages of this process, staff worked with PFM to develop an initial financial strategy for the program so that the necessary financial resources would be available to fund the accelerated implementation of the EAP projects over the early years of the program. The Transportation Committee approved the initial financial strategy at its May 20, 2005 meeting. Staff and PFM have been working over the past few months to implement the elements of this financial strategy and complete the Plan of Finance analysis work simultaneously. The key elements of the financial strategy are:

- Expand the *TransNet* commercial paper program from \$135 to \$335 million
- Issue additional short-term notes, if needed
- Issue long-term "take out" bonds in 2008
- Investigate hedging opportunities to lock in low rates today for 2008 bond issue

The additional financial analysis that has taken place since this initial strategy was approved has served to reinforce the approved strategy. Significant progress has been achieved on the elements of this strategy. In September 2005, the Board approved the expansion of the commercial paper program to \$335 million. Final documents were completed in early November and the expanded commercial paper program is now in effect providing the funding needed to proceed with early project implementation.

In addition, a request for proposals process was initiated in September for interest rate hedging concepts. This process led to a recommended interest rate swap proposal being presented to the Board at the November meeting. Based on the Board's approval of the interest rate swap proposal, a total of \$600 million in interest rate swap agreements was executed on November 22, 2005. The average interest rate for these swap agreements was 3.68%. Once the estimated 0.21% for support costs on the bonds to be issued in 2008 is added, the total cost for the first \$600 million in bonds under the new *TransNet* Extension is estimated to be 3.89%. The final Plan of Finance was refined using this rate for the planned bond issue in 2008. Attachment 9 is a memo from PFM summarizing the results of the interest rate swap transaction.

Early Action Program

Based on the actions of the Transportation Committee and Board in the first half of the year, the set of projects included in the EAP include the following major highway and transit improvements:

Tier 1 Projects: these projects are the remaining projects from the current *TransNet* program that were given priority for completion in the *TransNet* Extension Ordinance and Expenditure Plan.

- Widening of SR 76 from Melrose Drive to I-15
- Extension of SR 52 from SR 125 to SR 67
- Mid-Coast light rail extension

Tier 2 Projects: these projects are priority projects on corridors already under construction or in advanced phases of planning and design, including environmental work on major corridors in preparation for implementation as part of the next tier of projects.

- I-15 Managed/High Occupancy Vehicle (HOV) Lanes from SR 163 to SR 78, including Bus Rapid Transit (BRT) stations, vehicles, and related improvements along the I-15 Managed Lanes and down SR 15 through the Mid-City San Diego area to downtown San Diego.
- SR 52 Widening and Managed/HOV Lanes from I-15 to SR 125.
- Mid-Coast Super Loop project to provide high-quality bus transit circulator services in support of the Mid-Coast light rail project.
- South Bay Bus Rapid Transit Project – initial phase using dedicated transit right-of-way in the Otay Ranch area and freeway shoulder lanes on I-805 until the I-805 Managed/HOV lanes are completed.
- Environmental documents on the I-5 North Coast Corridor from La Jolla Village Drive in San Diego to Vandegrift Boulevard in Oceanside.
- Environmental documents on the I-805 Corridor from SR 905 to I-5.

These EAP projects are to be funded through the *TransNet* Major Corridor program matched with state and federal funds. A complete listing of the project descriptions of each of the projects included as part of the EAP is provided in Attachment 2. A map of the EAP projects is provided as Attachment 3.

Cost and Schedule Assumptions for the Draft Plan of Finance

TransNet Major Corridor Program

Staff worked in cooperation with Caltrans District 11 staff to update the EAP project costs identified in 2002 dollars in the *TransNet* Extension Ordinance and Expenditure Plan to 2005 dollars, which is the base year used in the financial model. The model then escalates annual costs to the year of expenditure based on a 3.6 percent per year assumed escalation factor.

As part of this cost updating process, a consulting firm (URS) was used to benchmark against the recent experience in construction cost trends over the past few years in California and other states. The results of this study were presented to the Transportation Committee on July 15, 2005. An unusual spike in the construction cost index occurred over the past year or so due to significant price increases in steel and concrete. The purpose of this study was to determine appropriate construction cost escalation rates for the 2002-2005 period and for long-range forecasting purposes as part of the financial model. Based on the 20-30 year history of transportation project cost escalation rates prior to 2002, an annual 2.6 percent construction cost escalation rate was found to be appropriate to use for long-range forecasting purposes. The 3.6 percent per year escalation rate assumed in the financial model is a blended rate for total project costs based on the 2.6 percent historical rate for construction costs and an 8 percent rate for right-of-way expenditures. However, given the recent spike in construction costs, the study indicated that a higher rate (7.25 percent) be used for the adjustment in project costs from 2002 dollars to 2005 dollars. Attachment 4 provides an illustration of these trends in the construction cost index.

The impact of these cost updates on the *TransNet* Major Corridor projects is shown on Attachment 5. The attachment compares the cost of each project in 2002 dollars from the Expenditure Plan to the adjusted cost in 2005 dollars based on the 7.25 percent per year escalation factor. Based on the 7.25 escalation factor, the total cost of the Major Corridor program increases from \$9.623 billion in 2002 dollars to \$11.860 billion in 2005 dollars. These 2005 dollar costs are then compared to the updated cost estimates for the EAP projects developed by Caltrans (for the highway projects) and SANDAG staff (for the transit projects) for use in the Plan of Finance process. In some cases, these estimates are higher than the estimated derived from applying the 7.25 percent per-year escalation rate. The net increase on these projects is \$381 million, increasing the total cost of the Major Corridor program to \$12.241 billion. The major reasons for the cost increases above escalation rates are summarized below:

- **I-15 HOV/Managed Lanes:** The middle segment of the I-15 corridor, which was not part of the *TransNet* Extension, had a project cost increase of \$71.5 million dollars mainly due to construction material cost increases. This amount was loaned to the project to be backfilled with state and federal dollars. Caltrans, in an effort to accelerate the delivery of the I-15 corridor, has undertaken a new delivery method called design sequencing. This technique allows Caltrans to construct portions of the corridor when the design for that portion is complete rather than waiting for the design for the entire corridor to be done. While this effort will reduce the construction time, it requires more staff support dollars to achieve. The remaining corridor cost increases were due to larger-than-expected retaining walls and noise barrier requirements, a

costlier FasTrak system, longer direct access ramps to BRT stations, and a required maintenance facility for the movable barrier machines.

- **Mid-Coast LRT:** More LRT vehicles will be needed than originally anticipated. Revisions to the rail fleet management plan, including accommodations for more aggressive maintenance schedules and emergency response plans, have increased spare vehicle requirements requiring the acquisition of more LRT vehicles than originally envisioned. In addition, larger amounts of property will need to be acquired than originally anticipated. Alignment optimization at Rose Creek and a larger station design at the Tecolote station have resulted in increased property needs. The availability of Caltrans right-of-way along the I-5 corridor is more restrictive than originally anticipated. The current plan for the Mid-Coast LRT alignment would share use of the Caltrans right-of-way along I-5 between Rose Canyon and UCSD. The old concept of widening I-5 from eight general purpose lanes to eight general purpose lanes plus two high-occupancy vehicle (HOV) lanes has been revised. The new concept calls for ten general purpose lanes plus two HOV lanes. This new concept for I-5 has reduced the availability of right-of-way for Mid-Coast LRT. This will require new rights-of-way, retaining walls, and/or structures for Mid-Coast LRT.
- **SR 52:** Cost increases (other than right-of-way escalation and unit price increases) are due to design modifications at the Cuyamaca Avenue local access interchange and the SR 67 freeway-to-freeway interchange. Additional right-of-way costs are due to the need to acquire a greater number of parcels in their entirety than previously assumed.
- **SR 76:** Costs increases are driven by rising costs of real property and mitigation property, additional environmental requirements related to the construction of animal under crossings, additional storm water requirements, and a new at-grade intersection to be constructed to serve a produce plant. Additionally, the original estimate assumed widening the existing San Luis Rey River structure; however, recent studies indicate the need to construct a new, more costly parallel structure.

In addition to adjusting the total project costs to 2005 dollars, another key input to the financial model was the assumed implementation schedule for each project, including the detailed annual cash flow needs. Attachment 6 provides a breakdown of the cash flow requirements by year for each EAP project, while Attachment 7 provides a summary level view of the schedules for each EAP project. As shown in Attachment 5, the total capital cost of these EAP Major Corridor projects is \$2.741 billion in 2005 dollars. Once these project expenditures are escalated to the year of expenditure in the financial model, the total cost reaches \$3.890 billion in future escalated dollars.

Environmental Mitigation Program (EMP)

Expenditures under the EMP program were derived from the detailed EAP project cost estimates. Mitigation opportunities are being investigated along EAP corridors, as well as along other RTP corridors. Nearly \$110 million in project mitigation needs have been identified to date. In addition, based on the EMP implementation guidelines approved by the Board in September 2004, expenditures for monitoring and management-related activities are included beginning at \$1 million in FY 2006 and increasing each year to \$5 million in FY 2009 and beyond. Preliminary estimates for “economic benefit” funding and local project mitigation increase the total expenditures for the EMP program to nearly \$220 million through 2015. These estimates will be revised as the methodology for determining how economic benefit funding is to be quantified and distributed is approved, and the cash flow needs for the EMP are more fully developed.

Local Street and Road/Transit Service Improvements/Other Programs

For the remaining programs, the basic assumption used in this Plan of Finance update was that expenditures would equal the revenues available for the purposes identified for each program. No major borrowing was assumed at this time for projects in these *TransNet* funding categories, and no significant fund balances were assumed to be available to be loaned to other program categories. In future refinements to the Plan of Finance, opportunities for inter-program loans may provide another financing option in addition to debt financing. Once the local agencies and transit operators begin to develop multi-year programs for these funding categories, needs and opportunities for loans or debt financing can be more fully explored.

Revenue Assumptions for the Draft Plan of Finance

The other key input to the financial model is the annual revenue estimates for all revenue sources available to fund the project cash flow needs. Where costs exceed available revenues on an annual basis, debt financing is used, if possible, to plug the financial gap and maintain the desired implementation schedules.

***TransNet* Revenue Assumptions:** The total *TransNet* estimates are based on actual receipts as of January 2005 increased by the annual growth rate for taxable retail sales as forecasted by the SANDAG Demographic and Economic Forecast Model (DEFM). The *TransNet* revenue estimates have been adjusted from 2002 dollars to escalated future dollars for each program category, as summarized in Attachment 1. The financial model links the revenues from the current *TransNet* program to the new program categories established under the *TransNet* Extension for FY 2009 and beyond. In the case of the EMP, a *TransNet* Extension program with no counterpart in the current *TransNet* program, the intent is to implement the program prior to the availability of EMP revenues in FY 2009, with the capital costs assumed to be funded through the commercial paper program. The related interest costs and other EMP operating/monitoring costs from FY 2006 to FY 2008 are treated as a loan from Highway/Major Corridor program to be paid back beginning in FY 2009.

Assumptions Regarding Other Non-*TransNet* Revenue Sources: A number of assumptions were made regarding other revenue sources available to match *TransNet* funds on the Major Corridor projects. Funds currently programmed for these Major Corridor EAP projects in the Regional Transportation Improvement Program (RTIP) through FY 2009 were included in the financial model. Assumptions regarding the availability of each major revenue source in the future are outlined below:

1. **State Transportation Improvement Program-(STIP):** Every two years, the California Transportation Commission (CTC) releases a Fund Estimate for the upcoming STIP cycle, which, among other funding sources, includes estimates of the formula funds provided through the STIP for regional improvements. For FY 2005 to FY 2009, these revenues are dedicated to specific projects (i.e., Mid-Coast, SR 52, I-15 Managed/HOV Lanes). For FY 2010 and FY 2011, the annual revenues identified in the 2006 Fund Estimate were assumed and, from FY 2012 forward, annual funding levels were escalated at 5 percent per year based on revenue trends in the Fund Estimate. The total amount assumed through 2015 was adjusted to deduct existing Grant Anticipation Revenue Vehicle (GARVEE) debt service payments related to the funding provided for the I-15 HOV/Managed Lanes.
2. **Federal Transit Administration (FTA) New Starts Program:** The basic assumption was that the FTA New Starts program would fund 50 percent of the total cost for the Mid-Coast project and other rail projects and 25 percent of total cost for major BRT projects, such as the South Bay Bus Rapid Transit project. This assumes SANDAG could have two FTA Full Funding Grant Agreements in place simultaneously, as has been the case with the Mission Valley East and Sprinter projects. The New Starts funding for these projects is the only transit-specific funding assumed in the Plan of Finance. Other sources of recurring transit revenues, such as the FTA formula funds (Section 5307 funds and Section 5309 Rail Modernization funds), which provide \$62 million per year currently to the region's transit operators, are expected to continue to fund ongoing transit operator capital improvement projects and operations. These funds, along with Transportation Development Act (TDA) funds, State Transit Assistance (STA) funds, and other transit revenues were not assumed to be available to match *TransNet* EAP projects as part of this financial analysis.
3. **Congestion Mitigation and Air Quality (CMAQ) Funds/Regional Surface Transportation Program (RSTP) Funds:** For FY 2005 to FY 2007, the revenues for these federal funding programs were based on the latest estimates from Caltrans. From FY 2008 forward, the revenues were escalated at 2 percent annually based on the growth rates in these funding programs as reflected in the federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

During the TEA-21 period (FY 1998 to FY 2004) and the current RTIP period (FY 2005 to FY 2009), many major highway and transit projects similar to the EAP projects have been funded with these federal and state funds, including the Mission Valley East light rail project, the Sprinter rail line, I-15 HOV/Managed Lanes, SR 76, and SR 52. In addition, several other projects and programs have received funding from these sources in the past, including the regional bikeway program, bus replacements, the Intelligent Transportation System (ITS) program, the regional rideshare program, and regional arterial system improvements. A summary of the use of these STIP/CMAQ/STP funds is provided in the table below for the period covering FY 1998 through FY 2009.

Summary of STIP, CMAQ, and STP Fund Usage
by Major Program Category
(FY 1998 – 2009)

Major Program Categories	Funds Allocated*	% Funds Allocated
Highway/Transit Major Corridor Projects	\$1,360	77.7%
Other Transit Projects	\$ 142	8.1%
Local Street and Road Projects	\$ 143	8.2%
Rideshare/Bikeways/Other	<u>\$ 105</u>	<u>6.0%</u>
Total	\$1,750	100.0%

*in \$ millions

Based on this review of the allocation of STIP, STP, and CMAQ dollars, nearly 78 percent of the available funds has been allocated to major highway and transit projects similar to those contained in the *TransNet* Major Corridor program. With the additional future revenues to be available for street and road improvements from Proposition 42 funds and the \$2,000 per dwelling unit private funding contribution for regional arterial funding required by the *TransNet* Extension Ordinance, the historical allocations for local streets and roads could be shifted to help match the *TransNet* Major Corridor projects. This would increase the allocation for the EAP and other future Major Corridor projects to 85 percent in order to come closer to achieving the 50 percent *TransNet*/50 percent State/Federal/Other funding assumption included in the *TransNet* Extension Ordinance and Expenditure Plan.

Summary of the Plan of Finance Financial Analysis

Based on the recommendations from the Transportation Committee, the Plan of Finance for the EAP was built around the following key assumptions: (1) bonding would be utilized to meet the accelerated schedules for the EAP projects, (2) 85 percent of available STIP/CMAQ/STP future revenues would be used to provide matching funds for the EAP projects, and (3) 90 percent of available *TransNet* Major Corridor funds would be used for EAP projects. These assumptions were held through 2015, which was the final year of this Plan of Finance for the EAP.

The results of the financial analysis are summarized in Attachment 8. The key findings of the analysis are:

- With the use of bonding, the assumed accelerated implementation schedules for the EAP projects can be met.
- A total of \$1.3 billion in debt financing (long-term bonds and commercial paper) would be required to meet the assumed EAP project implementation schedules. The financial analysis work conducted for the Plan of Finance shows that the higher the share of *TransNet* and state/federal funds set aside for other non-EAP purposes, the greater the amount of bonding required to meet the implementation schedules and the higher the share of future *TransNet* revenues devoted to debt service instead of implementing other *TransNet* Major Corridor projects.
- With the assumed set-asides of *TransNet* Major Corridor funds and state and federal matching funds, a total of \$204 million remains available through 2015 for non-EAP purposes. The more

that *TransNet* and state/federal funds are used for EAP purposes, the less there is available for other non-EAP *TransNet* projects or other non-*TransNet* needs through 2015.

- Based on the coverage ratios (ratios of annual total *TransNet* and Major Corridor revenues to annual bond debt service requirements) calculated as part of the financial analysis, there is some additional borrowing capacity available for the Major Corridor program during the EAP period through 2015. The overall *TransNet* program remains above a 2.5 ratio, which is well above the minimum 1.3 ratio required by SANDAG's bond indenture and provides significant bonding capacity for other transit or street and road projects. The coverage ratio for the Major Corridor program reaches a low of 1.29 in 2013. Annual growth in sales tax revenues would need to occur in order to provide additional coverage for future Major Corridor projects.
- The *TransNet* Extension Ordinance and Expenditure Plan assumed a set aside of \$500 million for financing costs associated with bonding. When converted from 2002 dollars to escalated future year dollars, that figure rises to \$1.8 billion over the life of the program. Based on the financial analysis, a total of \$1.115 billion in financing costs is estimated, which is well below the amount set aside for financing costs in the Ordinance. Once the funds set aside for financing costs are exhausted, additional financing costs will be treated as increased project costs as was done in the current *TransNet* program.
- The use of bonding to accelerate the EAP requires fronting with *TransNet* funds when matching state and federal funds are not available. This means that the major assumption in the *TransNet* Extension Ordinance and Expenditure Plan that 50 percent of the total Major Corridor project costs will be covered by state/federal/other revenues is not achieved in this Plan of Finance for the EAP. When the future financing costs are included, the overall funding split for the Plan of Finance for the EAP is 61 percent from *TransNet* and 39 percent from state and federal matching funds. Fronting with *TransNet* funds early means that a greater share of state and federal funding will be required in the future in order to complete remaining non-EAP Major Corridor projects in the *TransNet* Expenditure Plan.

TransNet Extension 40-Year Expenditure Plan

Comparison of Revenues in Constant 2002 Dollars and Escalated Future Year Dollars (in millions)

Expenditure Plan Component	Total <i>TransNet</i> Funds in 2002 Dollars	Percent of Net	Percent of Total	Total <i>TransNet</i> Funds in Escalated Dollars
Congestion Relief Program				
Major Transportation Corridor Improvements:	\$6,850	50.5%	48.9%	\$24,530
Freeway, Highway, & Transit Capital Projects	\$5,150	38.0%	36.8%	\$18,458
Project Specific Transit Operations	\$1,100	8.1%	7.9%	\$3,935
Freeway, Highway, & Transit Project Environmental Mitigation	\$600	4.4%	4.3%	\$2,137
Local System Improvements	\$4,480	33.0%	32.0%	\$16,029
Local Street & Road Projects	\$3,950	29.1%	28.2%	\$14,135
Local Street & Road Project Environmental Mitigation	\$250	1.8%	1.8%	\$874
Smart Growth Incentive Competitive Grant Program	\$280	2.1%	2.0%	\$1,020
Transit System Improvements -	\$2,240	16.5%	16.0%	\$8,015
Continuing Bus/Rail Support and Improvements, including Senior/Disabled/Youth Transit Passes and Specialized Senior/Disabled Transportation Services				
Subtotal	\$13,570	100.0%	N/A	\$48,574
Bicycle, Pedestrian & Neighborhood Safety Grant Program	\$280	*	2.0%	\$1,002
Administration	\$140	*	1.0%	\$501
Oversight Committee	\$10	*	0.1%	\$31
TOTAL TransNet Funding Requirement	\$14,000		100.0%	\$50,108
TOTAL TransNet Funds Available	\$14,000		100.0%	\$50,108

* These categories deducted "off the top" prior to other allocations.

***TransNet* Early Action Program - Project Descriptions**

	Early Action Project	Description
1	I-5 HOV Lane Extension	Extend northbound HOV to Manchester Avenue, construct southbound HOV lane between Manchester Avenue and I-805
2	I-5 Lomas Santa Fe Interchange	Reconfigure on ramps and off ramps, modify local circulation
3	I-5 North Coast	Complete environmental document for I-5 widening between Genesee Avenue and Vandegrift Boulevard
4	I-15 BRT Stations (SR 163 to SR 78)	Modify Escondido transit center, construct transit centers at Del Lago, Rancho Bernardo, Sabre Springs, and Mira Mesa
5	I-15 BRT DARs (Hale & Hillery)	Construct direct access ramps (DARs) at Hale Avenue and Hillery Drive
6	I-15 BRT Stations (Downtown to SR 163) and Service	Construct transit centers at University Avenue and El Cajon Boulevard, modify Downtown transit centers, BRT service between Escondido and Downtown San Diego
7	I-15 FasTrak	Install and operate managed lane technology between SR 163 and SR 78
8	I -15 Middle (SR 56 to Centre City Pkwy)	Cover cost increases including purchase of the moveable barrier, noise barrier construction, and direct access ramps
9	I-15 North (Centre City Pkwy to SR 78)	Construct four managed lanes with fixed median barrier, add auxiliary lanes.
10	I-15 South (SR 163 to SR 56)	Construct four managed lanes with moveable median barrier, add auxiliary lanes.
11	I-805 Middle (SR 94 to SR 52)	Complete environmental document for I-805 widening
12	I-805 North (SR 52 to I-5)	Complete environmental document for I-805 widening
13	I-805 South (SR 905 to SR 94)	Complete environmental document for I-805 widening
14	Mid-Coast LRT	Construct and operate LRT service between Old Town transit center, UCSD, and UTC
15	Otay BRT (Phase 1)	BRT service between Otay Mesa and Downtown San Diego
16	SR 52 (SR 125 to SR 67)	Construct four lane freeway between SR 125 and SR 67
17	SR 52 Westbound Truck Lane	Extend general purpose lane from 1.4 miles east of Santo Road to I-15
18	SR 52 Managed Lanes (I-15 to SR 125)	Construct two managed lanes
19	SR 76 (Melrose to Mission Road)	Widen from two lanes to four lanes
20	SR 76 (Mission to I-15)	Widen from two lanes to four lanes
21	SR 76 Environmental Enhancement	Environmental enhancements for SR 76 widening between Mission Road and I-15
22	Super Loop BRT	BRT service between UCSD and UTC

TransNet

Early Action Projects

Tier 1 Projects

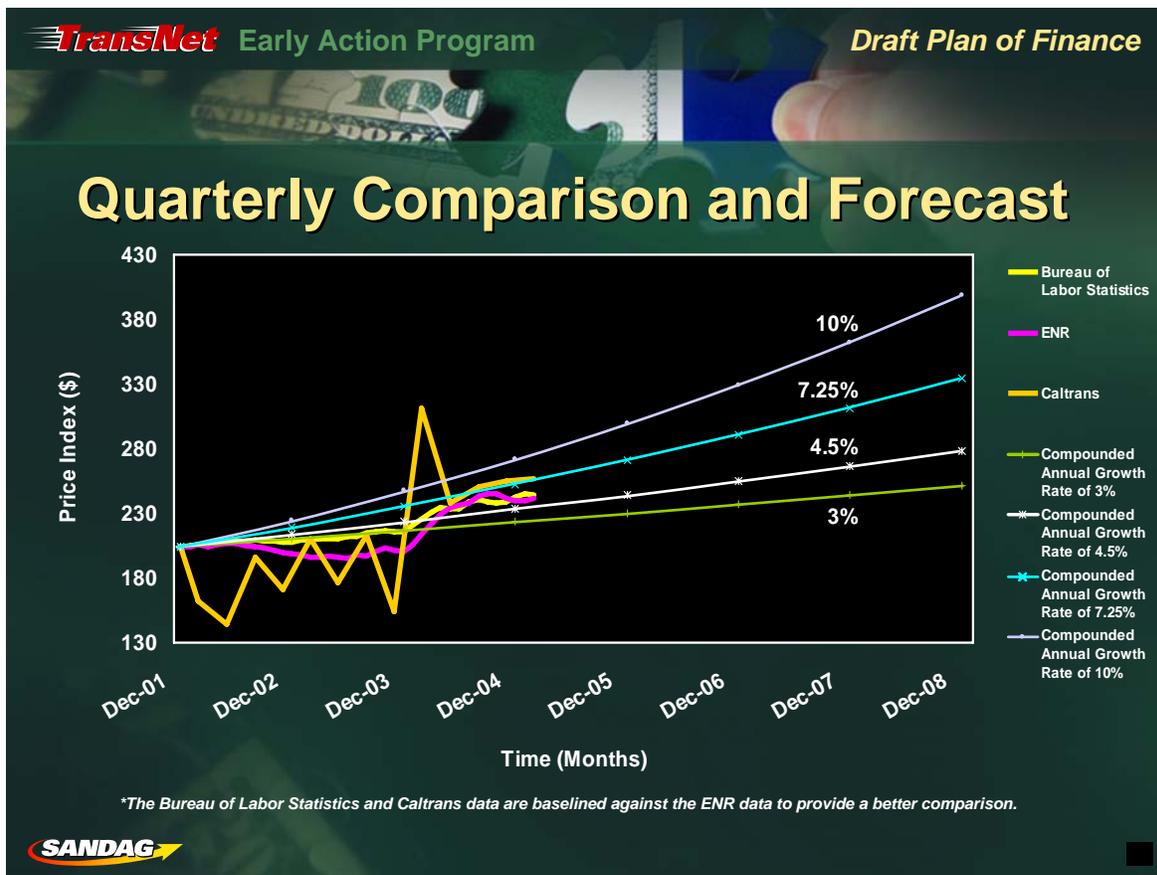
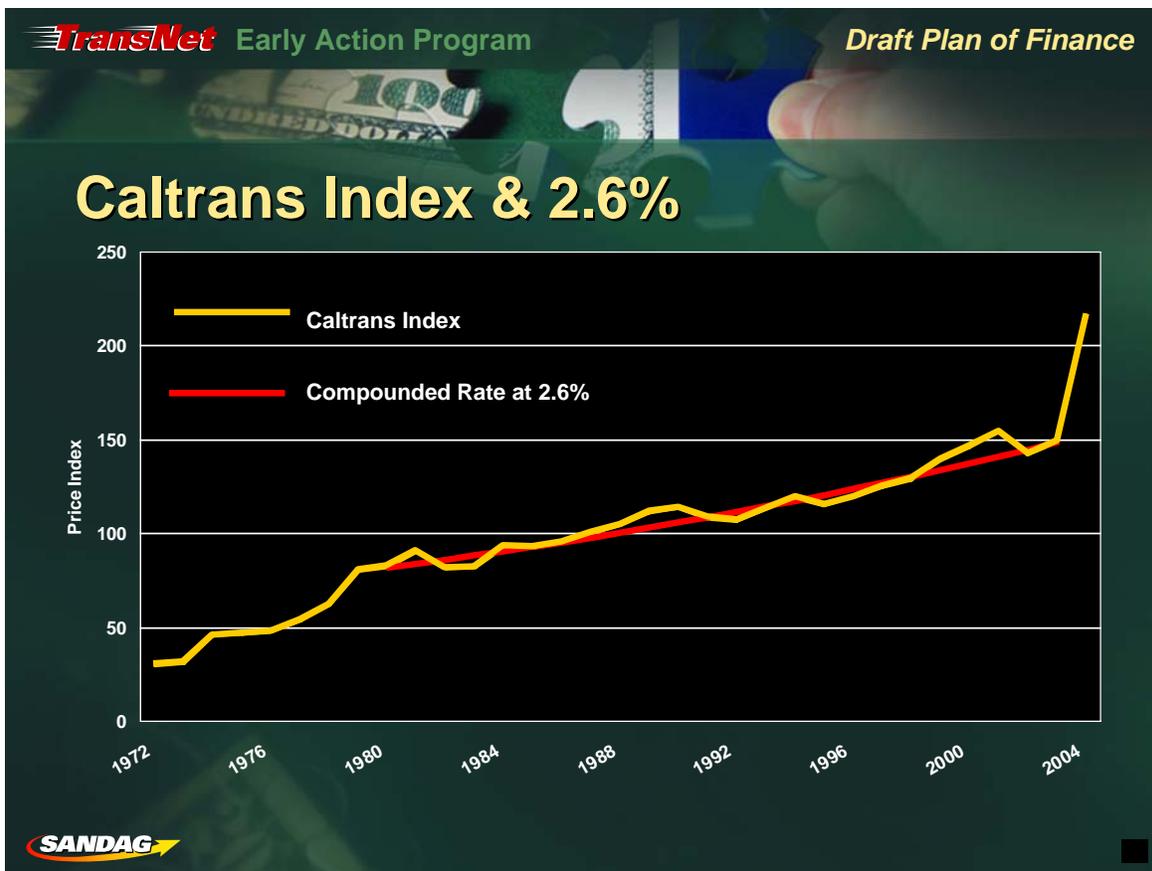
1. SR 76 - Widening
2. SR 52 - New Freeway
3. Mid-Coast LRT (+ Super Loop)

Tier 2 Projects

4. I-15 Managed Lanes & BRT (North and South Extension)
5. SR 52 - HOV/Managed Lanes (Reversible)
6. I-5 North Coast Corridor - Environmental Effort
7. I-805 Corridor – Environmental Effort & BRT



Historical Construction Cost Index Comparisons



**TransNet Program Cost Estimate
Comparison of 2002 and 2005 Cost Estimates (\$ millions)**

		2002 Project Cost Estimate ¹	2002 Estimates Escalated to 2005 ²	2005 Project Cost Estimate ³	Increase
Group [^]	<u>TransNet Early Action Projects</u>				
A	I-5 North Coast (Phase 1)	\$79	\$97	\$97	\$0
B	I-15 BRT (Escondido to Downtown - Phase 1)	\$118	\$146	\$146	\$0
C	I-15 Managed Lanes (SR 163 to SR 56)	\$220	\$271	\$341	\$70
D	I-15 Managed Lanes (SR 56 to Centre City Pkwy)*	\$0	\$0	\$72	\$72
E	I-15 Managed Lanes (Centre City Pkwy to SR 78)	\$120	\$148	\$188	\$40
F	Mid-Coast LRT (Old Town to UCSD)	\$670	\$827	\$914	\$87
G	I-805 BRT (Otay Mesa to Downtown - Phase 1)	\$72	\$89	\$89	\$0
H	I-805 Managed Lanes (Environmental - Phase 1)	\$14	\$17	\$17	\$0
I	SR 52 - New Freeway (SR 125 to SR 67)	\$200	\$247	\$288	\$41
J	SR 52 Managed Lanes (I-15 to SR 125)	\$170	\$210	\$210	\$0
K	SR 76 (Melrose to I-15)	\$220	\$271	\$342	\$71
L	Super Loop BRT (University City)	\$30	\$37	\$37	\$0
Subtotal		\$1,913	\$2,360	\$2,741	\$381
Table ^a	<u>Other TransNet Projects</u>				
2	Other I-15 Corridor Projects	\$942	\$1,162	\$1,162	\$0
3	Other I-805 Corridor Projects	\$2,014	\$2,485	\$2,485	\$0
4	I-5 (International Border to La Jolla Village Dr)	\$1,193	\$1,472	\$1,472	\$0
5	Other I-5 North Coast Projects	\$1,591	\$1,963	\$1,963	\$0
7	SR 94/SR 125 Corridor	\$620	\$765	\$765	\$0
8	SR 54/SR 125 Corridor	\$140	\$173	\$173	\$0
9	SR 67 Corridor	\$240	\$296	\$296	\$0
10	I-8 Corridor	\$30	\$37	\$37	\$0
11	SR 78 Corridor	\$700	\$864	\$864	\$0
13	SR 56 Corridor	\$100	\$123	\$123	\$0
14	Mid City to Downtown Corridor	\$90	\$111	\$111	\$0
15	Coronado Tunnel	\$25	\$25	\$25	\$0
16	Border Access	\$25	\$25	\$25	\$0
Subtotal		\$7,710	\$9,500	\$9,500	\$0
Total		\$9,623	\$11,860	\$12,241	\$381

¹ Cost estimate included in *TransNet* Ordinance.

² 2002 estimates escalated at 7.25% per year except contribution projects.

³ Does not include transit operating costs or SR 76 environmental enhancements.

[^] Groups of projects from Attachment 6.

* *TransNet* loan per Ordinance Section 7.

^a Corridor cost summary table reference number in *TransNet* Ordinance.

TransNet Early Action Program (EAP) - Project Cash Flow Summary (in millions of 2005 dollars)
December 16, 2005

	Project	FY 05/06	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY11/12	FY12/13	FY 13/14	FY 14/15	Totals
1	I-5 HOV Lane Extension	\$2.5	\$26.2									\$28.7
2	I-5 Lomas Santa Fe Interchange	\$31.7										\$31.7
3	I-5 North Coast	\$19.0	\$15.0	\$2.9								\$36.9
4	I-15 BRT Stations (SR 163 to SR 78)	\$0.3	\$10.2	\$9.9	\$9.8							\$30.2
5	I-15 BRT DARs (Hale & Hillery)	\$0.3	\$1.0	\$6.0	\$8.0	\$12.7	\$15.0	\$15.0				\$58.0
6	I-15 BRT Stations (Downtown to SR 163)	\$0.0	\$0.2	\$0.2	\$6.4	\$6.4	\$6.4	\$38.2	\$1.7	\$1.7	\$1.7	\$62.9
7	I-15 FasTrak	\$1.0	\$5.8	\$4.0	\$0.0	\$0.0	\$4.5	\$4.5				\$19.8
8	I -15 Middle	\$19.1	\$26.5	\$25.9								\$71.5
9	I-15 North	\$5.0	\$11.5	\$38.0	\$50.0	\$50.0	\$24.0					\$178.5
10	I-15 South	\$7.0	\$13.5	\$13.0	\$82.0	\$72.0	\$72.0	\$72.0				\$331.5
11	I-805 Middle (SR 94 to SR 52)			\$2.1	\$2.2	\$2.2	\$2.2	\$0.3				\$9.0
12	I-805 North (SR 52 to I-5)	\$2.2	\$2.1	\$1.3	\$1.2	\$0.2						\$7.0
13	I-805 South (SR 905 to SR 94)	\$2.0	\$2.8	\$2.1	\$3.1	\$0.3						\$10.3
14	Mid-Coast LRT	\$1.4	\$1.8	\$1.8	\$23.2	\$33.0	\$51.4	\$156.4	\$229.5	\$229.5	\$186.1	\$913.9
15	Otay BRT (Phase 1)	\$1.6	\$16.2	\$11.2	\$36.9	\$18.9	\$3.1	\$3.6	\$3.6	\$3.5	\$7.7	\$106.3
16	SR 52 (SR 125 to SR 67)	\$73.8	\$28.4	\$50.4	\$90.4	\$45.3						\$288.3
17	SR 52 Westbound Truck Lane	\$2.1	\$16.1									\$18.2
18	SR 52 Managed Lanes (I-15 to SR 125)	\$3.7	\$3.7	\$7.4	\$7.4	\$84.9	\$84.4					\$191.5
19	SR 76 (Melrose to Mission)	\$10.5	\$18.8	\$51.7	\$54.7	\$11.3						\$147.0
20	SR 76 (Mission to I-15)	\$2.0	\$19.0	\$10.0	\$33.0	\$19.0	\$71.0	\$41.0				\$195.0
21	SR 76 Environmental Enhancement	\$0.0	\$20.0	\$20.0								\$40.0
22	Super Loop BRT	\$1.1	\$1.1	\$10.7	\$12.7	\$12.8	\$2.8	\$2.8	\$2.8	\$2.8	\$2.8	\$52.4
	Total	\$186.3	\$239.8	\$268.6	\$420.9	\$368.9	\$336.8	\$333.8	\$237.6	\$237.5	\$198.2	\$2,828.5

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TransNet Early Action Program
 Project Delivery Schedule
 December 16, 2005

		FY 05/06	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY11/12	FY12/13	FY 13/14	FY 14/15
1	I-5 HOV Lane Extension										
2	I-5 Lomas Santa Fe Interchange										
3	I-5 North Coast										
4	I-15 BRT Stations (SR 163 to SR 78)										
5	I-15 BRT DARs (Hale & Hillery)										
6	I-15 BRT Stations (Downtown to SR 163)										
7	I-15 FasTrak										
8	I -15 Middle										
9	I-15 North										
10	I-15 South										
11	I-805 Middle (SR 94 to SR 52)										
12	I-805 North (SR 52 to I-5)										
13	I-805 South (SR 905 to SR 94)										
14	Mid-Coast LRT										
15	Otay BRT (Phase 1)										
16	SR 52 (SR 125 to SR 67)										
17	SR 52 Westbound Truck Lane										
18	SR 52 Managed Lanes (I-15 to SR 125)										
19	SR 76 (Melrose to Mission)										
20	SR 76 (Mission to I-15)										
21	SR 76 Environmental Enhancement										
22	Super Loop BRT										

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Summary Overview of Major Corridor Capital Program

Total Project Costs	3,889,587,738		
Total Funding Sources	Amount	Percent	TransNet vs. Other
Federal Grants	947,929,958	24.4%	
Other Potential Funds	668,557,286	17.2%	
State Funds	287,617,000	7.4%	50.2%
Other Local funds	50,156,000	1.3%	
<i>TransNet - PayGo</i>	633,443,213	16.3%	
<i>TransNet - Bond Proceeds*</i>	830,257,047	21.3%	
<i>TransNet - Commercial Paper</i>	460,886,041	11.8%	49.8%
Project Fund Interest Earnings	10,741,193	0.3%	
TOTAL FUNDING SOURCES	3,889,587,738		

Debt Service Costs

Bond Debt Service	
Principal**	849,815,357
Interest	967,115,039
TOTAL	1,816,930,397
Commercial Paper	
Principal	460,886,041
Interest & Fees	148,340,039
TOTAL	609,226,080
Total Principal	1,310,701,398
Total Interest	1,115,455,078
Total Debt Service	2,426,156,477

Funding Allocation Including Debt Service Costs

Total Project Costs	3,889,587,738	
Total Financing (Interest) Costs	1,115,455,078	
TOTAL COSTS	5,005,042,816	
Funding Sources		TransNet vs. Other
Federal Grants	947,929,958	
Other Potential Federal Funds	668,557,286	
State	287,617,000	39.0%
Other Local	50,156,000	
<i>TransNet Revenues</i>	3,050,782,572	61.0%
TOTAL FUNDING SOURCES	5,005,042,816	

* Represents project proceeds, net of issuance costs

** Represents total par amount, including issuance costs

**The PFM Group**

Public Financial Management, Inc.
PFM Asset Management LLC
PFM Advisors

December 2, 2005

Memorandum

To: SANDAG Board of Directors
From: Public Financial Management, Inc.
PFM Asset Management LLC
Re: Interest Rate Exchange Agreements

On November 22, 2005 following PFM's recommendation, SANDAG's staff executed three interest rate exchange agreements, known as "Swaps," for \$200 million each to hedge the costs of funds of the 2008 bonds.

SANDAG locked in a rate of 3.8165% on \$400 million of the 2008 bonds by entering into two swaps, in which Goldman Sachs and Merrill Lynch respectively serve as the counterparties. These agreements involve SANDAG paying a fixed rate of 3.8165% and receiving 65% of one month LIBOR (London Interbank Offered Rate) for ten years. In the tenth year, the agreements convert to the receipt of the Bond Market Association (BMA) rate. The conversion on this portion of the transaction provides protection to SANDAG in the event of federal tax law changes (i.e., reductions in the top marginal tax rate) in the future.

SANDAG entered into a third swap transaction of \$200 million with Bank of America as the counterparty. As a result of this transaction, SANDAG will pay a fixed rate of 3.41% and receive 65% of LIBOR for the length of the transaction.

In 2008, SANDAG will issue variable rate bonds secured by the TransNet sales tax. Variable rate receipts from the Swaps are expected to offset the variable rate payments made to bond holders. The cost of funds is then established by the fixed rate payments made by SANDAG to the counterparties of 3.8165% on two-thirds of the transaction and 3.41% on one-third of the transaction, for a blended cost of 3.681%. If we assume 21 basis points in bond support costs, this translates into an all in 30-year cost of capital of 3.89%.

To put this in perspective, the average cost of funds for TransNet I was approximately 5.60%. In addition, as of the execution date, the interest cost of a fixed rate, 30-year, non-callable bond issue was 4.53%. The executed transactions locked in a cost of funds 85 basis points lower than a traditional fixed rate bond issue and 192 basis points lower than the 20-year average cost of funds achieved during TransNet I.



We have included the transaction in updated drafts of the proposed Plan of Finance. By locking in a cost of funds on approximately 50% of the Early Action Program at this low rate, we have preserved substantial debt capacity in the event of project overruns or additional project requirements. In addition, we have ensured that we will be able to accomplish the TransNet program with sufficient coverage to achieve high bond ratings, further reducing borrowing costs in the future.

Congratulations to SANDAG's staff and working group members who were successful in expediting the swap process, which allowed SANDAG to capitalize on the market's low rates and flat forward yield curve, resulting in an outstanding 30-year all in cost of borrowing of a 3.89%.

All of us at PFM appreciate the opportunity to be of service on this transaction.

Best wishes.