

# STATE OF LOUISIANA LEGISLATIVE AUDITOR

*Staff Study*

**Department of Transportation and Development**  
**Feasibility of Bond Financing for**  
**the Remaining TIMED Projects**  
*Baton Rouge, Louisiana*

*August 22, 2001*



**Staff Study**

---

---

**Daniel G. Kyle, Ph.D., CPA, CFE**  
**Legislative Auditor**

**LEGISLATIVE AUDIT ADVISORY COUNCIL**

**MEMBERS**

**Representative Edwin R. Murray, Chairman**  
**Senator J. "Tom" Schodde, Vice Chairman**

**Senator Robert J. Barham**  
**Senator Forster L. Campbell, Jr.**  
**Senator Lynn B. Dem**  
**Senator Willie L. Mount**  
**Representative Rick Ferrer**  
**Representative Victor T. Nolly**  
**Representative T. Taylor Townsend**  
**Representative Warren J. Triche, Jr.**

**LEGISLATIVE AUDITOR**

**Daniel G. Nyk, Ph.D., CPA, CFE**

**DIRECTOR OF PERFORMANCE AUDIT**

**David K. Greer, CPA, CFE**

This document is produced by the Legislative Auditor, State of Louisiana, Post Office Box 94387, Baton Rouge, Louisiana 70804-9387 in accordance with Louisiana Revised Statute 24:513. One hundred sixteen copies of this public document were produced at an approximate cost of \$200. This material was produced in accordance with the standards for state agencies established pursuant to P.S. 43:21. This document is available on the Legislative Auditor's Web site at [www.la.legis.la.gov](http://www.la.legis.la.gov).

In compliance with the American With Disabilities Act, if you need special assistance relative to this document, or any documents of the Legislative Auditor, please contact Phyllis "Inq" Irwin, Director of Administration, at 225/338-8080.

---

**Department of Transportation and Development  
Feasibility of Bond Financing for  
the Remaining TIMED Projects**

August 2003



**Staff Study  
Office of the Legislative Auditor  
State of Louisiana**

**Daniel G. Kyle, Ph.D., CPA, CFE  
Legislative Auditor**

# Table of Contents

---

Legislative Analyst's Transmittal Letter.....	v
---	---

---

## Introduction

Background.....	1
Summary.....	2

---

## Cost Estimates

Can the Department of Transportation and Development complete all of the remaining TIMED projects for \$1.5 billion?.....	3
Results of Cost Estimate Analysis.....	4

---

## Bond Financing

Will the Department of Transportation and Development be able to borrow sufficient funds to finance the accelerated construction schedule proposed for the remaining TIMED projects?.....	9
Traditional Bond Financing Analysis.....	10
Forward Swap Bond Financing Analysis.....	13
Financing Implications of Unreliable Cost Estimates.....	15

---

## Exhibits

Exhibit 1: TIMED Major Projects.....	1
Exhibit 2: Louisiana Department of Transportation and Development Estimate Categories and Descriptions.....	5
Exhibit 3: Louisiana Department of Transportation and Development Categorization of the Current Construction Cost Estimates for the Remaining TIMED Projects.....	6
Exhibit 4: Louisiana Department of Transportation and Development Comparison of Current Estimates to 1998 Estimates for Selected Major Projects.....	7
Exhibit 5: Construction Schedule.....	12

---

## Appendix

Appendix A: Department of Transportation and Development's Response.....	A.1
--	-----





OFFICE OF  
LEGISLATIVE AUDITOR  
STATE OF LOUISIANA  
BAYOU BOULE, LOUISIANA 70004-1007

8000 HOWELL BLVD SUITE 7  
HOUSTON TEXAS 77057-1400  
TEL: (281) 424-1000 FAX: (281) 424-1000  
WWW: www.louisiana.gov

DANIEL G. KYLE, CPA, CMA, CFE  
LEGISLATIVE AUDITOR

August 22, 2008

The Honorable John J. Hankel, Jr.,  
President of the Senate  
The Honorable Charles W. DeWitt,  
Speaker of the House of Representatives

Dear Senator Hankel and Representative DeWitt:

This report gives the results of our staff study of the feasibility of the Department of Transportation and Development's proposed use of bond financing to accelerate construction of the remaining TIMED projects. This staff study was conducted under the provision of Title 24 of the Louisiana Revised Statutes of 1950, as amended.

This report contains our conclusions and recommendations. Appendix A contains the Department of Transportation and Development's response. We have also identified matters for legislative consideration. I hope this report will benefit you in your legislative decision-making process.

Sincerely,



Daniel G. Kyle, CPA, CMA  
Legislative Auditor

DGK/AL

08/22/08 10:15

# Introduction

---

## Background

The Transportation Infrastructure Model for Economic Development (TIMED) Program was established by Act 16 of the 1989 First Extraordinary Session of the Louisiana Legislature. This legislation created Louisiana Revised Statutes 47:828.1 through 828.5, which established a 4-cent per gallon fuel tax and earmarked this tax revenue for 16 major projects. As of June 30, 2001, four of these major projects are considered complete and implementation continues on 12 of these projects. Exhibit 1 lists the major projects.

<b>Exhibit 1</b> <b>TIMED Major Projects</b>
<b>Highway Projects:</b> US 171 - Lake Charles to Shreveport US 165 - I-10 to Alexandria to Monroe to Ruston to Arkansas Line US 90 - Morgan City to Houma * US 167 - Alexandria to Ruston LA 3241 - I-12 to Breaux (Bogalusa) Jefferson Parish West Bank Expressway - Arcoma Dr to Arcoa Blvd. * New Orleans Treme/Algiers Street Corridor Barthel Blvd. - Orleans Parish Line to Loyola Ave. West Napoleon (Jefferson Parish/City of Kenner) Houma Rouge to Monroe LA 15 - Natchez, Miss. to Monroe US 61 - Baton to Miss. Line
<b>Bridges:</b> New Mississippi River Bridge at St. Francisville (connection to US 61) Hiway P. Long Bridge (rides to six lanes) New Florida Ave. Bridge over Industrial Canal
<b>Other:</b> Port of New Orleans * New Orleans International Airport *
* Projects that are considered complete. Sources Created by legislative analysis using information provided by DOTD.

This study reviews certain aspects of plans by the Department of Transportation and Development (DOTD) to finance the completion of the remaining TIMED projects. DOTD has proposed a bond issue to help finance these construction projects. According to DOTD, final project development, right-of-way acquisition, utility relocations, permitting and construction have not begun on an estimated \$2.3 billion in TIMED projects. DOTD believes the borrowed funds would allow completion of all of the TIMED projects in 12 years, instead of the projected 30-38 year time frame under the current pay-as-you-go funding method. Because fuel tax revenue is expected to grow at a slower rate than the inflation rate for construction, the accelerated construction schedule would allow DOTD to mitigate rising construction costs because of inflation.

We focused our review of the proposed bond sale on two questions. First, can DOTD complete all of the remaining TIMED projects for \$2.3 billion? In order to do so, DOTD must have an accurate idea of how much it will cost to construct the remaining roads and bridges. Therefore, we evaluated the reasonableness of DOTD's cost estimates for the remaining TIMED projects. Second, will DOTD be able to borrow sufficient funds to finance the accelerated construction schedule proposed for the remaining TIMED projects? In order to address this question, we examined the feasibility of the proposed bond financing program, focusing on the ability of projected fuel tax revenues to cover future payments to bondholders.

---

## Summary

DOTD will probably not be able to complete all of the remaining TIMED projects for the estimated \$2.3 billion. We found that the majority of the remaining TIMED projects are in the early phases of the pre-construction process and therefore have the least accurate cost estimates possible. To further support our opinion that it is very likely the actual costs will increase, we found that several existing projects experienced significant increases between 1998 and 2004. In addition, the \$2.3 billion total cost estimate does not take into consideration the difference between the cost estimate for a project and the actual expenditures.

It is unlikely that DOTD will be able to borrow all of the funds needed to finance the proposed accelerated TIMED construction schedule unless it uses a forward swap arrangement with a gradually increasing repayment schedule. This arrangement exposes the state to some significant risks. Under the most likely conditions using traditional fixed-rate financing and a flat repayment schedule, DOTD could borrow enough to finance 88% of the projects on the proposed schedule. If actual costs exceed the \$2.3 billion estimate or the fuel tax revenue does not grow at a 1.5% annual rate, DOTD will be unable to complete the remaining projects within a 12-year time frame.

## Cost Estimates

---

### Can the Department of Transportation and Development complete all of the remaining TIMED projects for \$2.3 billion?

We consider it unlikely that the remaining TIMED projects can be completed for the estimated \$2.3 billion. A large portion of the remaining TIMED construction dollars are reserved for projects that are in the early stages of planning. Our analysis of the difference between current construction estimates and those developed in 1998, along with statements from DOTD staff, indicates that estimates are almost always revised upward as projects move through the planning process. In addition, we found that there is further potential for the actual expenditures to be higher than estimates prepared by DOTD personnel because of differences between the actual contract amount and the final estimate and cost overruns during construction.

**Recommendation 1:** To achieve DOTD's objective of completing all remaining TIMED projects within 12 years, DOTD should narrow the scope of some or all of the work within the remaining projects so that costs are kept at or below the current \$2.3 billion estimate. DOTD has some discretion in interpreting the scope of the TIMED projects enumerated in Louisiana Revised Statute (R.S.) 47:803.2. It should exercise its discretion, setting priorities within projects and funding only those priorities that keep the project costs under the current cost estimates. Because of the limited expected growth in fuel tax revenue, cost savings or costainment is critical to completing all remaining projects within 12 years. It should also be noted that reducing the scope of some TIMED projects may increase costs in other areas. For example, using different types of construction materials (e.g., asphalt versus concrete) may reduce construction costs but may increase maintenance costs in the future.

#### Summary of Department of Transportation and Development

**Response:** DOTD partially agrees with this recommendation. DOTD states that the \$2.3 billion estimate to complete the TIMED program was developed by DOTD staff using a very conservative approach, which yielded a non-traditional "best available estimate." DOTD adds that a review of actual bid prices received on all TIMED highway projects to date reflects a 7% savings from the final construction cost estimate to the actual winning bid. Therefore, DOTD believes that our decision to increase the \$2.3 billion by 4% to account for construction cost overruns will over estimate the total program cost. DOTD essentially agrees with the other assumptions used in our analysis. DOTD states that there should be no compromise in the quality of construction materials used on the remaining projects and asserts that it is their intention to carefully adhere to the project limits and scope of each of the remaining TIMED projects.

**Legislative Auditor's Additional Comments:** We did not find that a non-traditional method was used to estimate the construction costs for the remaining TIMED projects. Therefore, our decision to add the historical average construction cost overruns of 4% to DOTD's cost estimate is valid and will not over estimate the total program cost. This 4% is the same amount that DOTD reserves for potential cost overruns in its accounting system. With reference to the 7% reduction in costs identified by DOTD, we would like to note that DOTD had not developed a final construction cost estimate for

any of the remaining TIMED projects. In the past, these final construction cost estimates have apparently been conservative. However, historically the preliminary cost estimates, which are the only cost estimates currently available, have increased as projects have moved through the planning process.

**Matter for Legislative Consideration 1:** The Legislature may wish to amend Louisiana R.S. 47:820.2 to restrict the scope of some or all of the remaining TIMED projects. As explained in Recommendation 1, cost savings or containment is critical to complete all remaining projects within 12 years. Reductions in project scope would translate into cost savings. The same caveat given in Recommendation 1 applies here as well; reducing the scope of some aspects of projects may increase costs in the future.

**Matter for Legislative Consideration 2:** The Legislature may wish to reduce the number of projects in the TIMED program. This would involve amending Louisiana R.S. 47:820.2. A reduction of TIMED projects may also require a change to Article 7, section 27 of the Louisiana Constitution, which states that the TIMED program shall include only those projects enumerated in Art. 16 of the 1989 First Extraordinary Session of the Legislature. Projects could be prioritized and those projects with the lowest priority could be removed from the TIMED program so that the remaining projects are fully funded. While voters approved the TIMED program in 1988, several things may have changed since then:

- The price of the program has increased as projects have moved through the planning process.
- The economic development expected to occur with these projects may have occurred without them.
- Other highway and bridge needs may be a higher priority to voters at this time.

These possible changes, along with the higher program costs, may make it worth reassessing the most efficient means of the remaining projects.

---

## Results of Cost Estimate Analysis

We evaluated the accuracy and reliability of DOTD's construction estimates for the remaining TIMED projects as well as the status of the remaining projects. We also considered the difference between the final cost estimates and the actual contract amount along with an historical average cost overrun of DOTD projects (from January 1997 to February 2001). In addition, we compared some of the current cost estimates with the project cost limitations found in H.S. 47:820.2.

DOTD personnel have subdivided each of the 12 remaining highway and bridge projects into smaller units that they call projects. There are 198 of these projects remaining in the pre-construction stage as of July 1, 2004. Each project has different components and costs associated with it. These costs can

generally be classified as engineering costs, right-of-way costs, utility costs, and construction costs. Construction costs are typically the largest element and are the cost of the actual construction of the project. We focused on construction costs in determining the accuracy and reliability of the estimates because DOTD staff indicated that this is where the greatest change is possible throughout the development of the final cost estimate and this is where the bulk of the dollars are spent.

Before DOTD receives bids for construction, the projects go through a pre-construction process. DOTD creates construction cost estimates at four points in this process. We categorized the 108 remaining TIMED projects into four categories that correspond to the four estimates created during the process. The following exhibit provides a brief description of the accuracy of each estimate.

<b>Exhibit 3</b>	
<b>Louisiana Department of Transportation and Development</b>	
<b>Estimate Categories and Descriptions</b>	
<b>Estimate</b>	<b>Accuracy of Estimate</b>
<b>First Estimate</b>	"Preliminary" stage; the first estimate is the first step in pre-construction; it is the least accurate estimate; developed before final alignment is established; based on mileage and historical cost per mile, not based on quantities of items needed to complete construction
<b>Second Estimate</b>	"Plan in Hand" stage; estimate usually lower than the actual cost; based on quantity estimates of major items needed to complete construction; includes a 40% contingency factor
<b>Third Estimate</b>	"Advanced Check Print" (ACP) stage; more accurate estimate with no contingency factor; based on quantities of all items
<b>Fourth Estimate</b>	"Plans, Specifications and Estimates" stage; most accurate estimate before actual letting, signed off on by chief engineer; generally close to the ACP estimate
Source: Created by legislative council's staff using the DOTD Project Listing Database Management System/User's Guide.	

A large portion of the TIMED construction dollars are for projects that have unreliable cost estimates. The categorization of the projects provides an idea as to the accuracy of the construction cost estimates. As shown in the following exhibit, over 60% of the total estimated construction dollars are for projects that have only had the first estimate developed by DOTD. The first estimate is the least accurate because it is only based on a rough guess of the

mileage of the project and historical cost per mile. Over 87% of the total estimated construction dollars are for projects that have only had a first or second estimate completed. The second estimate is more reliable than the first, but according to officials with DOTD, this estimate contains a 40% contingency factor and is usually lower than the actual cost.

<b>Exhibit 3</b>					
<b>Louisiana Department of Transportation and Development</b>					
<b>Comparison of the Current Construction Cost Estimates</b>					
<b>for the Remaining TIMED Projects</b>					
	<b>First Estimate</b>	<b>Second Estimate</b>	<b>Third Estimate</b>	<b>Fourth Estimate</b>	<b>TOTAL</b>
<b>Number of projects</b>	54	35	19	0	108
<b>Percent of total</b>	50%	32%	18%	0%	100%
<b>Estimated construction dollars associated with these projects (in thousands)</b>	\$1,069,282	\$427,965	\$287,626	\$0	\$1,784,873
<b>Estimated construction dollars as percent of total</b>	60%	24%	16%	0%	100%

Source: Projects classified by the legislative auditor's staff using DOTD databases.

These estimates were developed under the current pay-as-you-go system of construction financing. Under this system, the estimates are only used to help plan the project letting schedule for a year or two in the future so that as projects are contracted, funding is available. Under DOTD's proposed bond financing proposal, these estimates will be used to project the letting schedule for 10 to 12 years in the future. Thus, the reliability of the cost estimates under the bond financing proposal is much more important to the success of the TIMED program.

The lack of historical data on cost estimates hampers efforts to assess quality of estimates. Because DOTD does not consistently track the changes in the cost estimates during the pre-construction process, we were unable to quantify the differences in the estimates as they move through the pre-construction process. DOTD recently began tracking the first estimate for a project in its database; however, for the projects we were evaluating, only the most current cost estimate was in the database. In addition, previous estimates are overwritten whenever a new estimate is entered. Therefore, we are only able to ascertain that the majority of the projects are in the early stages of the process where estimates are traditionally less accurate according to DOTD staff.

The difference between the current cost estimates and the statutory limitations established in 1998 indicates that estimates increase over time. We were able to do a limited analysis on previous cost estimates compared to current estimates using R.S. 47:820.2, which sets dollar limits for each project. According to DOTD officials, the 1998 statute contains the most accurate estimates available at that time. DOTD's current estimates exceed the statute limitations for many of the projects. The table below contains three projects whose estimates have increased significantly from the 1998 estimates used to develop the amounts found in the statute.

Project	Amount Authorized in Statute	DOTD Current Estimate	Dollar Difference	Percent Increase
US 167	\$380,000,000	\$555,791,000	\$166,791,000	43%
US 9201	\$52,000,000	\$70,030,000	\$18,030,000	35%
West Napoleon	\$53,000,000	\$72,527,653	\$19,527,653	37%

Source: Created by Legislative Auditor's staff using R.S. 47:820.2 and data provided by DOTD.

After the final estimate, there is potential for increased project costs when the contract is awarded as in the form of overruns after the contract is signed. Once DOTD finalizes the project (including a final cost estimate), the project is advertised for bidding. The difference between the final cost estimate and the winning contractor's bid amount may also cause the \$2.3 billion total construction estimate to be inaccurate. However, this is a factor that is determined by the market and is difficult to predict five to ten years in the future.

Once the construction contract is signed, there is still the possibility of increased costs or overruns. Because of this possibility, DOTD sets aside an additional 3% to 5% of the contract amount when it authorizes project expenditures. The construction cost estimates for the remaining THMED projects do not contain a contingency factor for contract overruns on construction costs. We calculated that DOTD projects completed from January 1, 1997, to February 28, 2003, averaged a 4% overrun on construction costs when comparing the contract amount to the total dollars expended for construction purposes. Assuming DOTD's estimates accurately predict the contract amounts, there is still the potential for an increase in cost through the overruns.



## Bond Financing

---

### **Will DOTD be able to borrow sufficient funds to finance the accelerated construction schedule proposed for the remaining TIMED projects?**

We found that it is unlikely that sufficient funds will be available to finance the accelerated construction schedule except for the possibility of using a forward swap arrangement with a gradually increasing repayment schedule, which exposes the state to some significant risks. Under the most likely conditions using traditional fixed-rate financing and a flat repayment schedule, DOTD could borrow enough to finance 86% of the remaining TIMED projects on the proposed accelerated construction schedule. To the extent that the cost of the remaining TIMED projects exceed the \$2.3 billion cost estimate and tax revenue is under the 1.5% growth estimate, DOTD will be unable to complete the remaining projects within a 12-year time frame. We also found that the bond financing projections developed by DOTD and two financial consultants used optimistic assumptions.

**Recommendation 2:** DOTD should attempt to follow its proposed schedule of bond issuance. However, DOTD should not lock the state into an arrangement to sell bonds without better understanding the likely costs of construction and the risks involved in a forward swap bond financing arrangement. As project plans near completion, allowing cost estimates to become more certain, DOTD could issue traditional fixed-rate bonds to finance these projects. If costs are higher than reported, tax revenues do not grow at the expected rate, or interest rates are not favorable, bond sales could be delayed and projects could be funded on a pay-as-you-go method until circumstances change. Issuing traditional fixed-rate bonds only as project plans solidify would allow DOTD to mitigate rising construction costs because of inflation without relying too heavily on questionable cost estimates, 40-year tax revenue projections, and riskier forms of financing.

#### **Summary of Department of Transportation and Development**

**Response:** DOTD partially agrees with this recommendation. DOTD responded that to some extent, the combination of bonding and pay-as-you-go is the process that got us to where we are today. DOTD now proposes the possible use of forward swap bond techniques, utilization of a program manager that may accept an at-risk contract, and the placement of a strict time limit on the program. DOTD states that two analyses by independent financial firms concur with DOTD on its overall bonding concept, the total bonding amount, and the sufficiency of the existing revenue streams. DOTD believes that it can achieve the goal of completing all remaining TIMED projects with an acceptable level of risk.

**Legislative Auditor's Additional Comments:** The independent analyses we reviewed used the revenue stream as described by DOTD. They did not assess the sufficiency of the current or future revenue streams. The growth of the revenue stream is one of the areas of risk that DOTD must make contingencies for.

---

## Traditional Bond Financing Analysis

To examine the feasibility of the proposed bond sale, we interviewed the Director of the State Bond Commission and an attorney from the law firm involved in DOTD's previous TIMED bond sales. We obtained historical data on fuel tax revenue and spoke with the economist on the Revenue Estimating Conference about future tax revenue. In addition, we reviewed bond-financing projections developed by two financial consultants. We also reviewed a projection developed by DOTD. We then developed our own financing projection using reasonable assumptions of fuel tax revenue growth, construction inflation, and interest rates and using a traditional fixed interest rate and a flat repayment schedule for the bond financing.

To evaluate the bond issue proposed by DOTD we used three major assumptions.

**Assumption 1:** Using a schedule of remaining projects provided by DOTD, we adjusted the cost estimates for typical cost overruns and construction inflation. DOTD provided us with a proposed accelerated construction schedule for the 198 remaining TIMED projects. The schedule spreads the estimated \$2.5 billion cost of the remaining projects over a 12-year period and lists the total expenditures planned during each fiscal year until the projects are completed in 2013. We made two adjustments to this schedule. First, we applied the average cost overrun percentage of 6% previously discussed on page 7. We did this to provide a more realistic estimate of the actual costs of the projects. Second, we applied an estimated annual inflation rate for construction to the adjusted schedule because the estimated \$2.5 billion cost of the remaining projects is in year 2000 dollars. A Louisiana Transportation Research Center (LTRC) study from 1999 estimated the inflation rate for highway construction in Louisiana through 2015 at 4.4% per year. We applied this 4.4% inflation rate to the cost estimates for each year between 2000 and the planned construction date.

**Assumption 2:** We used an annual growth rate of 1.5% for fuel tax revenue. In our bond-financing projection, we used 1.5% as the annual growth rate for the revenue from the 4 cents per gallon TIMED gasoline and special fuels tax. In its first complete fiscal year [fiscal year ended (FFE) June 30, 1991], this tax generated approximately \$89.1 million in revenue. During the last reported complete fiscal year (FFE June 30, 2008), \$109.9 million was collected through this tax. Revenue from the tax has increased at an annual rate of 2.4% over this ten-year period. However, the decade of the 1990s was an unprecedented time for gasoline consumption because of low gasoline prices, economic prosperity, and the popularity of sport utility vehicles. Dr. James Richardson of the Revenue Estimating Conference does not expect this growth rate to continue because of rising gasoline prices and the recent economic slow-down. He predicts a 1.2% annual growth rate for this tax in the future. Two of the financing proposals we

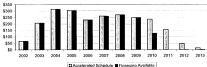
reviewed (the one from DOTD and one from a financial consultant) used 1.5% as an annual growth rate; the other financial consultant used 2.0%.

**Assumption 3: We used bond interest rates of 5.0% and scheduled a bond sale every three years to minimize the cost of issuing bonds.** We obtained estimates of tax-exempt bond interest rates from the Director of the State Bond Commission and from the law firm used by DOTD on previous bond sales. The State Bond Commission gave us rates that range from 3.5% to 5.5%, depending on the term of the bond sale. DOTD's previous bond counsel gave us a list of interest rates for varying maturities that would average out to about 5%. We used 5.0% in our scenario.

DOTD's previous bond counsel also explained that there are fixed costs associated with issuing bonds and that by law the proceeds of a tax-exempt bond sale must all be used within three years of the sale. Therefore, in constructing our financing projection, we included a bond sale every three years and generated enough money at each sale to finance the planned construction for that year and the next two years. A bond sale every three years minimizes the fixed costs associated with issuing bonds.

Based on DOTD's cost estimates, we do not expect that DOTD will be able to borrow all of the funds required to finance the accelerated TIMHP construction schedule using traditional fixed-rate bond financing methods with a flat repayment schedule. According to the bond attorney we spoke with, bond underwriters perform a coverage test to determine the maximum amount that can be borrowed. The most liberal coverage test allows an entity to borrow an amount that requires bond payments that match the annual income (e.g., local tax revenue and interest earned) of the entity. Using traditional fixed-rate bond financing methods with a flat repayment schedule, the 4-cent per gallon fuel tax revenue is not sufficient to borrow the amount needed to fund all the estimated \$2.3 billion of the projects on the accelerated TIMHP construction schedule without violating this coverage test. Under our bond financing projection, DOTD would only be able to issue enough bonds to complete \$1.0 billion (50%) of the construction without violating the coverage test. If bonds were issued to complete all of the construction, debt service is projected to exceed revenue by nearly \$30 million in the ninth year of the bond issue and yearly debt service is expected to exceed revenue for the next 18 years. The bar chart on the following page compares the proposed accelerated construction schedule and the amount of construction that we expect to be funded before the financing runs out.

**Exhibit 9  
Construction Schedule  
(in millions)**



We found that the projections developed by DOTD and the financial consultants used overly optimistic assumptions. We analyzed three bond-financing projections and compared them to our own projection. The primary differences between our projection and these are discussed below. These differences help explain their more optimistic results.

All three projections spread the bond issues over DOTD's 12-year accelerated construction schedule. However, all three use fuel tax revenue estimates that are erroneously high because interest income is included in the beginning fuel tax revenue figure and is also included elsewhere in their calculations. In addition, the projection by one financial consultant does not adjust the project costs for construction inflation and none of the projections we reviewed include the 4% increase in project costs for revenues that we included in our analysis.

The DOTD projection does not begin principal and interest payments until 3 years after each bond sale. The 30-year bonds are thus paid off in 33 years. Typically, bond payments start 6 months to 1 year after the bond sale. According to the DOTD bond contract, it is possible to delay these payments; however, delaying payments cannot be done without additional costs. The DOTD projection does not account for the additional interest that would be required under this kind of unusual arrangement.

---

## Forward Swap Bond Financing Analysis

The forward swap arrangement proposed by one of the financial consultants could raise the funds required to follow the accelerated construction schedule but it exposes the state to some significant risks. The projection from one of the financial consultants uses a forward swap agreement. On agreed upon dates in the future, this agreement would require DOTD to issue variable rate bonds and to begin making fixed payments to a swap counterparty. In return, the counterparty would make payments to DOTD based on a variable interest rate tied to a specific interest rate index. The payments from the counterparty should be enough to cover the payments DOTD must make to the bondholders; however, sufficient payments are not guaranteed. Risks (even and above those in a traditional fixed interest rate bond financing arrangement) include:

- **Basis Risk** - the risk that the payments from the counterparty will not cover DOTD's required payments to the bondholders
- **Counterparty Risk** - the risk that the counterparty will default on its payments to DOTD
- **Termination Risk** - the risk that one party in the arrangement will want to end the swap prematurely (e.g., due to significant changes in interest rates over the life of the arrangement)

While this proposal would allow DOTD to know the interest rate it would be paying on bonds issued 10 years in the future, it would lock DOTD into issuing those bonds. If circumstances changed (e.g., construction costs increased more than expected or fuel tax revenue growth was less than expected), DOTD could not avoid issuing bonds without paying penalties.

This projection also gradually increases the size of the principal and interest payments over the repayment schedule. Thus, the graduated repayment schedule relies heavily on the growth of fuel tax revenues. If revenues do not grow at the projected rates, the state would have to find an additional source of revenue to pay bondholders.

---

## Financing Implications of Unreliable Cost Estimates

To the extent that the rest of the remaining projects exceed the \$2.3 billion estimate, DOTD will be unable to finance its completion using the 4 cent per gallon fuel tax within a 12-year time frame. Our financing projections using fixed-rate interest rates and a flat repayment schedule assume that the estimated \$2.3 billion remaining costs discussed above on pages 3-7 are accurate (with the exception of the 4% adjustment we made for construction cost

overrun). To the extent that actual costs exceed \$2.3 billion, the funding shortfall described on page 14 would be greater. The forward swap arrangement with the guaranteed repayment schedule is predicated on the remaining projects costing \$2.3 billion or less. If actual costs are higher, this financing arrangement would also develop a funding shortfall.

In discussions with DOTD officials about the possible funding shortfall, they indicated that they could use interfund borrowing from the Transportation Trust Fund (TTF) to close the funding gap. Another possibility is to secure financing by pledging part of the TTF revenue stream (i.e., the 16-cent per gallon fuel tax) to guarantee the bond payments. In addition to the TIMED program, DOTD has identified over \$8 billion worth of highway and bridge needs. Using TTF funds to close the funding gap, even if only temporarily, will impose additional costs on taxpayers by reducing or delaying funding of these other projects and potentially raising the credit rating on future state bond issues.

## Appendix A

### Department of Transportation and Development's Response



STATE OF LOUISIANA  
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT  
P. O. Box 94398  
Baton Rouge, Louisiana 70804-8048



H. J. "BOB" BOFFELAS  
GOVERNOR

DAVE L. SCHALLER  
SECRETARY

August 13, 2001

Dr. Daniel G. Kyle, Ph.D., CPA, CFE  
Legislative Analyst  
1600 North Third Street  
P.O. Box 94397  
Baton Rouge, LA 70804-8397

Dear Dr. Kyle:

This is in response to your staff's study on the feasibility of bond financing for the remaining TIMHD projects. The report provides two recommendations as a result of the audit and the DOTD "partially agrees" with the recommendations as indicated on the attached form you provided. Our response and justifications for proceeding with the plan to further study the feasibility of bond financing is presented herein:

**Recommendation 1:** The \$2.3 billion estimate to complete the TIMHD program was developed by the DOTD staff as a non-traditional "best available estimate" to complete all pre-construction and construction activities for the remaining TIMHD program. The DOTD staff was cognizant of the lack of detailed information and chose a very conservative approach in estimating project costs. In our opinion, your staff's approach to increase the \$2.3 billion figure by 4% to account for uncertainty will over estimate the total program cost. A review of the actual bid prices received on all TIMHD highway projects to date reflects a 7% savings (\$697 million best estimate vs. \$646 actual low bid). While we fully recognize that past prices cannot be guaranteed in the future, these results (based on eleven years and 58 projects) more than adequately validate the conservative nature of our estimates and supports our contention an additional 4% estimate escalation factor is unnecessary. All other assumptions used by your staff in their analysis are consistent with our own and we therefore essentially agree with the figures. With regard to reducing the scope of some TIMHD projects, we agree that there should be no compromise in the quality of construction materials. In addition, it is our intention to carefully adhere to the project limits and scope of each remaining TIMHD project. The goal of the DOTD is to complete the remaining TIMHD projects for less than the currently estimated present worth of \$2.3 billion.

**Recommendation 2:** The thrust of the DOTT proposal is to present a program that has projected completion dates for all remaining TIMED projects based on a specified pre-construction and construction schedule, coupled with a sound financial plan. To some extent, the combination of bonding and pay-as-you-go is the process that got us to where we are today. With eleven years of experience, we now propose the possible use of forward swap bond techniques, utilization of a program manager that may accept an at-risk contract, and the placement of a strict time limit on the program. We believe we can achieve the goal of completing all remaining TIMED projects with acceptable level of risk.

While our analysis indicated bonding of the 4 cent facility fee coupled with an accelerated schedule to complete all remaining projects is feasible, your staff cautions certain assumptions and concludes that traditional bonding standards could not be met. Two analyses by independent financial firms concur with DOTT on its overall bonding concept, the total bonding amount, and sufficiency of the existing revenue stream. In your analysis of the forward swap proposal, you highlight only the risks associated with such an arrangement and fail to acknowledge the possibility of future favorable market conditions, which could motivate investors to "buy out" the state's fixed rate bonds at considerable savings to the state. Nevertheless, it should be clearly understood, that the financing alternatives mentioned above are simply suggested proposals and the State Bond Commission will determine the advisability/utility of pursuing any new TIMED program-debt arrangement.

Recently, the DOTT presented to the Joint Committee on Transportation, Highways and Public Works a process for working with the private sector to solicit statements of qualifications to engage up to five qualified program management firms to produce estimates of the total cost to complete all remaining TIMED projects. The Joint Committee fully endorsed the DOTT's proposal. Attached is a copy of the notice of request for qualifications. Key aspects of this document include the development of overall program/cost timelincs, presentation of a program management system, submission of a financial management system that not only tracks the projects but projects the ultimate outcome, and a proposed program manager method of compensation that is incentive based which minimizes compensation until milestones events are completed. Also to be included are cost over-run prevention measures and warranties on time and cost overruns. This notice was released on July 13, 2001, with scheduled completion of the process by December 7, 2001.

The TIMED program was adopted by the legislature and coupled with the 4 cent facility fee, and subsequently approved by a statewide vote constitutionally mandating the completion of the 16 enumerated projects. A dilation of any project or portion thereof would, we believe, require adoption of such a measure by the legislature and a vote of the people. The DOTT therefore, has tried to develop an approach to complete all remaining TIMED projects as cost effectively and quickly as possible.

Dr. Daniel D. Kyle, Ph.D., CPA, CFP  
August 13, 2000  
Page 3

We appreciate this opportunity to respond and would suggest that a final review of all economic and proposed expenditures be made as the additional data generated by our private sector partners becomes available. Without this confirmation the DAPFI would not proceed with the bonding approach.

Sincerely,



Kara K. Merzougli, Ph.D., P.E.  
Secretary

cc: M.J. "Mike" Foster, Jr., Governor

A/Rachensko

**REQUEST FOR QUALIFICATIONS TO PROVIDE:**

**"ENGINEERING, GEOTECHNICAL, LAND SURVEYING, PERMITS, PROJECT AGREEMENTS, ENVIRONMENTAL CLEARANCES, REAL ESTATE, UTILITY RELocations, AND PROGRAM AND FINANCIAL MANAGEMENT SERVICES"**

**JULY 13, 1991**

**STATE PROJECT NO. 700-99-0266  
TIMED PROGRAM MANAGEMENT  
STATEWIDE**

Notice is hereby given that the Louisiana Department of Transportation and Development (DOTD) is accepting submittal of Qualification Statements on Standard Form 24-102 (SF 24-102), "Professional Engineers and Related Services Questionnaire for Specific Project" Revised, July 1984, and May 1988 as supplemented for this project, from "Proposer" (Program Manager) interested in providing all Engineering, Geotechnical, Land Surveying, Permits, Project Agreements, Environmental Clearances, Real Estate, Utility Relocations, and Program and Financial Management Services, required to assist the DOTD in completing the implementation of the TIMED Program. Joint Ventures will be allowed in accordance with R.S. 48:290.C3. Interviews will be required for this project. One "Proposer/Prime-Program Manager/Sub-Contractor(s)" (Program Manager/Team) will be selected for this contract. Attached are lists of all TIMED Projects, Appendix A are projects managed by DOTD, Appendix B are projects managed by the Program Manager/Team, and Appendix C are projects that may be managed by the Program Manager/Team. A status report of all projects and work, including the total estimated cost to complete the TIMED Program will be part of each of the standardized Proposer's response and an early work product of the selected Program Manager.

In accordance with R.S. 47:820.3, at least 80% of the work must be performed by Louisiana residents. A "Louisiana resident" will be defined as a person who has resided in this state for at least 180 consecutive days at the time of initial employment, as evidenced by a valid Louisiana motor vehicle operator's license or bill for utility services.

**DOTD Management** of this project will be by a Committee appointed by the Secretary of DOTD. During the process to select the Program Manager any questions or clarifications relating to the RFP package should be addressed in writing to Mr. Henry J. Dancoski, P.E., Contract Services Administrator. He may be reached at (225) 379-3734, for any questions regarding this project.

**DOTD Project Manager** - Mr. Lloyd B. Peris, Jr., P.E., will be the Principal Project Manager. He may be reached at (225) 379-1388, for any questions regarding this project.

## DEFINITIONS OF TERMS

The following terms, and words as used hereinafter will mean the following:

**"Proposer"** includes a firm or firms, partnerships or joint venture.

**"TIMED Program"** includes the 12 remaining projects to be under construction no later than 2010.

**"Program Strategy"** is the overall plan and approach offered by the Proposer consisting of work elements and/or tasks for completing the implementation of the TIMED Program.

**"Program Schedule"** is the systematic arrangements of interrelated events developed by the Proposer showing the dates for starting and completing work elements and/or tasks to complete the TIMED Program by a specific date.

**"Program Manager"** the selected Proposer charged with the responsibility to complete all aspects of the TIMED Program within the established budget, within schedule, meeting the established standards of quality to the satisfaction of the DOTD.

**"Contract Design Consultant"** is a registered consulting engineering firm under contract to the DOTD to provide project plans, special specifications, and possible right-of-way acquisition services for construction letting.

**"Sub-Consultant"** a registered consulting engineering firm or professional specialty firm.

**"TIMED Project (Project)"** is a specific segment of one of the identified 12 remaining TIMED Projects.

## INSURANCE

During the term of this contract, the Program Manager and each Sub-Consultant(s), all design consultants, contractors, and vendors performing work on a TIMED Project will maintain:

- Worker's Compensation in accordance with the statutory requirements of the State of Louisiana; and
- Commercial General Bodily Injury and Property Damage Liability, including Automobile Liability in a Combined Single Limit of \$1,000,000, for any one accident; and
- Professional Liability Insurance in the amount of \$10,000,000. This insurance will be written on a "claims-made" basis.

Prior to executing the contract, the Prime Program Manager and their Sub-Consultant(s) will provide, or cause to be provided, a Certificate of Insurance to DOTD showing evidence of all insurance required.

## BACCGROUND

The Transportation Infrastructure Model for Economic Development (TIMED) Program, was established by Act 16 of the 1998 Legislature. Sixteen major projects were announced in Act 16. As of this date, 4 are considered complete and implementation continues on 12. The implementation of the TIMED Program has resulted in the breakdown of the remaining 12 major projects into approximately 145 individual project segments of which approximately 85 remain to be completed. Preliminary plans and basic designs have been initiated for each project segment. The current estimated cost to complete all pre-construction aspects of these projects is approximately \$2.32 billion based on 2003 estimates and the current scopes of work for each project segment. This estimate represents approximately \$1.8 billion in construction, \$354 million for right-of-way and utility relocations, and \$166 million for engineering. Construction administration and inspection costs are not included in these figures and could represent an additional \$180 million bringing the estimated program total to \$2.5 billion.

The funding to implement the TIMED Program is based on a dedicated 4 cents per gallon fuel tax on gasoline that yielded approximately \$116 million during 2000 and has a history of an annual growth of approximately 2 to 3 percent. At the initiation of the 4 cents fuel tax a \$160 million bond issue was sold to start the program. Payments of an approximate \$33 million annually are required for debt service through 2005. Act 64 of the 1998 Legislature continued the 4 cents fuel tax for as long as necessary to complete all of the initially established 16 projects. On a pay-as-you-go basis it is estimated that completion of the remaining 12 projects will not occur until beyond 2003.

As an alternative to the pay-as-you-go plan an examination has been made of issuing revenue bonds in several large sales over the next 8 years to fund all remaining projects under construction before 2009. To achieve this goal, completion of the project plans and bid documents, acquisition of required rights-of-way, relocations of utilities, securing the needed permits and project alignment, managing the schedule, financial requirements and construction administration would best be handled by a single Program Manager/Team. The State will make separate arrangements for the professional services of bond counsel and broker to assure the timely sale of the revenue bonds.

Since beginning the implementation of the TIMED Program, the Department has designed and completed many individual construction projects in the Program. Most of the design activities were done by Consultant firms under contract with the Department (Contract Consultants). In order to accelerate the construction schedule, the Department proposes to finance the completion of the TIMED program through periodic issuance of bonds through the State Bond Commission Office. The funds from the dedicated fuel tax will be the source of revenue to retire the bonds over a period of years. All projects will be let to contract prior to January 2010, and the preliminary schedule for anticipated completion of the TIMED Program is January 2012, with the anticipated issuance of 5 bond packages. The size and schedule of the bond issuance will be influenced by the Program Schedule.

## PROGRAM DESCRIPTION

The Program Manager/Team will assist the DOTD by managing all Engineering, Geotechnical, Land Surveying, Permits, Project Agreements, Environmental Clearances, Real Estate, Utility Relocations and Program and Financial Management Services required to complete the implementation of the TIMED Program. The remaining projects are identified as follows:

### Highways -

1. U.S. 171 - Lake Charles to Shreveport
2. U.S. 165 - I-10 - Alexandria - Monroe - Ruston - Arkansas State Line
3. U.S. 167 - Alexandria - Ruston - Arkansas State Line
4. LA 3241 - I-12 to Bush (Hogans)
5. Teche/Sapoula Corridor
6. Barham Boulevard - Orleans Parish
7. West Napoleon - Jefferson Parish
8. LA 15 - Natchez - Monroe
9. U.S. 63 - Baton to Mississippi State Line

### Bridges -

10. Mississippi River at St. Francisville
11. Huey P. Long Widened to 6 Lanes - Jefferson Parish
12. New Florida Avenue Bridge over the Industrial Canal

The **Highway** projects are achieved by the addition of 2 new lanes with a median or by construction of a 3 lane section. On LA 3241 the project study will be 4 lanes at a new location. The Program Manager/Team will be responsible for the Teche/Sapoula Corridor, the Barham Boulevard and West Napoleon projects that will involve the local officials currently managing these projects. The **Bridge** projects consists of the widening of the Huey P. Long two rail track and existing narrow four lane highway section to 6 highway lanes and maintaining the two rail tracks; and the construction of a new bridge at St. Francisville over the Mississippi River and a new bridge at Florida Avenue over the Industrial Canal. The DOTD will continue to implement certain of the **Highway** projects through December 2012 and may include the Program Management Services for the **Bridge** projects as a part of the Program Management Services. It is intended that All **Highway** and **Bridge** projects will be included in the Program Schedule and Program Management Financial Services to be provided by the Program Manager/Team. (Appendix D).

## SCOPE OF SERVICES

The Proposer selected to provide Program Management will be expected to provide consulting services to DOTD required for the timely and successful delivery of the TIMED Program. Where individual contract design consultants are currently under contract those services will be continued provided that appropriate contract modifications required for the Program Management Program may be made by the DOTD based upon recommendations of the Program Manager/Team. Where necessary additional design consultants will be selected for each of the projects listed. DOTD will make the selections and enter into contracts with the selected design consultant, but the Program Manager/Team will assist DOTD in developing the project scopes and predetermined contract form. The Program Manager/Team will be responsible for the management of all design consultant contracts and the providing of certain specified implementation tasks such as right-of-way acquisition, utility relocation, permits, etc., for the total program delivery, attached is a TIMED Management Responsibility Matrix (Appendix D). The services are to include the following:

### 1. Development of a Program Strategy

The Program Manager/Team will be required to develop an overall strategy for execution and completion of the TIMED Program. The strategy will address issues related to preconstruction activities including design standards, coordination between contract consultants, right-of-way activities and all items that influence project delivery schedules. The Program Manager/Team will create with DOTD to establish the program strategy. Procedures will be developed to address and resolve unexpected program issues in a timely manner.

### 2. Develop the Program Schedule

The preliminary program schedule has been prepared by DOTD. The Program Manager/Team will evaluate the preliminary program schedule and confirm or establish schedule milestone dates for all events necessary to advance each project to construction in accordance with the Program Strategy. Any issues anticipated to impact individual project schedules will be addressed by the Department and contract design consultants.

### 3. Program Development

- a. Program Manager/Team will provide a system for tracking all project preconstruction and construction activities and projections of the outcome. The system will be easily understood and accessible by DOTD and contract consultants. Any program management system used by the Program Manager/Team should be able to interface with the existing DOTD system.
- b. Project status reports will be provided on a monthly basis to DOTD and contract consultants.

- c. Program Manager/Team will establish a procedure to identify activities that fall behind schedule and will be responsible for establishing a Recovery Plan with contract consultants and DOTD.
- d. Program Manager/Team will be responsible for recommendations to the DOTD and its contract consultants to resolve issues that will impact the Program Schedule and Budget.

#### 4. Program Design Oversight

- a. Program Manager/Team will represent DOTD in ensuring that all projects are designed in accordance with the policies outlined in the Program Strategy.
- b. Program Manager/Team will receive and resolve design issues from contract design consultants in compliance with the Program Strategy. A reporting system to document and record the history of design decisions will be maintained and provided to DOTD.
- c. Program Manager/Team will receive, review and distribute preliminary plans from the contract design consultants and schedule all field meetings and plan-in-hands. Proper minutes of these meetings will be provided by the Program Manager/Team and distributed to attendees.
- d. Program Manager/Team will receive and review right-of-way plans and distribute to the right-of-way service providers for handling. Changes in the right-of-way plans will be evaluated by the Program Manager/Team and a recommendation for resolution made to the DOTD.
- e. Program Manager/Team will receive and review proposed design exceptions and make recommendations to DOTD. All supporting documentation will be reviewed by the Program Manager/Team upon receipt from the contract design consultant.
- f. Final plans will be submitted to the Program Manager/Team who will be responsible for design reviews, constructability reviews, cost estimates and submitted to DOTD for contract letting.
- g. Program Manager/Team will conduct Pre-bid Conferences as necessary, and will be responsible for listing appropriate plan revisions made by the contract design consultant.
- h. Program Manager/Team will review and recommend all Special Provisions, develop bid contract documents for DOTD.
- i. Program Manager/Team will review data and make recommendations to DOTD construction personnel and contract design consultants to resolve plan issues during construction. These decisions will be documented and furnished by report to DOTD.
- j. Program Manager/Team will obtain all the necessary agreements and permits for each construction project.

## **5. Right-of-Way Management and Acquisition**

- a. Program Manager/Team will provide title attorneys, abstractors, appraisers, negotiators, closers and encroachment personnel for the management and acquisition of any additional right-of-way to be acquired for projects in the TIMT/Program.
- b. All right-of-way activities will be conducted in accordance with DOTD Regulations and State Statutes.
- c. All claims and supporting documentation for right-of-way disbursements will be reviewed by the Program Manager/Team and submitted to DOTD for payment.

## **6. Utility Relocation**

- a. Program Manager/Team will be responsible for the implementation of all utility relocations to ensure these relocations do not interfere with construction.
- b. Program Manager/Team will coordinate utility relocation activities with the Right-of-Way Acquisition to meet contract letting schedules.
- c. Program Manager/Team will receive, review and recommend utility relocation claims to DOTD for payment.
- d. Program Manager/Team will specify the location and disposition of each existing utility facility.
- e. Program Manager/Team will prepare preliminary estimates of the utility relocation and work days required to complete adjustments.
- f. Program Manager/Team will prepare utility agreement packages and provide construction oversight.

## **7. Public Involvement**

- a. Program Manager/Team will develop an outreach program to present status of all remaining projects and document comments and suggestions regarding each project.
- b. Program Manager/Team will recommend modifications and adjustments to each project, if necessary, gain overall project acceptance by all involved.
- c. Program Manager/Team will present these modifications and confirm acceptance of each project to proceed with final design.
- d. Program Manager/Team will provide adequate office staffing to receive and respond to the public, Legislators and other inquiries on project requests. The inquiries and responses should be documented for reference and furnished to DOTD.
- e. Program Manager/Team should be available to attend and assist with the Public Involvement Process to provide information on program status.

- c. Program Manager/Teams would be available to provide an oral or written briefing to the Louisiana Transportation Committee and Legislative members to advise on the program status.

## **8. Site Assessment of Abandoned Hazardous Waste Site (Underground Storage Tanks)**

- a. Program Manager/Teams will investigate each individual section project for the discovery of contamination within the limits of construction, estimate extent of contamination and provide first order estimate as to the remediation cost.
- b. Program Manager/Teams will develop a field work plan which will outline the intended methodology to be used in meeting the primary objective. The Program Manager/Teams will also develop a Health and Safety Plan (HASP) for those activities.
- c. Program Manager/Teams will develop a final report, coordinate with DOTD and develop any required remediation plan.
- d. The Project Manager/Teams will prepare proposals to carry out any remediation work required by the approved report.

## **9. Construction Inspection**

- a. Program Manager/Teams may be called upon to perform all construction contract administration and construction inspection under the supervision of the Department's District Offices.
- b. All Construction Inspection Personnel utilized by the Program Manager/Teams must meet the same qualifications and certification requirements of DOTD's Construction Personnel.
- c. Program Manager/Teams will prepare "As Built" drawings in accordance to the Louisiana Standard Specification for Roads and Bridges.

## **10. Program Financial Management System**

- a. Program Manager/Teams will provide a system of recording, tracking, and projecting all costs of the TIMEID Program, regardless if projects are managed by DOTD or the Program Manager/Teams. The system will be easily understood and accessible by DOTD. Systems will be updated as cost information becomes available and a report on the individual project budget will be provided monthly to DOTD.
- b. Budget control in the TIMEID Program is critical and the Program Manager/Teams will establish a process to address project budget variances with DOTD and contract consultants and provide plans of action to resolve budget issues.
- c. The financial management system must be able to provide information schedules for bond funds being utilized for individual project elements.

## REFERENCES

All reports and environmental documents will meet DOTD standard requirements as to format and content, and will be prepared in accordance with the latest applicable editions, supplements, and revisions of the following publications:

1. American Association of State Highway and Transportation Officials (AASHTO) Standards.
2. DOTD Roadway Plan Preparation Manual
3. DOTD Bridge Design Manual
4. DOTD Hydraulic Manual
5. DOTD Standard Specifications For Roads and Bridges (Metric version) (Red Book)
6. DOTD Location and Survey Manual
7. National Electric Safety Code
8. Manual of Uniform Traffic Control Devices (MUTCD)

## CONTRACT TIME

Will be for 10 years on the completion of the TIMED Program.

## MINIMUM MANPOWER REQUIREMENTS

1. At least one Principal of the Program Manager's Firm must be a Registered Professional Engineer in the State of Louisiana.
2. At least one Principal, or a responsible member of the Program Manager's Firm, must be a Registered Professional Civil Engineer.
3. The selected Program Manager must be able to demonstrate that the firm can become Registered with the Louisiana State Board of Registration for Professional Engineers and Land Surveyors, and the Secretary of State's Office.
4. The Program Manager must identify one person with appropriate qualifications, professional registrations and/or education, training and experience in the following areas:
  - a. Program/Project Manager
  - b. Transportation Engineers/Planners
  - c. Bridge Engineers
  - d. Geotechnical Engineers
  - e. Land Surveyors
  - f. Right-of-Way Specialists
  - g. Title Attorney
  - h. Title Abstractors
  - i. Appraisers
  - j. Negotiators
  - k. Close and Acquisition
  - l. Eminent Domain

- m. Utility Relocations and Agreements
- n. Public Information
- o. Program/Project Scheduling
- p. Program/Project Financial Reporting, Scheduling, and Projecting
- q. Construction Administration
- r. Construction Inspection and Laboratory Testing

#### **AUDIT REQUIREMENTS**

The selected Program Manager/Team will maintain, as a minimum, a Project Cost Ledger and will segregate direct from indirect cost in their General Ledgers. The Program Manager/Team will provide, through an independent Certified Public Accountant (CPA), an audited overhead rate in accordance with Federal Acquisition Regulations (FAR), and guidelines provided by DOTD's Audit Section, or allow DOTD's Audit Section to perform an annual audit of their books for this overhead rate development. In addition, the Program Manager/Team will submit semi-annual labor rate information, when requested by DOTD.

Both pre-audit and post audits, as well as interim audits, may be required. For audit purposes, the selected Program Manager/Team will maintain accounting records for a minimum of three years after final contract payment.

#### **SUBMITTAL REQUIREMENTS**

Seven copies of the SF 24-102 must be submitted to DOTD. Any Program Manager/Team failing to submit any of the information required on the SF 24-102 will be considered non-responsive. The SF 24-102 may be downloaded from the DOTD Website, and the Proposer may modify the SF 24-102 as necessary, but must provide all information required by the SF 24-102.

Any Sub-Consultants to be used, including Disadvantaged Business Enterprise/Women-Owned Business Enterprises (DBE/WBE) Sub-Consultants, in performance of this contract must also submit a SF 24-102, completely filled out and containing information pertinent to the work to be performed. The Sub-Consultant's SF 24-102 must be firmly bound to the Program Manager's SF 24-102. In Section 6, the Program Manager's SF 24-102 must describe the work to be performed by the Sub-Consultant(s), and state the approximate percentage of work to be subcontracted to each Sub-Consultant.

#### **PREVIOUS EXPERIENCE**

The Program Manager will supply the names with addresses and phone numbers, projects, completion dates, and other pertinent material to establish the successful completion of at least three program management projects in a governmental environment, similar in scope to that required by DOTD. Each project must include the implementation of new applications on equipment operating in an on-line, real-time environment.

## **FINANCIAL STABILITY**

The proposer must submit an audited financial statement for the lead firm and each major partner, indicating adequate financial resources for the performance of the project.

## **COMPENSATION**

The Louisiana DOTD is interested in incentive-based fee proposals rather than traditional methods of compensation. The successful firm will propose a compensation plan through which compensation is minimized until program milestones are met. Cost proposals will be required only of those firms selected for the shortlist. They are not to be included in the initial qualification statement.

## **OWNERSHIP OF MATERIALS**

All materials, including programs and data and reports, produced for DOTD under a contract resulting from this RFP will be wholly owned by DOTD. Therefore, unless specifically and precisely stated otherwise, it will be assumed that all software documentation, procedures, methodology, and techniques and other related items will be available for use by DOTD without need to consider further payment to the proposer or to any other party either on a one-time basis or a continuing maintenance basis. Unless specifically and precisely stated otherwise, it is assumed that full and unlimited rights to these items will be conveyed by the proposer to DOTD.

## **SELECTION PROCESS**

A two-staged process will be used. The responses to this RFP will be evaluated by the Consultant Evaluation Committee and ranked on the basis of qualifications. The general criteria for evaluating qualifications will be evaluated on an equal initial basis and then factored as shown:

1. Related experience of the Proposer/Firm/Team, weighting factor of 3;
2. Past performance on similar transportation projects, weighting factor of 8;
3. Related experience of key staff, weighting factor of 4;
4. Identification of discipline services to be provided by the Proposer with an organizational chart identifying discipline managers and the relationships to the overall team. (Included as a separate attachment to the Program Manager's SF 24-102), weighting factor of 4.

A shortlist of no more than five firms will be selected from those submitting qualifications. The firms on the shortlist will participate in a pre-proposal meeting with DOTD, and will submit detailed formal proposals that will include a compensation plan. The final selection will be based upon the detailed proposal, including the compensation plan, presented at a structured interview/presentation before the Consultant Evaluation Committee and other DOTD Staff.

## SCHEDULE OF EVENTS

**ADVERTISE** – Friday, July 13, 2001

**LAST DAY TO RECEIVE QUESTIONS** – Monday, July 30, 2001; 4:00 p.m.

Questions are to be submitted in writing. All questions and answers will be posted on the DOTD Website by Friday, August 3, 2001.

**DISTRIBUTION OF QUESTIONS AND ANSWERS MEETING** – Monday, August 6, 2001; 10:00 a.m.

This is a mandatory meeting for all Firms responding to this Advertisement. Any additional questions and answers as a result of this meeting will be posted on the DOTD Website by Friday, August 10, 2001.

**QUALIFICATION STATEMENT DEADLINE** – Monday, August 20, 2001; 4:00 p.m.

**SHORTLIST** – Tuesday, September 4, 2001

**PRE-PROPOSAL MEETING** – Tuesday, September 11, 2001 and Wednesday, September 12, 2001

At a joint meeting with all firms on the shortlist, DOTD staff will supply detailed information on:

- Project scope and limits
- Budget limitations and bonding restrictions
- Project constraints
- Timelines
- Project Development Process
- Distribution of authority
- Content and format for proposals

**STUDY/QUESTION PERIOD** – Tuesday, September 11, 2001 to Friday, October 5, 2001

This period is established for the competing firms to study and become familiar with the program, its goals and constraints, and to request any additional information from DOTD.

**LAST DAY TO RECEIVE QUESTIONS** – Friday, October 5, 2001; 4:00 p.m.

Questions are to be in writing. All questions and answers will be posted on the DOTD Website by Friday, October 12, 2001.

**DISTRIBUTION OF QUESTIONS AND ANSWERS MEETING – Friday, October 12, 2001; 10:00 a.m.**

This is a **mandatory** meeting for all Firms responding to this Advertisement. Any additional questions and answers as a result of this meeting will be posted on the DOTD Website by Friday, August 19, 2001.

**PRESENTATION/PROPOSAL – Monday, November 26, 2001 through Friday, November 30, 2001**

Each of the short-listed firms will make a formal presentation before the DOTD Consultant Evaluation Committee. Each of the short-listed firms will be contracted with the DOTD and compensated a lump sum fee of \$50,000, to offset the cost of preparing the proposal and presentation. A written proposal will also be required. The Consultant Evaluation Committee will score the presentation/proposals on each of the following criteria:

- **Overall Program/Cost Timeline** – Based on the documents and materials made available, each short-listed Proposer is to prepare an estimate of their judgment of the remaining engineering costs, right-of-way costs, utility relocation costs, bidding and award costs, construction costs, construction administration costs and overall program management cost, assumed to produce an estimated total program cost-to-complete, and the cost will be broken down for each of the projects listed under the Program Description. This figure will be used to determine the feasibility of the bond implementation program. A proposed timeline showing the program and project milestones from start to completion of the program. The cumulative expenditure of funds will be monitored at each milestone. The program/cost timeline will be the basis for regular progress reviews with DOTD staff and will be a fundamental element in the proposed fee structure.  
  
20 points.
- **Program Management System** – The selected Program Manager/Team will act on behalf of DOTD to ensure that all projects are completed on time, within budget, and in compliance with applicable regulations. The management system to be used by the Program Manager/Team must ensure the integrity of the overall program by controlling expenditures and projecting cash flow throughout the life of each project and the program. The management system will also ensure substate integrity and overall quality control. This plan must also identify any resources and specific delegated authority the Program Manager/Team will require of DOTD. Specific elements must include:

- a. A system for tracking all project pre-construction and construction activities. The system must be easily understood and accessible by DOTD and contract design consultants. Any project management systems must also be able to interface with DOTD software systems.
- b. Project status reports will be provided monthly to DOTD and to contract design consultants.
- c. A procedure to identify activities that fall behind schedule or over budget and a Recovery Plan with contract design consultants and with DOTD and to restore schedule and budget integrity.
- d. The Program Manager will submit a Staffing Plan listing all personnel (first names, titles, residency, their duties, and a brief resume), specifically assigned to each component of the scope of services for this project.

20 points.

- **Proposed Financial Management System** – To record, track, and project all program costs, to stay within budgetary constraints, and provide schedules for bond funds being utilized for individual project elements. Specific elements must include:
  - a. A system, easily understood and accessible to DOTD, of recording and tracking all costs of program. The system will be updated as cost information becomes available and a report on the program budget and individual project budgets will be provided monthly to DOTD.
  - b. Budget control is critical. The plan must include a process to address any budget variances and a plan of action to resolve budget issues.
  - c. The system must be able to provide information schedules for bond funds being utilized for individual project elements.

20 points.

- **Proposed Pay Structure** - Basis for structure and method of program compensation, including incentive/disincentive formulas. The incentive/disincentive element must be specifically related to the maintenance of the overall project schedule and budget (timeliness).

20 points.

- **Cost over-run prevention measures.**

10 points.

- Warranties on time and cost coverage.

10 points

Maximum score 100 points.

**NOTIFICATION OF FINAL SELECTION – Friday, December 7, 2001**

**EXECUTED CONTRACT AND NOTICE TO PROCEED – Monday, February 10, 2002**

The SF 24-102 will be identified with State Project Number 700-99-0246 and must be submitted **prior to 4:00 P.M. on August 28, 2001**, by hand delivery or mail addressed to:

Department of Transportation and Development

Attn: Mr. Henry J. Barreault, P.E.

Consultant Contract Services Administrator

1201 Capital Access Road, Baton Rouge

Haton Rouge, Louisiana 70802-4438

or

Post Office Box 94245

Haton Rouge, Louisiana 70804-0245

Telephone: (225) 379-1734

Item No.	Description	Unit	Quantity	Rate	Amount
1	...	...	...	...	...
2	...	...	...	...	...
3	...	...	...	...	...
4	...	...	...	...	...
5	...	...	...	...	...
6	...	...	...	...	...
7	...	...	...	...	...
8	...	...	...	...	...
9	...	...	...	...	...
10	...	...	...	...	...
11	...	...	...	...	...
12	...	...	...	...	...
13	...	...	...	...	...
14	...	...	...	...	...
15	...	...	...	...	...
16	...	...	...	...	...
17	...	...	...	...	...
18	...	...	...	...	...
19	...	...	...	...	...
20	...	...	...	...	...
21	...	...	...	...	...
22	...	...	...	...	...
23	...	...	...	...	...
24	...	...	...	...	...
25	...	...	...	...	...
26	...	...	...	...	...
27	...	...	...	...	...
28	...	...	...	...	...
29	...	...	...	...	...
30	...	...	...	...	...
31	...	...	...	...	...
32	...	...	...	...	...
33	...	...	...	...	...
34	...	...	...	...	...
35	...	...	...	...	...
36	...	...	...	...	...
37	...	...	...	...	...
38	...	...	...	...	...
39	...	...	...	...	...
40	...	...	...	...	...
41	...	...	...	...	...
42	...	...	...	...	...
43	...	...	...	...	...
44	...	...	...	...	...
45	...	...	...	...	...
46	...	...	...	...	...
47	...	...	...	...	...
48	...	...	...	...	...
49	...	...	...	...	...
50	...	...	...	...	...
51	...	...	...	...	...
52	...	...	...	...	...
53	...	...	...	...	...
54	...	...	...	...	...
55	...	...	...	...	...
56	...	...	...	...	...
57	...	...	...	...	...
58	...	...	...	...	...
59	...	...	...	...	...
60	...	...	...	...	...
61	...	...	...	...	...
62	...	...	...	...	...
63	...	...	...	...	...
64	...	...	...	...	...
65	...	...	...	...	...
66	...	...	...	...	...
67	...	...	...	...	...
68	...	...	...	...	...
69	...	...	...	...	...
70	...	...	...	...	...
71	...	...	...	...	...
72	...	...	...	...	...
73	...	...	...	...	...
74	...	...	...	...	...
75	...	...	...	...	...
76	...	...	...	...	...
77	...	...	...	...	...
78	...	...	...	...	...
79	...	...	...	...	...
80	...	...	...	...	...
81	...	...	...	...	...
82	...	...	...	...	...
83	...	...	...	...	...
84	...	...	...	...	...
85	...	...	...	...	...
86	...	...	...	...	...
87	...	...	...	...	...
88	...	...	...	...	...
89	...	...	...	...	...
90	...	...	...	...	...
91	...	...	...	...	...
92	...	...	...	...	...
93	...	...	...	...	...
94	...	...	...	...	...
95	...	...	...	...	...
96	...	...	...	...	...
97	...	...	...	...	...
98	...	...	...	...	...
99	...	...	...	...	...
100	...	...	...	...	...





## APPENDIX D

### TIMED PROJECT MANAGEMENT

#### Responsibility Matrix

	DOTD	CONTRACT DESIGN CONSULTANT	PROGRAM MANAGER
Project Planning	Provide Assistance		Responsible for
Community Coord.	Provide Assistance		Responsible for
Project Schedule	Approve		Responsible for
Site Office (Real Estate)			Responsible for
Consultant Advertisement	Responsible for		Provide Assistance
Consultant Select	Responsible for		Provide Assistance
Topographic Survey		Responsible for	Review & Comment
Property Survey		Responsible for	Review & Comment
Road Plans		Responsible for	Review & Comment
Bridge Plans		Responsible for	Review & Comment
Grassroots		Responsible for	Review & Comment
Hydrology		Responsible for	Review & Comment
Generalized a. Hoisting b. Typical Section c. Foundations	Responsible for	Responsible for	Review & Comment
Consultant Fee	Responsible for	Responsible for	Review & Comment
	Responsible for		Provide Assistance

	<b>DOTD</b>	<b>CONTRACT DESIGN CONSULTANT</b>	<b>PROGRAM MANAGER</b>
ROW Maps		Responsible for	Review & Comment
ROW Acquisition			
1. Staking		Responsible for	Review & Comment
2. Easement Contracts (Appraisal)	Approval		Responsible for
3. Appraisal	Approval		Responsible for
4. Appraisal Review	Review & Comment		Responsible for
3. Title Work	Review & Comment		Responsible for
6. Property Management	Provide Assistance		Responsible for
7. Relocation	Provide Assistance		Responsible for
8. Acquisition	Approval		Responsible for
9. Eminent Domain	Responsible for		Provide Assistance
10. Administrative Settlement	Approval		Responsible for
Utility Relocation	Provide Assistance	Provide Assistance	Responsible for
UST:			
a. Identification		Provide Assistance	Responsible for
b. Testing			Responsible for
c. Remediation	Provide Assistance		Responsible for
d. Coordination with DOTD	Provide Assistance	Provide Assistance	Responsible for
National Agreement	Approval	Provide Assistance	Responsible for
Permit	Approval	Provide Assistance	Responsible for
Agreement	Approval	Provide Assistance	Responsible for
Plan In-Hand		Provide Assistance	Responsible for
ACP's (Construction)		Provide Assistance	Responsible for
Bill Specifications	Approval	Provide Assistance	Responsible for
Letting	Responsible for		Provide Assistance
Construction Supervision	Provide Assistance	Provide Assistance	Responsible for
Financial Management	Approval		Responsible for
Environmental Documentation	Approval		Responsible for

**"ENGINEERING, GEOTECHNICAL, LAND SURVEYING, PERMITS, PROJECT AGREEMENTS, ENVIRONMENTAL CLEARANCES, REAL ESTATE, UTILITY RELOCATIONS, AND PROGRAM AND FINANCIAL MANAGEMENT SERVICES"**

July 13, 2001

The Louisiana Department of Transportation and Development (DOTD) hereby issues a request for Qualification Statements (RFQ) and Letters of Interest from Consulting firms interested in performing the engineering, and surveying services as designated for the projects listed below.

Each firm includes a brief description of the type of services required. Additional information and specific requirements relative to these projects may be obtained on the DOTD Internet home page at [www.dotd.state.la.us](http://www.dotd.state.la.us) or by contacting Mr. Henry Bouscassat at (225) 379-1734. A separate qualification statement submittal is required for each project for which the firm desires to be considered.

State Project No. 700-99-0246  
TIMED Program Management  
Statewide

**SERVICES REQUIRED** - provide engineering, geotechnical, land surveying, permits, project agreements, environmental clearances, real estate, utility relocations, and program and financial management services required to assist the DOTD in completing the implementation of the TIMED Program.

**MINIMUM MANPOWER** - see advertisement.

**COMPENSATION** - will be cost plus a negotiated cost plus fixed fee, with a maximum limitation.

**CONTRACT TERM** - will be for 10 years or the completion of the TIMED Program.

Qualification statements are to be submitted on "Professional Engineer and Related Services Questionnaire for Specific Project" (Standard Form DOTD 24-022, revised July 1984, and May 1998), and Letters of Interest are to be identified with their respective State Project Number(s), and must be received prior to 4:00 p.m. on August 20, 2001 by hand delivery or mail addressed to:

Department of Transportation and Development  
Attn: Mr. Henry J. Bouscassat, P.E.,  
Contracts Services Administrator  
1201 Capital Access Road, Room 202  
Baton Rouge, Louisiana 70805-4438 or,  
P. O. Box 9426  
Baton Rouge, Louisiana 70804-8243  
Telephone No. : (225) 379-1734