

THIS AGREEMENT is entered into this 1st day of December, 1996
by and between the undersigned Stated Agencies:
Set forth services, materials, or equipment to be furnished, or work to be performed, and by whom,
me for performance including the terms, date of commencement and date of completion, and provision
or payment per (1225 and 8752-8752.1 SAM.)

- Distribution:
- ☐ Agency providing services
 - ☐ Agency receiving services
 - ☐ Department of General Services (unless exempt from DGS approval)
 - ☐ Controller

The entire agreement is contained on the following pages.

Federal Funds May Be Involved

Continues on <u>13</u> sheets which are hereby attached and made a part hereof	
NAME OF STATE AGENCY RECEIVING SERVICES DEPARTMENT OF TRANSPORTATION	
NAME OF STATE AGENCY PROVIDING SERVICES REGENTS OF THE UNIVERSITY OF CALIFORNIA	
CALLED ABOVE (SHORT NAME) CALTRANS	
CALLED ABOVE (SHORT NAME) UC	
AUTHORIZED SIGNATURE <i>[Signature]</i>	
AUTHORIZED SIGNATURE <i>[Signature]</i>	
PRINTED NAME AND TITLE OF PERSON SIGNING Marcella Harrison, Contract Officer	
PRINTED NAME AND TITLE OF PERSON SIGNING David F. Mears, Director - Research Administration	
FUND NUMBER AND NAME	
FUND NUMBER AND NAME	
MOUNT ENCUMBERED BY THIS DOCUMENT 0-	
PROGRAM/CATEGORY (CODE AND TITLE) TRANSPORTATION	
FUND TITLE State Hwy	
PRIOR AMOUNT ENCUMBERED FOR THIS CONTRACT 0-	
(OPTIONAL USE) Each Individual RTA will encumber funds for the RTA.	
ITEM	
CHAPTER	
STATUTE	
FISCAL YEAR	
TOTAL AMOUNT ENCUMBERED TO DATE 0-	
OBJECT OF EXPENDITURE (CODE AND TITLE) Each Individual RTA will encumber funds for the RTA.	
I hereby certify upon my own personal knowledge that budgeted funds are available for the period and purpose of the expenditure stated above	
T.B.A. NO.	
B.R. NO.	
SIGNATURE OF ACCOUNTING OFFICER	
DATE	
DEPARTMENT OF GENERAL SERVICES USE ONLY	
FORM	
POLICY	
BUDGET	
Department of General Services APPROVED OCT 18 1996	
BY <i>[Signature]</i> Ass't. Chief Counsel	

ARTICLE I - DESCRIPTION

The Regents of the University of California, hereafter known as UC or Contractor, agree to furnish the necessary personnel and facilities to conduct various transportation research projects for the Department of Transportation, hereafter referred to as the State, Caltrans or the Department. The words "Contract" and "Agreement" are used interchangeably.

- A. Each transportation research project shall be performed in accordance with the provisions of this Transportation Research Master Agreement and an individual Research Technical Agreement (RTA). Each individual RTA shall refer to and adopt all of the terms of this Transportation Research Master Agreement, describe the specific project to be performed, the total amount funded from each fiscal year (e.g., State fiscal year 1996/97 runs from July 1, 1996 through June 30, 1997) for the project, and identify UC's Principal Investigator, Caltrans' Contract Manager, the project performance period, and the address to which invoices shall be sent. Each RTA will be subject to a pre-award review by Caltrans at the discretion of the Caltrans Office of Audits and Investigations. Each UC technical proposal shall contain a budget and work schedule that at a minimum contain the following:
1. Salaries and wages for the Principal Investigator, research associates and others (such as students),
 2. Project completion milestones with deliverables to Caltrans and, if payment will be based on milestones in accordance with Article VII.E.2, an estimated cost breakdown associated with each milestone, and
 3. A time milestone schedule showing dates of milestone project deliverables to Caltrans.
- B. Each individual RTA shall include the payment schedule as an attachment and, by reference, the UC technical proposal. If there is any conflict between UC's technical proposal and the RTA, the RTA shall take precedence. Each individual RTA shall be approved and fully executed by both parties thereto prior to performance of any work proposed. When an RTA is so executed, this Transportation Research Master Agreement shall be considered a part of that RTA.
- C. All incomplete RTAs initiated under the prior Transportation Research Master Agreement 65Q346, and its amendments dated prior to July 1, 1996, shall be completed under the terms and conditions of this Transportation Research Master Agreement. No further amendments to those incomplete RTAs will be required to substitute the terms of this Transportation Research Master Agreement for the prior document.

ARTICLE II - CHANGE IN TERMS/PERSONNEL/AMENDMENT

- A. This Transportation Research Master may be amended or modified only by mutual written agreement of the parties.
- B. The individual Research Technical Agreement (RTA) may be amended as agreed to by the parties to the RTA. However, RTAs shall not make changes in the terms of this Master Agreement except where allowed by the Master Agreement.
- C. There shall be no change in the Principal Investigator as designated on the individual RTA without prior written approval by Caltrans RTA Contract Manager. Requests for changes of Principal Investigator shall include a brief description of the capabilities and experience of the proposed replacement.

ARTICLE III - CONTRACT PERIOD

This Transportation Research Master Agreement 65Y350 shall begin on January 1, 1997, contingent upon approval by the State, and terminate on June 30, 2001 unless extended by an amendment to this agreement.

ARTICLE IV - CONTRACT MANAGEMENT

The Caltrans Contract Manager is John West, Manager, New Technology and Research Program.

The UC Project Manager is David F. Mears, Director, Research Administration Office.

ARTICLE V - TERMINATION

This Agreement or any RTA under this Agreement may be terminated by either party upon thirty (30) days prior advance written notice to the other party by registered mail. If the University is terminating the RTA, official notice shall be sent to Caltrans New Technology and Research Manager John West. If Caltrans is terminating the RTA, official notice shall be sent to the UC Contracts Officer referenced in the individual RTA. Courtesy copies should be sent to the Caltrans Contract Manager for the particular RTA and the UC Principal Investigator. Caltrans shall reimburse UC for noncancelable obligations and costs incurred for purposes indicated in the proposal up to thirty (30) days from the date of the official termination notice. Upon such termination, UC shall deliver to Caltrans all project documents, studies, data and other material as is then available and are listed as required deliverables under the individual RTA.

ARTICLE VI - FUNDING REQUIREMENTS

- A. It is mutually understood between the parties that future Research Technical Agreements may be written before ascertaining the availability of Congressional or Legislative appropriation of funds. This is done for the mutual benefit of both parties in order to avoid program and fiscal delays that would occur if the RTAs were executed after that determination was made.

- B. Any RTA is valid and enforceable only if sufficient funds are made available to the State by the United States Government or the California State Legislature for the purpose of this program. In addition, all RTAs are subject to any additional restrictions, limitations, conditions, or any statute enacted by the Congress or the State Legislature that may affect the provisions, terms or funding of said RTA in any manner.
- C. It is mutually agreed that if the Congress or the State Legislature does not appropriate sufficient funds for the program, any RTA shall be amended to reflect any reduction in funds.
- D. Caltrans has the option to void any RTA under the 30-day cancellation clause or to amend the Transportation Research Agreement to reflect any reduction of funds.
- E. All RTAs are subject to termination in the event that Federal Highway Administration or State funding is not provided for in the current State fiscal year, or any subsequent State fiscal year, or portion thereof, which is included in the performance period of the RTA. The funding for any State fiscal year shall not be considered approved until the Governor signs the State Budget for that fiscal year. In accordance with Article V, Termination, Caltrans shall provide advance written notice of termination to the UC Contracts Officer as listed in the RTA. Upon receipt of notice of termination, UC shall take all necessary measures to mitigate costs, and shall return to Caltrans all unexpended advance payments. Caltrans shall reimburse UC for noncancelable obligations and costs incurred for the purposes of closing-out the project and preparing the final/termination report.

ARTICLE VII - ALLOWABLE COSTS AND PAYMENT

- A. The method of payment for any RTA will be based on actual direct costs plus indirect costs incurred by UC in accordance with Section 8752 of the State Administrative Manual and these costs are not to exceed those allowed in the RTA and those allowed in accordance with the negotiated agreement between UC and the U.S. Department of Health and Human Services.
- B. Nothing herein contained shall preclude advance payment pursuant to Article I, Chapter 3, Part 1, Division 3, Title 2 of the Government Code Section 11257. When authorized, an advance payment will not exceed 25% of any encumbered non-federal funds.
- C. Transportation and subsistence costs shall not exceed rates authorized to be paid UC employees under current UC rules.
- D. Caltrans will reimburse UC for the cost of purchasing, developing, or renting special equipment needed to conduct a research project covered by this Agreement subject to the following limitations:

1. Except as specifically identified in the estimate portion of UC's proposal, special equipment must be of a type not normally used in the conduct of UC's business. In general the equipment to be acquired through development, rental, or purchase should not be standard laboratory and office equipment (such as testing machines, typewriters, tables, etc.) which are normally used in an adequately organized and equipped laboratory.
 2. Equipment costing more than five hundred dollars (\$500) in the aggregate which is not specifically identified in the estimate portion of UC's RTA proposal shall not be purchased without prior written approval by Caltrans.
 3. Special equipment identified in the cost estimate section of the research proposal portion of the RTA will be considered as having prior approval upon full execution of the RTA.
 4. The title to special equipment purchased from funds provided by Caltrans under a given RTA will vest in Caltrans. Upon termination of a given RTA, Caltrans may:
 - a. Request that such equipment be returned to Caltrans with any cost incurred by UC for such return being designated as an allowable charge against the RTA;
 - b. By mutual agreement with UC, allow UC to purchase such equipment for an amount not less than the residual value of the equipment as of the date of termination of the RTA under which said equipment was purchased; or
 - c. Authorize the continued use of such equipment for work to be performed under a different RTA.
- E. Payment may be invoiced in either of the two ways shown below and specified in the RTA.
1. Option 1: Progress Payments will be made monthly in arrears based on invoices for services provided and actual costs incurred.

The RTA Contract Manager shall receive an invoice from UC with a maximum of the following seven line items:

1. Salaries
2. Benefits
3. Supplies and Expenses
4. Equipment
5. Travel
6. Subcontractors/Consultants
7. Indirect Costs

2. Option 2: Payments will be made in accordance with the schedule of milestones set out in the RTA, upon completion of those milestones. The amount reimbursed shall not exceed the cumulative estimate of costs at each milestone. Caltrans understands that the UC accounting system does not allow for separate accounting by tasks, and that amounts invoiced may represent costs incurred for activities of overlapping milestones.

An invoice with the line items set forth in Section E.1, or a total of the amount due pursuant to Section E.2 shall be submitted.

It is expressly understood that this basis for invoice approval is for the convenience of the parties to facilitate and simplify the payment process.

The parties understand and agree that: each RTA is a cost reimbursement agreement; upon completion of each RTA, the total allowable costs to be paid for the purposes of performing under the RTA will be settled with the final invoice on an actual basis not to exceed the total allowable costs authorized by the RTA; and UC will maintain cost financial documentation in compliance with Article VIII.

- F. Caltrans will reimburse UC as promptly as standard State fiscal procedures will permit upon receipt by the Contract Manager of signed invoices in triplicate. Separate invoices shall be submitted for each RTA. All invoices shall be approved and submitted by the appropriate representative of the University Accounting Office, reference the RTA number and project title, and shall be mailed to the Caltrans Contract Manager identified in the RTA.

Whether an RTA authorizes the UC use of invoicing Option 1 or 2 above, no additional invoice or expense documentation shall be required by Caltrans in order to pay invoices submitted as prescribed herein. Pursuant to Article IX, Caltrans may subsequently initiate an audit review and disallow costs paid pursuant to this process where those costs were not properly charged against the RTA.

- G. Final payment or payments of reimbursable expenses billed by UC will be made upon Caltrans' receipt of UC's final report as set forth in Article XIII. Invoices for the final costs incurred under an RTA shall be submitted to Caltrans no later than one-hundred twenty (120) days after each RTA termination.

ARTICLE VIII - COST PRINCIPLES

- A. UC agrees that when State and Local Governments are acting as subcontractors to UC, UC will require those governmental entities to comply with Federal procedures in accordance with Office of Management and Budget Circular A-87, Cost Principles for State and Local Governments.
- B. UC also agrees that when State and Local Governments are acting as subcontractors to UC, UC will require those governmental entities to comply with Federal procedures in accordance with 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

- C. UC also agrees to comply with Federal procedures in accordance with Office of Management and Budget Circulars A-110, Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals and other Nonprofit Organizations, and Budget Circular A-21, Cost Principles for Educational Institutions, which establishes principles for determining costs applicable to grants, contracts, and other agreements with educational institutions.
- D. Any costs for which payment has been made to UC that are determined by subsequent audit to be unallowable under any applicable Office of Management and Budget Circular are subject to repayment by UC to Caltrans.

ARTICLE IX - RETENTION OF RECORDS/AUDIT

For the purpose of determining compliance with Public Contract Code Section 10115, et. Seq. And Title 21, California Code of Regulations, Chapter 21, Section 2500 et. Seq., when applicable, and other matters connected with the performance of the contract pursuant to Government Code Section 8546.7, UC, its subcontractor(s), and the State shall maintain all books, documents, papers, accounting records, and other evidence pertaining to the performance of each RTA. All parties shall make such materials available at their respective offices at all reasonable times during the performance period of an RTA and for three years from the date of final payment under the RTA. The State, the State Auditor General, FHWA, or any duly authorized representative of the Federal government shall have on site access to any books, records, and documents of UC and any subcontractor(s) that are pertinent to the RTA for audits, examinations, excerpts, and transactions, and copies thereof shall be furnished if requested.

ARTICLE X - SUBCONTRACTING

- A. UC shall perform the work contemplated with resources available within its own organization and no portion of the work pertinent to a Research Technical Agreement (RTA) shall be subcontracted by the Contract Manager, except that which is expressly identified in the proposal portion of the RTA.
- B. Any subcontract(s) in excess of a \$25,000 ceiling amount as a result of an executed RTA, shall contain all the provisions stipulated in this Research Technical Master Agreement and shall be subject to a pre-award review by Caltrans at the discretion of the Caltrans Office of Audits and Investigations.
- C. UC shall submit, for prior written approval by the Caltrans Contract Manager, any proposed subcontract(s) exceeding \$5,000 and not listed in the applicable RTA proposal which UC desires to enter into for the performance of work under this Agreement except for the following:
 - 1. Subcontracts with constituent UC campuses and/or system and campus auxiliary organizations.
 - 2. Standard employment contracts up to a limit of \$3,000 for non-UC personnel.

- D. Upon termination of any subcontracts other than those provided for above, Caltrans shall be notified immediately.
- E. All agreements with subcontractors must contain all of the following provisions:
Article IX - Retention of Records/Audit, the applicable cost principles in **Article VIII - Cost Principals** and **Article VII - Allowable Costs and Payment**.
Subcontractor transportation and subsistence costs shall not exceed rates authorized to be paid State employees under State Department of Personnel rules which are in affect at the time of the execution of the RTA.

ARTICLE XI - STATEMENT OF COMPLIANCE

The signature of any subcontractor affixed and dated on any subcontract shall constitute a certification under penalty of perjury under the laws of the State of California that the subcontractor has, unless exempted, complied with the nondiscrimination program requirements of Government Code Section 12990 and Title 2, California Administrative Code, Section 8103.

ARTICLE XII - FEDERAL LOBBYING ACTIVITIES CERTIFICATION

In RTAs which include more than \$100,000 in Federal funding, the following is required.

- A. UC certifies, to the best of its knowledge and belief, that:

No State or Federal appropriated funds have been paid or will be paid, by or on behalf of UC, to any person for influencing or attempting to influence an officer or employee of any State or Federal agency, a Member of the State Legislature or United States Congress, an officer or employee of the Legislature or Congress, or any employee of a Member of the Legislature or Congress in connection with the awarding of any State or Federal contract, the making of any State or Federal grant, the making of any State or Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any State or Federal contract, grant, loan, or cooperative agreement.
- B. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, UC shall complete and submit Standard Form-LL., "Disclosure Form to Report Lobbying", in accordance with its instructions.
- C. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code. Any person who fails to file the required

certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

- D. UC also agrees, by signing this document, that it shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000, and that all such subrecipients shall certify and disclose accordingly.

ARTICLE XIII - CONTRACTOR'S REPORTS AND/OR MEETINGS

- A. The UC Principal Investigator identified in each Research Technical Agreement (RTA) shall meet or confer with the Contract Manager and/or representatives of Caltrans on a quarterly basis to discuss progress on the research project to determine if UC is performing to expectations or is on schedule, to provide communication of interim findings and to afford occasions for airing difficulties or special problems encountered so that remedies can be developed.
- B. Prior to completion of an RTA, UC shall hold a final meeting with the Caltrans Contract Manager to present findings, conclusions and recommendations. A final report as noted below is required. Travel costs for all required meetings shall be listed in the proposal budget and shall be reimbursed by Caltrans.
- C. Standard instructions on the preparation of final reports are provided in this Master Agreement in Attachment A. These standard instructions include the general criteria to be used in determining the acceptability of final reports. UC agrees to furnish Caltrans with reports on all transportation research projects as follows:
1. One (1) copy of Research Quarterly Progress Report MR-6068 (Rev. 5/93) on or before the first of July, October, January, and April during the period in which the study is being performed. If agreed to by both parties (the Principal Investigator and the Contract Manager), the report may be submitted by electronic mail.
 2. Four (4) copies of a draft final report shall be submitted to Caltrans for review and comment not less than ninety (90) days prior to the date stated in the RTA for Caltrans receipt of the final report.
 - a. If Caltrans wishes to comment on the draft final report, it must return any comments on the draft final report to the Principal Investigator no later than 45 days following receipt of the applicable draft final report.
 - b. Alternatively, Caltrans must provide written notification that the draft final products are satisfactory and acceptable, no later than 45 days after receipt of the applicable draft final report, or Principal Investigator shall proceed to prepare final reports based on draft reports submitted.

- c. In the event that UC cannot agree to the comments of Caltrans, then the provisions of SECTION D "Publication Rights" in Attachment B "PUBLICATION OF DELIVERABLE REPORTS PROVISIONS" DATED JULY 1, 1996 shall apply.
3. Final Products: Principal Investigator shall submit final report by the date stated in the applicable RTA. All final products must be acceptable to Caltrans in general physical format and appearance. Principal Investigator shall deliver the following:
 - a. Unless otherwise specified in an RTA, seventy-five (75) copies of a final report are due on or before the date set forth in the individual RTA. The final report shall include a recommended procedure for implementation and shall describe a means and mechanism for translating the product into a form usable by Caltrans, if applicable. The report shall also describe all potential benefits and detriments to be derived from implementing the research findings.
 - b. One disk copy of the published final report in Microsoft Word format. All scanned images of charts, graphs, illustrations and photographs shall be imported into the Word document.
4. The number of quarterly progress, draft final and final reports required may be modified in the RTA.
5. The title pages of the report shall bear an appropriate inscription acknowledging the sources of funds used to produce the report. A Documentation Page, Form DOT F 1700.7 (8-72), shall be included following the title page. The Contract Manager will supply the numbers and information other than the abstract and key words during the review of the draft copies.
6. Reports shall contain a disclaimer statement in a separate section preceding the main body of the document (See Attachment B)

ARTICLE XIV - RIGHTS TO DATA

UC hereby grants to Caltrans a royalty-free, nonexclusive, irrevocable license to reproduce, translate, publish, use and dispose of, for State government purposes, and to authorize others to do so, all data collected and reports and documents produced. As used in this clause, data collected means the original records of scientific and technical data collected during the performance of the work by the Principal Investigator or the project personnel. Data collected includes, but is not limited to, notebooks, drawings, lists, specifications, and computations, in written, pictorial, graphic, electronic or machine form.

ARTICLE XV - OTHER PUBLICATIONS

- A. Four (4) copies of draft publications (other than reports referenced in **Article XIII** above) produced at the completion of specific phases of the research project or when significant findings are developed which may be implemented or provide the basis for additional research shall be submitted to Caltrans for review and comments prior to submission for publication. Caltrans shall have thirty (30) days from receipt of draft interim publication to submit comments to the Principal Investigator.
- B. One final copy of publication shall be submitted to Caltrans. Further copies to be provided by UC upon request by Caltrans.

ARTICLE XVI - INVENTORY

- A. UC and all subcontractors shall maintain annual inventory records for each piece of nonexpendable equipment purchased or built with funds provided under the terms of each RTA. The inventory record shall include the location or section to which each said piece of equipment is assigned, and the number of the applicable research project's RTA to which the special equipment is charged and whether or not Federal money was involved in its purchase or construction. Caltrans will inform UC when equipment has been purchased with Federal money.
- B. Nonexpendable equipment to be so inventoried shall be those items of equipment which have a normal life expectancy of two years or more and an approximate unit price as defined in UC rules for nonexpendable equipment. In addition, other items of equipment costing less than UC's definition of nonexpendable equipment and being especially popular or attractive shall also be inventoried. Each item of nonexpendable equipment inventoried will have a tag affixed to it with its inventory control number shown thereon or with its inventory control number engraved directly on the item of nonexpendable equipment.
- C. UC shall provide Caltrans with annual copies of UC's inventory record for nonexpendable equipment purchased with or built with funds provided under terms of each RTA.
- D. Said equipment purchased by Caltrans shall be used on a priority basis for work undertaken pursuant to this Transportation Research Master Agreement.

ARTICLE XVII - REPORTING ON SPECIAL EQUIPMENT

Upon delivery of special equipment to the research project or upon completion of construction of such special equipment, the Principal Investigator shall include the following information for each piece of special equipment in or with their next quarterly progress report on the research project:

1. Inventory control number

2. Brief description
3. Make, model and serial number (if purchased)
4. Date of delivery, if purchased, or date of completion of construction, if done in-house with funds provided by a Research Technical Agreement (RTA).
5. Cost as charged to the research project
6. Physical location
7. Copy of written authorization from Caltrans for the special equipment to be acquired or constructed unless the equipment was approved as part of the proposed budget.

ARTICLE XVIII - PATENT RIGHTS AND PROVISIONS

- A. When there is no federal participation in the research project, the parties to this Transportation Research Master Agreement hereby mutually agree that, if patentable discoveries or inventions should result from work described herein, all rights accruing from such discoveries or inventions shall be the sole property of UC. However, UC agrees to and does hereby grant to Caltrans for state governmental purposes only, an irrevocable, non-exclusive, nontransferable and royalty-free license to practice each invention in the manufacture, use and disposition, according to law, of any article or material, and in the use of any method that may be developed as a part of the work under this agreement. Such manufacture, use, and disposition, however, shall not be for commercial purposes or in competition with any commercial licensee(s) of the University.
- B. When federal participation is provided through Caltrans for a research project, UC will provide the State of California and the federal government with the same patent rights accorded the federal government under Public Law 98-620, "Patent Rights in Inventions Made with Federal Assistance".

ARTICLE XIX - NONDISCRIMINATION

- A. During the performance of this Research Technical Master Agreement and any Research Technical Agreement (RTA), UC's subcontractor(s) shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age (over 40) or sex. UC's subcontractor(s) shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and applicable regulations promulgated thereunder (California Administrative Code, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990, set forth in Chapter 5 of Division 4 of Title 2 of the California Administrative Code are incorporated into this Transportation Research Master Agreement and any RTAs by reference and made a part

hereof as if set forth in full. UC's subcontractor(s) shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

- B. UC's subcontractor(s) shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the RTA.
- C. When there is federal participation in the research project, UC agrees to conform to the terms of Appendix A, Form DAS-OBM-1351 (4/82), relative to nondiscrimination on federally-assisted projects, which is attached hereto and made a part of this agreement.
- D. UC shall comply with Title VI of the Civil Rights Act of 1964, as amended. Accordingly, 49 CFR 21 through Appendix C and 23 CFR 710.405(b) are applicable to this Agreement by reference.

ARTICLE XX - DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

The Contractor and subcontractors shall comply with the Disadvantaged Business Enterprise (DBE) requirements, which is attached hereto and made a part of this Agreement as Appendix B (OBM-373), when Federal funding is included as part of the RTA reimbursement fund allocation by Caltrans.

ARTICLE XXI - INSPECTION OF WORK

UC shall permit Caltrans and the Federal Highway Administration on site to review and inspect the research project activities at all reasonable times during the performance period of a Research Technical Agreement.

ARTICLE XXII - DISPUTES

- A. Any dispute concerning a question of fact arising under a Research Technical Agreement (RTA) which is not disposed of by mutual agreement shall be decided by Caltrans, who shall reduce the decision to writing and mail or otherwise furnish a copy thereof to UC. The decision of Caltrans shall be final and conclusive unless, within 30 days from the receipt of such copy, UC mails or otherwise furnishes Caltrans with a written appeal addressed to the Director of Caltrans. The decision of the Director or his or her duly authorized representatives for the determination of such appeals shall be final and conclusive unless appealed to a court of law of competent jurisdiction or other appropriate State board.
- B. In connection with any appeal proceeding under this Article, UC shall be afforded an opportunity to be heard and to offer evidence in support of its appeal.
- C. Pending final decision of a dispute hereunder, UC Shall proceed diligently with the performance of work under the RTA and in accordance with Caltrans' decision.

- D. This "Disputes" article does not preclude considerations of law questions in connection with decisions provided herein above: Provided, that nothing in this Transportation Research Master Agreement or in a RTA shall be construed as making final the decisions of any administrative official or board on a question of law.

Attachment A
HOW TO PREPARE THE FINAL REPORT

Generally, the final tasks of conducting a research project are preparing the draft final report and publishing and distributing the final report. Normally, the final report is in the form of a formal written report. However, it may include a slide presentation, video tape, filmstrip, etc.

The acceptability of a final report is judged on three criteria: (1) fulfillment of research objectives; (2) adequacy of documentation; (3) clarity of presentation. The final report must fully document the research work which was done. It should include convincing evidence to back up any conclusions and recommendations. Ideally, the user will have no lingering questions about the validity of the findings after reading the report. Thus, implementation can be done quickly and enthusiastically. There should be a short implementation section in the report which states clearly and concisely how the findings will be used and who will be responsible for the implementation.

The researcher should remember that even if a new device or process being studied is a failure, the research project is "successful". Therefore, it is equally important to document the work completely, state clearly in the report that the findings were not consistent with the hypothesis, and disseminate the findings. The potential users need to understand why the ideas were rejected. When the report is distributed to the research and user community, the unsuccessful ideas may not get repeated. All of this information contributes in the effort to perform the best work possible in Caltrans. Since much research is federally funded, it also optimizes the work of many other states.

Whether research findings were as anticipated or not, the projects may wind down with some questions unresolved or new questions generated. The final report should list any needed future research.

Some research report drafts, such as those on highway safety subjects, should be reviewed by the Legal Division. They sometimes suggest wording changes which do not change the meaning of conclusions or implementation statements, but help keep Caltrans out of trouble in legal cases. Some reports written 30 years ago are still used as evidence in legal cases.

All reports submitted to the Transportation Research Board (TRB) must follow the guidelines contained in the annual TRB booklet titled "Information for Authors and Speakers".

Each final report written by or for the Department should contain the elements listed below and in this order:

- Cover Page
- Title Page
- Technical Report Documentation Page,
(Form # DOT-F-1700.7)
- Table of Contents
- Illustrations and Tables
- Disclosure Section
- Disclaimer
- Foreword, Preface, or Acknowledgments
- Introduction
 - Overview of Report Contents
 - Problem
 - Background and Literature Search
 - Objectives and Scope
- Body of Report/Technical Discussion
 - Test Conditions
 - Test Facility
 - Test Equipment
 - Instrumentation
 - Test Article or Material or Site
 - Test Methods and Procedures
 - Test Parameters
 - Test Results (Factual Only)
 - Evaluation (Results analyzed, evaluated, compared against standards, judgments made)
- Conclusions and Recommendations
- Implementation
- Appendices
 - Details on Test Equipment, Methods, etc.
 - Raw Test Data
 - Detailed Drawings, Specifications
 - Side Issues
- References, Literature Cited, or Bibliography

FIGURE 5-3

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle		5. Report Date	
		6. Performing Organization Code	
7. Authors		8. Performing Organization Report No.	
9. Performing Organization Name and Address California Department of Transportation New Technology and Research, MS-83 P.O. Box 942873 Sacramento, CA 94273-0001		10. Work Unit No.	
		11. Contract or Grant No.	
12. Sponsoring Agency Name and Address California Department of Transportation Sacramento, CA 95819		13. Type of Report and Period Covered	
		14. Sponsoring Agency Code	
15. Supplementary Notes This project was performed in cooperation with the U.S. Department of Transportation, Federal Highway Administration.			
16. Abstract			
17. Key Words		18. Distribution Statement No restrictions. This document is available to the public through the National Technical Information Service, Springfield, VA 22161	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages	22. Price

The following paragraphs describe each report element.

- Cover- Examples are available upon request from the Office of Research.
- Title Page- Examples are available upon request from the Office of Research.
- Technical Report Documentation Page-Form DOT-F-1700.7 - the first right hand page after the cover for all published research reports (See Figure 5-3). Numbers in boxes 1, 8 and 11 are provided to the author by the Office of Research. Instructions to complete the form are as follows:

Block 1 Report Number

This number is the same as the one appearing on the cover of the report. For reports on in-house research, the number is derived in the following manner:

Example: FHWA/CA/TL-93/19

FHWA: Abbreviation of federal agency (in this example, Federal Highway Administration) participating in the research. If the research project does not include federal participation, start the report number with CALTRANS, in lieu of CA, and continue as indicated below. The following paragraphs describe each report element.

CA: State of California

TL: Office of Transportation Laboratory, the responsible unit for the research project. For other Offices or Programs, inquire with the Office of Research.

93: The calendar year in which the report was submitted to the appropriate project manager for approval.

19: For the Program, Office, or District, the serial number denoting the sequential order in which the report was submitted for approval during the calendar year. For reports compiled on research performed under outside contract, the report number will be furnished by the Office of Research. Do not use a locally created report number.

Block 2 Government Accession Number
leave blank.

Block 3 Recipient's Catalog Number
leave blank.

Block 4 Title and Subtitle

The title should be the same as the one appearing on the cover of the report. Capitalize all letters of the title. When a report is prepared in more than one volume, this block should show the main title plus the volume number and the subtitle for the volume being reported.

Block 5 Report Date

This date should agree with the one appearing on the cover and should normally be the month and the year of the submittal of the report to the appropriate functional manager for approval.

Block 6 Performing Organization Code
leave blank.

Block 7 Author(s)

List name(s) and author's affiliation if it differs from the performing organization.

Block 8 Performing Organization Report Number

For in-house projects that are part of the SP&R Program or are being conducted under direct contract for others, show the Responsible Unit's source code and the appropriate expenditure authorization. For outside research projects that are part of the SP&R Program or for non-participating studies, leave this item blank.

Block 9 Performing Organization Name and Address

Give name, city, state and zip code. List no more than two levels of the organization.

For in-house reports, the program office or district responsible for the research project should be listed, such as:

New Technology and Research
California Department of Transportation
Sacramento, California 94273-0001

Block 10 Work Unit Number
leave blank.

Block 11 Contract or Grant Number

Show the project identification number. If this space is left blank, the report will not be accepted by the National Technical Information Service (NTIS).

Block 12 Sponsoring Agency Name and Address

This would normally be shown as:

California Department of Transportation
Sacramento, California 95814

However, if the research project for which the report has been written is being conducted under direct contract for others, the name of the applicable, sponsoring organization and its address should be shown.

Block 13 Type of Report and Period Covered

Indicate either interim or final report. For interim reports, indicate the time period covered if pertinent.

Block 14 Sponsoring Agency Code

Leave blank.

Block 15 Supplementary Notes

If appropriate, indicate that the study was conducted in cooperation with the U.S. Department of Transportation, Federal Highway Administration. In addition, insert the study title if it is different from the report title. If the report title is a multivolume and is identified as "Vol. 2" or "Vol. 3", note whether the preceding volume(s) has (or have) been published and, if so, indicate the source.

Block 16 Abstract

Include a brief (not to exceed 200 words) factual summary of the most significant information contained in the report. This should include advice on how the results of the research can be used or applied, when applicable.

Guidelines for Writing an Abstract - The author of the abstract should have a set of questions in mind while preparing the abstract. Three of the questions are primary because the answers will generally bring out the major concepts of the report.

Primary Questions

- (a) What relations among variables are discussed?

Nearly all research is devoted to the study of relations among variables. The relations will often be expressed as:

"the effect of" (independent variables) "on" (dependent variables) e.g., the effect of temperature and loading rate on pavement deflection; or as:

"the correlation of" (correlated variables) e.g., the correlation of profile with profile y.

- (b) What processes are discussed?

The answers to this question will be the major concept in a number of documents. The process name may be analysis, evaluation, construction, development, weathering, simulation and will involve inputs and outputs.

- (c) What other subjects are discussed?

A report may contain major subjects that are neither relations nor processes in the context (e.g., modal preference, limitations, origin and destination)

For each relation, process, or other subject that is found in answer to the primary questions, three secondary questions are to be asked.

Secondary Questions for Each Answer to a Primary Question

(a) What are the results or conclusions reached in the study, i.e., for the relations, processes or other subjects?

Answers to these questions indicate what was learned from the study or concluded from the discussion often in terms of applications and uses introduced by the words "for," "to be used for," "to be applied to".

(b) What scope and limitations are given for the study, i.e., for any relation, process or other subject?

Answers to these questions will often be the objects of prepositions and include time or space location (e.g., at night, in California); climate (e.g., during frost periods), ambient conditions (e.g., at high humidity), hosts for variables (e.g., deflection of asphalt concrete, profile X as measured by the CHLOE Profilometer), and other scope definers (e.g., stock piling of aggregates in bins, weight limitations for trucks).

(c) What methods are employed in the study?

Answers will include devices, procedures and other means of accomplishment often preceded by words such as, "by means of" (e.g., shadow vehicle, regression analysis, computer modeling, freeze-thaw apparatus, home interviews).

Thus, to analyze the Content of Report: Determine all answers to questions 1, 2, and 3. For each of these answers, determine answers for a, b, and c.

To Abstract Contents of Report: Arrange answers with regard to importance, compactness, grammar and readability. Omit general discussion and insignificant details.

Block 17 Key Words

Select terms or short phrases that identify the principal subject in the report and words that are sufficiently specific and precise to be used as index entries for cataloging. The authorized term index in the TRIS Thesaurus may be helpful in this regard.

Block 18 Distribution Statement

If the report is on a federally participating project, or is being conducted under a direct contract with a federal agency, state:

"No restrictions. This document is available to the public through the National Technical Information Service, Springfield, Virginia 22161."

For non participating studies, use the above statement if the report will be available to NTIS. Otherwise, leave blank.

Block 19 Security Classification (of this report)

Insert the word, "Unclassified."

Block 20 Security Classification (of this report)

Insert the word, "Unclassified."

Block 21 Number of Pages

Insert the total number of pages including title page and other front matter pages.

Block 22 Price

Leave blank.

- Table of Contents—an organized listing of important report sections in outline form, with beginning, but not inclusive, page numbers. Outline numberings or letterings, if any, are carried only before main items: Column heads (as "Chapter" or "Section" on the left, and "Page" on the right) and dot leaders may or may not be used. At the beginning of the outline, a list of "Appendixes," etc., may appear, with the heading centered but no dividing line above it.

- Illustrations and Tables—"List of" is unnecessary, a list of main titles, all illustrations, except tables are called "Figures," and may include drawings, diagrams, maps, charts, or graphs and photographs (which may be called "plates" if grouped on one page or printed singly on special paper.) Column heads "Figure" or "Table" on the left and "Page" are usually used. "Tables or Illustrations" may appear at the foot of the "Contents" or on a separate page in the front or end matter.

If there are many illustrations, number consecutively as they are referred to in the text as "Figure 1" (usually "Fig. 1") below the illustration and preceding or above its title in initial caps.

- Disclosure Section—(for outside research under contract) A disclosure statement must be included in all published interim and final reports prepared for Caltrans by the contractor. The purpose of the statement is to identify the number and dollar amounts of all contracts or subcontracts in excess of \$5,000 relating to the preparation of the report.

The contractor is free to copyright material, including interim reports and final reports, developed under the contract with the provision that the Department and the FHWA reserve a royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, the work for government purposes.

- Disclaimer Statement—Reports must include a disclaimer statement in or before the introduction. For research reports involving FHWA participation, the disclaimer statement shall say verbatim:

"The contents of this report reflect the views of the author(s) who is (are) responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the STATE OF CALIFORNIA or the FEDERAL HIGHWAY ADMINISTRATION. This report does not constitute a standard, specification, or regulation."

- Foreword, Preface and Acknowledgments—each should be placed on a separate page, or the last two may be combined. More impersonal than, and usually replaces a letter of transmittal. These items are normally presented as part of the front matter but could be placed in the end matter. (Financial support is acknowledged as "This work was supported by . . .")

- Introduction—first, introduce the report by clearly identifying the exact subject being considered and how the final report is organized.

Next, identify the problem that lead to the research project and how it relates to prior research and to other current research. Then indicate the research project's objectives, as shown in the research proposal and any later supplements, and briefly summarize how the research findings respond to each specific research objective. Lastly, relate the significance of the research findings to the overall operations of the Department.

Keep the introduction brief and concise. This section should not contain details of any state-of-the-art survey, test procedure, or mathematical analysis.

- Body—In general, the body of the report should contain a statement of the research procedure(s) in sufficient detail to permit the research to be replicated. Also include a description of the data recorded, a detailed statement of how the data was analyzed, and a summary of the analyses. The data may be in an appendix or not presented.

Any problems encountered during the progress of the research should be described in the body of the report. Also include a discussion of the meaning of the relationships observed or derived from the research.

- Conclusions and Recommendations—As appropriate, provide detailed quantitative statements of those relationships that were found to exist. Also provide a description of the tests used for significance and the degree of confidence one may have in the stated findings.
- Implementation—This statement should point out any immediate practical application of the research findings. It should be prepared cooperatively by the principal investigator and the co-principal investigator(s) from potential implementing offices. Also, it should provide answers to such questions as the following:

Did the findings warrant or aid:

- the application of new procedures?
- the issuance of new specifications, standards or designs?
- the use of new materials?
- the development of new equipment?
- the rejection of a proposed new procedure?
- a determination that no problem exists
- other positive benefits?
- no conclusions, but suggest other research needed, and why?

• Include a recommended procedure for implementation, and describe the methods used to translate the research product into implementable form. Describe any potential benefits to be derived from implementing the research findings. Such potential benefits should be in terms of savings in time, money, lives, increased safety, better service, improved aesthetics, improved environment, increased energy efficiency, enhanced capability of solving transportation problems that may become available to the engineering, planning or related professions, and other user and nonuser benefits. When savings can be expressed in terms of dollar amounts, estimate the first year savings, and the subsequent average annual savings anticipated upon application of the research results.

If the findings are positive, but not suitable for immediate application, indicate the extent of additional work needed to produce results suitable for implementation; e.g., testing for verification, combining, correlating and interpreting additional research, etc.

If significant implementation is proposed that could be profitably shared or an implementation plan will be prepared, such information should be included. For more information, see Section 6000, Implementation and Technology Transfer.

- Appendices or Appendixes— the supplementary material titled and identified A, B, C; or 1, 2, 3; or I, II, III if Roman numerals have not been used for Chapters. Appendices include information such as supporting data, substantiation of evidence, documentation, charts, photographs, and other details referred to in the text (usually by footnotes) not appropriate for the body of the report.
- References, Literature Cited, or Bibliography—a list of books or other authoritative writings that have been cited ("called out") in the text as "stated by Lee (1968, p.12)," or "(Ref. 6)," or just "(3)," and which have not been carried in footnotes or listed at the end of each chapter. They may be arranged here alphabetically, or numerically to correspond to their citation numbers in the text.

A bibliography is a listing of pertinent or consulted literature, usually uncited in the report text. The list may be divided according to subject or type of writing.

Attachment B

PUBLICATION OF DELIVERABLE REPORTS PROVISIONS
July 1, 1996

(A) General - The word, "State", as used herein refers to the California Department of Transportation.

These Publication Provisions are to provide for adequate documentation of the completed contract obligations, to encourage publication and distribution of research information, and to protect the State and/or the Federal Highway Administration from unwarranted implication of policy or concurrence with the conclusions of the contractor.

(B) Review of reports - The process of the State's review of the drafts of interim and final research reports to ensure adequate compliance with provisions of this agreement will include:

1. A general technical review to ensure that all aspects of the study provided for by this agreement have been adequately carried out and documented. Correction of deficiencies found in this review is a requirement for the State's acceptance of partial or final fulfillment of the agreement objectives.

2. Consideration as to whether or not the organization, language and content of the report are presented in a manner which will be intelligible to its intended audience. Reports on studies which produce an implementable product in the form of a device, procedure or the like must be written in a manner understandable to the user. Where studies conclude with intermediate research results, they may be written in the language of that research field but must contain a technical summary in terms intelligible to the user of the ultimate system to which the research is expected to contribute and in sufficient detail to permit the practicing engineer to implement the items. Correction of deficiencies found in this review is also a requirement for the State's acceptance of a report as satisfactory documentation of the agreement requirements.

3. An analysis of the recommendations and conclusions of the report in relationship to the data and theories developed therein to determine whether or not the State concurs that the contractor's recommendations and conclusions are supported by the data. Recognizing that professional differences of opinion do arise, the concurrence of the contractor with review comments of this type is not a requirement for acceptance, but may affect decisions regarding State distribution of the report and use of the research results.

4. General comments on the technical content and presentation may be furnished for the optional use of the author in preparing the manuscript for publication.

(C) Acknowledgment and disclaimer statements - All reports published by the Contractor under provisions of this agreement shall contain the following:

1. A credit reference: "Prepared in cooperation with the State of California, Business and Transportation Agency, Department of Transportation".

2. A disclaimer statement:

a. State funds only -

"The contents of this report reflect the views of the author who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California. This report does not constitute a standard, specification, or regulation".

b. Federal participating funds -

"The contents of this report reflect the views of the author who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation"

(D) Publication rights - Reports prepared by the contractor under provisions of this agreement may be published under the following conditions:

1. Any material contained in interim or final reports which have received final acceptance by the State may be published in any form and through any media the contractor may desire without further written permission by the State, Subject only to the inclusion of credit and disclaimer statements of Sections C-1 and C-2 of these Publication Provisions.

2. In the event that the contractor cannot agree with the comments of the State, the contractor may publish the material contained in the report 70 days after it has been resubmitted in final form to the State subject to the inclusion of (1) a statement that the State does not concur with the findings and conclusions of the research and (2) the credit and disclaimer statements of Sections C-1 and C-2 of these Publication Provisions. In the event of said lack of agreement, the contractor may include the State's technical comments in the report in a clearly identified section such as "Sponsor's Comments".

3. The State review of draft final reports will normally be completed within 45 days. In the event that the State fails to provide the contractor with any comments on the draft report within 45 days of its submission by the contractor, the contractor may proceed to the preparation of the final manuscript and its submission for formal acceptance in documentation of completion of contract objectives. The State will authorize the contractor to publish the material contained in the report after it has been resubmitted in final form to the State, subject to the inclusion of (1) a statement that the State has not completed its review of the report and (2) the credit and disclaimer statements of Sections C-1 and C-2 of these Publication Provisions.

(E) Dissemination of results - The contractor may submit for publication deliverable technical reports to professional organizations subject to these Publication Provisions. Both written and oral releases are considered to be within the context of publication. However, there is no intention to limit discussions of the study with small technical groups or lectures to employees or students. Lectures to other groups which describe the plans but disclose neither data nor results are permissible without advance review by the State.

(F) Presentation of papers and articles - In unusual cases when the scheduled time for the preparation of a technical paper, containing previously undisclosed findings, for presentation at professional meetings or submission to professional organizations does not permit time for formal review and acceptance, an abstract and notification of intent to present the paper should be submitted for State concurrence. Such concurrence will normally be given unless there is indication of new and controversial findings and conclusions based on data which the State has not been given adequate opportunity to review. To protect the interest of the State such presentation should contain (1) a statement that the State has not reviewed the paper and (2) the credit and disclaimer statements of Sections C-1 and C-2 of these Publications Provisions. Draft copies of these papers should be submitted for State review as soon as completed.

(G) Copyright - The contractor shall be free to copyright material developed under the agreement with the provision that the State reserve a royalty-free, nonexclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, the work for Government purposes.

APPENDIX A

DEPARTMENT OF TRANSPORTATION

This appendix applies to all subcontracts over \$25,000.00. During the performance of this contract, the Contractor for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

(1) Compliance with Regulations: The Contractor shall comply with regulations relative to Title VI (non-discrimination in federally-assisted programs of the Department of Transportation - Title 49 Code of Federal Regulations Part 21 Effectuation of Title VI of the 1964 Civil Rights Act). Title VI provides that the recipients of federal-assistance will implement and maintain a policy of nondiscrimination in which no person in the state of California shall, on the basis of race, color, national origin, religion, sex, age, disability, be excluded from participation in, denied the benefits of or subjected to discrimination under any program or activity by the recipients of federal assistance or their assignees and successors in interest.

(2) Non-discrimination: The Contractor, with regard to the work performed by it during the contract shall act in accordance with Title VI. Specifically, the contractor shall not discriminate on the basis of race, color, national origin, religion, sex, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the U.S. DOT's Regulations, including employment practices when the contract covers a program whose goal is employment.

(3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the Contractor's obligations under this contract and the Regulations relative to non-discrimination on the grounds of race, color or national origin.

(4) **Information and Reports:** The Contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the State Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the State Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the non-discrimination provisions of this contract, the State Department of Transportation shall improve such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- (a) withholding of payments to the Contractor under the contract until the contractor complies, and/or
- (b) cancellation, termination or suspension of the contract, in whole or in part with.

(6) **Incorporation of Provisions:** The Contractor shall include the provisions of paragraph (1) through (6) in every Subcontract, including procurements of materials and leases of equipment, unless exempt by the regulations or directives issued pursuant thereto. The contractor will take such action with respect to any subcontractor or procurement as the State Department of Transportation or The Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the State Department of Transportation to enter into such litigation to protect the interest of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

APPENDIX B

DEPARTMENT OF TRANSPORTATION
DBE REQUIREMENTS
(FEDERAL FUNDS WITHOUT GOALS)
DAS—OBM—373 (4/20/88)

DISADVANTAGED BUSINESS ENTERPRISE - This project is subject to Part 23, Title 49, Code of Federal Regulations, as amended April 27, 1981. The Regulations in their entirety are incorporated herein by reference.

It is the policy of the Department of Transportation that disadvantaged business enterprises (DBEs) as defined in said Part 23, Title 49 CFR shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. The Contractor shall ensure that DBEs, as defined in said Part 23, have the maximum opportunity to participate in the performance of this contract and shall take all necessary and reasonable steps, as set forth in said Part 23, for such assurance. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts. Failure to carry out the requirements of this paragraph shall constitute a breach of contract and may result in termination of this contract or such other remedy the Department may deem appropriate.

Bidders shall be fully informed respecting the requirements of the Regulations and are urged to obtain DBE participation in this project, although there are no specific goals for DBE participation. After completion of the project, if DBE participation is obtained, with a complete description and the dollar value of work or supplies provided by each such DBE transaction.

DBE RECORDS - The Contractor shall maintain records of all subcontracts entered into with DBE subcontractors and records of materials purchased from DBE suppliers. Such records shall show the name and business address of each DBE subcontractor or vendor and the total dollar amount actually paid each DBE subcontractor or vendor.

Upon completion of the contract, a summary of these records shall be prepared and certified correct by the Contractor or his authorized representative, and shall be furnished to the Contract Administrator.

RECEIVED

OCT 25 1996

RESEARCH ADMINISTRATIVE