

January 29, 2010

Dr. Paul R. Lowe; Assistant Vice President for Research
Kansas State University
2 Fairchild Hall
Manhattan, Kansas 66506-5103


Dear Mr. Lowe:

We have enclosed an executed copy of a contract coversheet for the following project:

C1859 KSU (TPF-5(220); RE-0451-01) "Accommodating Oversized/Overweight Vehicles at Roundabouts – Pooled Fund Study."

Sincerely,

Richard E. Kreider Jr., P.E., Bureau Chief
Materials and Research

A handwritten signature in black ink that reads "Rodney A. Montney". The signature is written in a cursive style with a large, stylized "R" and "M".
Rodney A. Montney, P.E.
Engineer of Research

c: Eugene Russell, Ph.D., Professor Emeritus of Civil Engineering, KSU (w/a)
E. Dean Landman, Adjunct Professor of Civil Engineering, KSU (w/a)
Steve King, Bureau of Design/Road (w/a)
Susan Barker, P.E., Bureau of Materials and Research (w/a)
Becky Welsh, Bureau of Materials and Research (w/a)
Darleen Bernhardt, Bureau of Materials and Research (w/a)

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AGREEMENT FOR TECHNICAL ASSISTANCE
BETWEEN THE SECRETARY OF TRANSPORTATION
AND THE
KANSAS STATE UNIVERSITY

THIS AGREEMENT made this 14th day of January 2010, by and between the Secretary of Transportation of the State of Kansas, hereinafter referred to as the "Secretary," and the Kansas State University, hereinafter referred to as "KSU," acting by and through Paul R. Lowe, Assistant Vice President for Research, its duly authorized representative. Collectively referred to as the "Parties."

WITNESSETH

WHEREAS, the Secretary has determined that research regarding "Accommodating Oversized/Overweight Vehicles at Roundabouts Pooled Fund Study" is needed; and

WHEREAS, the proposed program is hereinafter called "Project;" and

WHEREAS, KSU has expressed an interest in performing the research and has qualified personnel with demonstrated expertise available to conduct the Project; and

WHEREAS, the Secretary is willing, subject to the terms of the Agreement, to reimburse KSU for the assistance provided.

NOW THEREFORE in consideration of the mutual covenants herein contained, the Parties hereto agree as follows:

Section 1. Scope of Services. The KSU shall furnish the necessary personnel, facilities and such other services as may be required to fulfill the tasks identified and described in the Proposal which is attached hereto and incorporated herein as Special Attachment No. 1.

Section 2. Contract Dates. The KSU may commence work in conformity with the Proposal (Special Attachment No. 1) of this Agreement upon acceptance by Secretary of the Proposal and shall prosecute the work outlined herein to begin on or after January 1, 2010, with completion not later than December 31, 2011, unless the time is extended by the Secretary, as evidenced in writing. In the event final approval of appropriation is not obtained, the Secretary will be responsible for only those noncancelable obligations incurred by KSU for work under this Agreement.

Section 3. Basis of Payment. The Secretary agrees to reimburse the KSU for the work completed and actual costs incurred in performance of the Agreement in accordance with the proposed budget, page 5 of the Proposal, in an amount not to exceed a total price of \$195,000.00. The project costs referred to in this Agreement shall be comprised of the allowable direct costs incidental to the performance of the work described in the Proposal and indirect costs. Indirect costs shall not exceed forty-eight percent (48%) of the total allowable modified total direct costs to the extent that Federal-aid funds are used for payment. In the event that final approval of Federal appropriation is not obtained, the Secretary will be responsible for only those noncancellable obligations incurred by KSU for work under this Agreement.

The Secretary agrees to make progress payments to the KSU upon presentation of proper billing to the Secretary. Certification of work performed will be documented by progress reports required under Section 11 of the Agreement to support costs claimed. Upon receipt of monthly expenditure reports, the

Secretary will reimburse allowable costs as requested by the KSU. The KSU shall indicate on the last Project billing that it is the final billing. The final request for payment shall not be disbursed until the Secretary determines that all obligations of the Agreement have been completed. Reimbursement of any cost pursuant to this Section shall not constitute a final determination by the Secretary of the allowability of such cost and shall not constitute a waiver of any violation of the terms of the Agreement committed by the KSU.

Written approval by KDOT will be required to extend a completion date or increase the total budget amount. Revisions on line items will not require written approval by KDOT. The Principal Investigator will notify the KDOT Project Monitor of planned changes to the work described in the proposal.

The test of allowability of a cost to be applied in the Agreement is based on the reasonableness of the allocation of the cost under generally accepted cost, accounting principles and practices and in accordance with 48 Code of Federal Regulations (CFR), Ch. 1, part 31 et. seq., and relevance to tasks identified and described in the Proposal. However, such costs are subject to limitation as per Agreement.

The final payment due under provisions of the Agreement shall be made within ninety (90) days after the Secretary's and the appropriate Federal Agency's acceptance and approval of the Final Evaluation Report and KSU's compliance with OMB A-133, Audits of States, Local Governments, and Non-Profit Organizations.

Section 4. Covenant Against Contingent Fees. The KSU warrants and guarantees that provisions for covenants against contingent fees found in Special Attachment No. 2 are incorporated in this Agreement and made a part hereof. For breach or violation of this warranty, the Secretary shall have the right to annul this Agreement without liability, or in his or her discretion to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

Section 5. Rights in the Project.

A. **Rights in Data.** The KSU grants to the Secretary, for any governmental purposes, the right to publish, translate, reproduce, deliver, use and dispose of, and to authorize others to do so, all data, including reports, drawings, blueprints, computer software which includes but is not limited to documentation and source code, and other technical information resulting from the performance of work under this Agreement. When the Secretary authorizes others to use, for governmental purposes, any patented or copyrighted items arising from the project, the Secretary will issue a standard restriction agreement to each party receiving authorization for return to KSU.

B. **Rights in Intellectual Property.** Consistent with KDOT and Board of Regents policy, the KSU will retain all rights to intellectual property including patents and copyrights arising from the Project. The Secretary shall retain a royalty-free, nonexclusive, irrevocable license to use any patent or copyright arising from the project for any governmental purposes. If the KSU elects not to pursue the patenting or copyrighting of intellectual property, the KSU will provide written notification to the Secretary who shall be free to do so. The KSU agrees to include, within the specification of any United States patent or copyright application and any patent and copyright issuing, the following statement, "The invention (copyright) was made with funds provided by the State of Kansas through the Kansas Department of Transportation."

C. **Confidentiality.** Secretary and KSU agree that information exchanged and generated pursuant to this Agreement, will generally be non-confidential and suitable for publication. Nevertheless the Secretary, or

his or her duly authorized representatives may disclose to KSU, during the course of the project, confidential information including data and statistics not suitable for public dissemination. KSU agrees to maintain such information in confidence, and to prevent the disclosure thereof to others to the extent that such information is disclosed in writing and marked as confidential or proprietary; if orally disclosed, noted at the time of disclosure as being confidential and or proprietary, and reduced to writing within thirty (30) days after such oral disclosure, the writing being marked as confidential or proprietary. KSU agrees that neither the KSU nor any of its colleagues, employees or agents shall use any of the confidential information for any purpose whatsoever, other than to complete this assignment for KDOT. The KSU agrees that the KSU or any of its colleagues, employees or agents shall not keep any copies of the information provided by the Secretary or his or her duly authorized representatives that has been identified as confidential or proprietary, and provided pursuant to this Agreement.

D. Rights in Equipment. It is mutually agreed by the KSU and the Secretary that all apparatus and equipment purchased with funds provided by the Secretary shall be used by the KSU for the Project and shall become property of the KSU upon completion of the Project subject to the following provision:

*Those Uniform Administrative Requirements contained in 49CFR Part 19 shall govern the purchase, use and disposition of equipment covered by this Agreement.

Section 6. Work Responsibility. The Parties hereto mutually agree that the services to be performed under the terms of this Agreement are to be performed by the Principal Investigator and others named in the Proposal under the guidance and supervision of KSU and that their time and effort as defined in the proposal, Special Attachment No. 1 cannot be assigned, sublet, or transferred to any other party without the written consent of the Secretary. KSU accepts full responsibility for the Project and its conduct. The KSU will bill Secretary for reimbursement as specified in the Agreement as awarded.

Section 7. Inspection and Approval of Work. The KSU shall permit the Secretary or his or her duly authorized representative to inspect and audit all work, material, computer programs and other data and records either during the performance of the project or for three (3) years from the date of the final payment to the KSU under the Agreement. All work will be performed according to the requirements as outlined in the Proposal, Special Attachment No. 1. Final Inspection of the Project will be conducted by the Secretary or his or her duly authorized representative.

Section 8. Publication Provisions. Publication by any party to this Agreement shall give credit to all other parties. However, if the Secretary does not wish to subscribe to the findings or conclusions of an interim report, the following statement shall be added: "The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the Kansas Department of Transportation and the U. S. Department of Transportation."

In the event of failure to reach a consensus between the Secretary and the KSU relative to the publication of a final report, or any other reports during the period of the Agreement, the Secretary reserves the right to publish independently in which event the nonconcurrence of the KSU shall be set forth in said publication, if requested by the KSU.

Section 9. Audit and Retention of Records. Arrangements shall be made by the KSU for the required financial and compliance audit to ensure that the audit will be made within the prescribed audit reporting cycle, and a copy of the OMB A-133 audit will be provided to the Secretary.

The KSU shall be required to maintain accounting records and other evidence pertaining to the costs incurred and to make the records available to their office at all reasonable times during the Agreement

period and for five (5) years from the date of the final payment to the KSU under this Agreement. Such accounting records and other evidence pertaining to the costs incurred will be made available for inspection by the Secretary or his or her duly authorized representatives and copies thereof shall be furnished if requested.

Section 10. Termination of Agreement. Either party has the right to terminate this Agreement by giving thirty (30) days written notice in the event a determination is made that the Project should be abandoned or indefinitely postponed; PROVIDED, however, that in any case, the KSU shall be paid the amount due for the services rendered and for any non-cancelable obligations incurred prior to the date of termination on the basis of the provisions of this Agreement and provided that the Secretary shall receive full reports of all work performed to the date of termination of this Agreement.

Section 11. Reports. The KSU shall advise the Secretary regarding the progress of the Project at such times and in such a manner as the Secretary may require, including but not limited to the following:

- 1) a monthly expenditure report, and
- 2) a quarterly progress report.

Section 12. Cooperation and Disputes. The Secretary and the KSU agree to make a reasonable effort to promptly resolve any disputes or questions concerning the Project. The Secretary and the KSU ensure that personnel will cooperate fully in carrying out the intent and provisions of this Agreement. The Secretary shall, in all cases not disposed of by agreement among or between the Parties to this Agreement, resolve any disputes which may arise in connection with the work being performed under this Agreement.

Section 13. Compliance with Laws. The KSU agrees to comply with all federal, state and local laws, ordinances and regulations in the implementation of the administrative service provided for in the Agreement, including but not limited to 49 CFR part 19, Title VI, Title VII and Title IX of the Civil Rights Act of 1964, Executive Order 11246 as amended by Executive Order 11375 entitled "Equal Employment Opportunity," Executive Order 12549 regarding debarment, eligibility, indictments, convictions, or civil judgments; and 31 U. S. C. Section 1352; Section 319 P.L. 1010.21 prohibiting use of Federal funds for lobbying activities which are incorporated herein as Special Attachments Nos. 3, 4, and 5, respectively.

Section 14. Responsibility to Employees. The KSU accepts full responsibility for payment of unemployment insurance, workmen's compensation, and social security as well as all income tax deductions and any other taxes or payroll deductions required by the law for its employees engaged in the work authorized by the Agreement.

Section 15. Employment of Secretary's Employees. The KSU will not, without written permission from the Secretary, engage the services of any person or persons in the employment of the Secretary for any work required by the terms of the Agreement.

Section 16. Contractual Provisions Attachment. The provisions found in contractual Provision Attachment Form DA-146a, Special Attachment No. 6, which is attached hereto, are hereby incorporated in this Agreement and made a part hereof.

Section 17. Indemnification Agreement. The KSU agrees to indemnify and hold harmless the Secretary and the Secretary's duly authorized representatives from any and all costs, liabilities, expenses, suits, judgments, damages to person or property or claims of any nature whatsoever arising out the negligent acts of the KSU, the KSU employees or subcontractors, in the performance of this Agreement. The KSU shall not be required to indemnify and hold the Secretary harmless for negligent acts of the Secretary or

his or her duly authorized representatives or employees. Nothing in this indemnification clause is meant to affect Section 4 Disclaimer of Liability of DA-146a, Special Attachment No. 6.

Section 18. Prohibited Interest. No member, officer or employee of the KSU during his/her tenure or one year thereafter shall have any interest, direct or indirect, in this Agreement or the proceeds thereof other than that allowed by Board of Regents policy.

IN WITNESS WHEREOF the Parties hereto have caused this Agreement to be signed by their duly authorized officers on the day and year first above written.

KSU

Secretary

Paul R. Lowe 1-6-10

Paul R. Lowe
Assist. Vice President for Research

Debra L. Miller

Debra L. Miller
Secretary of Transportation
By: Jerome T. Younger, P.E.
Deputy Secretary for Engineering and
State Transportation Engineer

De Ann Bratten

ATTEST

Kathy Holthaus
ATTEST



Special Attachment No. 1, Proposal
Special Attachment No. 2, Certification - Covenant Against Fees
Special Attachment No. 3, Civil Rights Act
Special Attachment No. 4, Certification – Debarment
Special Attachment No. 5, Certification – Federal Aid Contracts
Special Attachment No. 6, form DA-146a

**Proposal to
Kansas Department of Transportation
for**

Accommodating Oversized/Overweight Vehicles at Roundabouts Pooled Fund Study

Transportation Pooled Fund Study Number TPF-5(220)

Period of Performance: Jan.1, 2010- Dec. 31, 2011

Project Monitor: Steve King

K-TRAN Funds Requested: \$195,000

Principal Investigators:

Eugene R. Russell, Professor Emeritus

E Dean Landman, Adjunct Professor 2118 Fiedler Hall

Department of Civil Engineering

Submitted by:

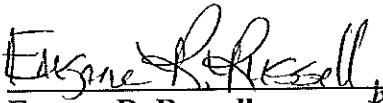
Kansas State University

2 Fairchild Hall

Manhattan, KS 66506-1103

Dec 2009

APPROVED:



**Eugene R. Russell
Professor Emeritus**

APPROVED:



**Paul R. Lowe
Assist. Vice President for Research**

TABLE OF CONTENTS

I.	Project Title.....	1
II.	General Problem Statement	1
III.	Background	1
IV.	Work Plan and Schedule.....	2
V.	Estimates of Funding and Research Period	3
VI.	Urgency and Potential Payoff.....	4
VII.	Implementation Strategy	4
VIII.	Project Personnel	4
IX.	Submission Information.....	4
X.	Detailed Budget	5

I. PROJECT TITLE

Accommodating Oversize/Overweight Vehicles at Roundabouts Pooled Fund Study

II. GENERAL PROBLEM STATEMENT

The safety and traffic operational benefits of roundabouts for the typical vehicle fleet have been well documented. Although roundabouts have been in widespread use in other countries for many years their general use in the United States began only in the recent past, but their use is growing. Roundabouts can offer several advantages over signalized and stop controlled alternatives, including better overall safety performance, lower delays, shorter queues, better management of speed and opportunities for community enhancement features. In some cases roundabouts can avoid or delay the need for expensive widening of an intersection approach that would be necessary for signalization.

However the potential use of roundabouts with all their benefits is greatly diminished because they may not accommodate oversize/overweight vehicles (superloads). This is the central issue and the need for this research.

III. BACKGROUND

The design vehicle for a roundabout, as in any design, should be the largest vehicles that can reasonably be anticipated for normal use. However, Superloads are vehicles that use the roadway by special permit and travel on a random basis. Further their physical characteristics greatly exceeds the dimensions given for trucks in and "A Policy on Geometric Design of Highways and Streets." (AASHTO, 2004)

Superloads impact pavement structure, roadway geometrics and traffic operations. Superloads are a reality for American industry and often critical for certain industries. In Kansas these vehicles average 122 feet long, 12'9" wide and almost 15 foot high and have an average weight of 218,000 pounds. In addition, many of the trailers have low clearance above the roadway surface. Kansas has experienced a significant increase in the number of these loads moving through the state. In 1999 there were 433 total loads that grew to 6,402 total loads in 2007. It is believed that this situation is similar to many other states. A better understanding and sharing of current practices is essential for states that permit such movements, and the industry which must rely on state highways and a permit to deliver large loads.

Roundabouts are intentionally designed to operate at slower speeds, by using narrow curb to curb widths and tight turning radii. However, if the design geometrics are too restrictive, roundabout use by the Superloads may be difficult or even impossible. Therefore, the central issue is how to accommodate Superloads without sacrificing the integrity of the roundabout. Typical Superloads are routed around roadway restrictions such as certain bridges, narrow roadways, etc. However, with the popularity of

roundabouts and the benefits they provide, such routing is becoming more difficult and could lead to reduced or prohibited roundabout use.

IV. WORK PLAN AND SCHEDULE

A. Research objective

This research project is necessary to compile current practice and research by various states and countries related to the effects that oversize/overweight vehicles (Superloads) have on roundabout location, design, and accommodation. Second research needs to fill in information gaps with respect to roundabout design and operations for these classes of vehicles. Currently there is little information available for accommodating the Superloads vehicle classes in roundabout design.

B. Tasks

Task 1. Initial meeting with partner state representatives. Discuss concerns, expectations project scope and work plan. Determine partner states' available data sources. Develop protocol for continued communication.

Task 2. Document states' historical State-of-the Practice regarding policy on permitting oversized vehicles on their state highways.

- a. Define extent of Superloads (greater than the normal semi trailers) on States' Highways
- b. Determine the magnitude of Superload demand, considering such things as states' policies, industry served, vehicles and vehicle miles, vehicle dimensions and weight, typical route characteristics, economic impact, growth, etc.)
- c. Examine states' roundabout status on major routes and typical designs
- d. Refine project scope and work plan

Task 3. Obtain data on and document roundabout constraints to Superloads.

- a. Contact trucking companies that design and/or use Superload vehicles to transport overweight/oversize cargo to determine constraints to transport due to roundabouts on desired routes in participating states and states where such data is available- data sources to be discussed as part of Task 1.
- b. Categorize the constraints and determine if there is a pattern between type of vehicle and constraints and determine if smaller loads would eliminate some constraints.

Task 4. Collect data on and categorize the characteristics of Superloads allowed on states' highways, including all critical parameters including turning path and

clearance requirements. Determine effect on current, common roundabout geometrics.

Task 5. Write an interim report documenting findings in Tasks 1 through 4 above and review report and project status with partner states' representatives.

Task 6. Through interviews and surveys, of knowledgeable professionals, e.g. roundabout designers, obtain relevant data and/or information on a preliminary list of possible changes and/or innovations to mitigate constraints by roundabouts on routes necessary for free flow of Superloads. Include data from International sources as available.

Task 7. Determine and conduct an in-depth study of the most promising solution(s) or improvements regarding their impact on states' roundabout policy, design, estimated costs and potential for implementation.

Task 8. Write draft final report with recommended solutions for review by the project partners.

Task 9. Revise draft and finalize final report.

V. ESTIMATES OF FUNDING AND RESEARCH PERIOD

Funding for this project comes from five different funding sources as follows:

- K-TRAN Project KSU-10-1 (KDOT)
- Transportation Pooled Fund Project TPF-5(220) with KDOT as lead state
- Mid-America Transportation Center-University of Nebraska-Lincoln (MATC)
- Kansas State University Transportation Center (KSUTC)
- Transoft Solutions, Inc.

The state DOT study partners also participating in transportation pooled fund project TPF-5(220) are:

- Connecticut Department of Transportation
- Iowa Department of Transportation
- Kansas Department of Transportation
- Mississippi Department of Transportation
- Ohio Department of Transportation
- Oregon Department of Transportation
- Washington State Department of Transportation
- Wisconsin Department of Transportation

Although separate contracts will be executed for the K-TRAN, TPF, MATC, KSUTC and Transoft Solutions funding, the overall study will be coordinated and run as a single project.

Period: 24 months
TPF Funds: \$195,000
Others: \$143,300

VI. URGENCY AND POTENTIAL PAYOFF

Given the fact that both the demand for statewide travel of Superloads and the proliferation of roundabouts are growing, it is desirable that roundabout planning and design better accommodate the Superloads' industries; and the demand for Superloads have a negative impact on the growth of roundabouts with the many benefits. The potential payoff should be in roundabout policy and design that will accommodate Superloads demand.

VII. IMPLEMENTATION STRATEGY

The final report will be widely distributed and papers and presentations at national meetings will ensure the results are disseminated. It is anticipated that states will implement the results in their design guides. If no reasonable solution is discovered then it may fall on industry to limit truck/trailer sizes.

VIII. PROJECT PERSONNEL

Dr. Eugene Russell will be the project Principal Investigator. Dr Russell has been studying roundabouts since the first one in Kansas was opened in Manhattan, KS in 1997. He has conducted several research projects for the Kansas DOT (KDOT), Insurance Institute for Highway Safety (IIHS) and Mack Blackwell Transportation Research Center (MBTC) on roundabouts, primarily on roundabout operations. He has presented several technical papers on the results of his research at several conferences in the United States, Canada and Australia. He developed and taught a K-State graduate course on roundabout design and operations and sponsored several others for practitioners. He is chair of the Transportation Research Board (TRB) task force on roundabouts and a member of other national committees dealing with roundabouts. Dean Landman, a KDOT retiree and K-State adjunct professor, who has 35 years of transportation planning experience with KDOT, will assist with routing and planning issues. Transoft Corp. will provide expert, in-kind services primarily dealing with oversize/overweight vehicle turning paths. It is expected that each state partner will provide one member to a project advisory committee that will also provide valuable input as well as guidance. The budget also provides funds for unspecified consulting as needed.

IX. SUBMISSION INFORMATION

Dr. Eugene Russell
Department of Civil Engineering
2118 Fiedler Hall
Manhattan, KS 66506 – 5000
Home 785-539-9422, cell 785-410-5231, e-mail geno@ksu.edu

Proposed Budget
For the Period 1/1/2010 to 12/31/2011

A. Personnel

1. Eugene R. Russell
Approximately 378 hours @ \$105/hr.
Approximately 646 hours @ \$105/hr.
Approximately 22 hours @ \$105/hr.
Approximately 39 hours @ \$105/hr.
2. Dean Landman
Approximately 200 hours @ \$50/hr.
Graduate Research Assistant (PhD)
0.5 time, 22.25 mos. Cal. Yr. (\$1,400/mo.)
- Subtotal Personnel
4. Fringe Benefits
10.4% of A1 & A2, 6.9% of A3
- Subtotal Salaries, Wages & Fringe Benefits

B. Travel

1. In-state
2. Meetings
- Subtotal Travel

C. Materials and Supplies

1. Computer software
2. Miscellaneous
- Subtotal Materials and Supplies

D. Other Direct Costs

1. Consulting Services
2. Telecommunications
3. Duplication
4. GRA out-of-state tuition
5. In-kind contribution - Transoft Solution, Inc.
- Subtotal Other Direct Costs

Total Direct Costs

- E. Facilities & Administrative Costs
- 48% of MTDC
 - 48% of MTDC (KDOT K-TRAN Costs)

TOTAL PROJECT COSTS

KDOT TPF (SPR)	KDOT K-TRAN	DOT KSUTC	Univ. of NE MATC	Transoft	KSU	Totals
\$67,807	\$39,660		\$2,301	\$4,100		\$39,660 67,807 2,301 4,100
10,000						10,000
8,160	8,160	14,840				31,160
85,967	47,820	14,840	2,301	4,100		155,028
8,655	4,688	1,024	239	426		15,032
94,622	52,508	15,864	2,540	4,526		170,060
13,351	2,000					2,000
	1,932	1,028	300			16,611
13,351	3,932	1,028	300			18,611
5,000	1,000		200	1,531		6,000 1,731
5,000	1,000		200	1,531		7,731
10,000						10,000
	2,060			700		2,760
	500					500
13,000				15,000		13,000 15,000
23,000	2,560			15,700		41,260
135,973	60,000	16,892	3,040	21,757		237,662
59,027		8,108	1,460	3,243		71,838
\$195,000	\$60,000	\$25,000	\$4,500	\$25,000	\$28,800	\$338,300

CERTIFICATION OF THE KANSAS STATE UNIVERSITY

I hereby certify that I am the Assistant Vice President for Research and duly authorized representative of The Kansas State University and that neither I nor the above agency I here represent has:

- (a) employed or retained for the payment of a commission, percentage, brokerage, contingent fee, or other consideration, any person (other than a bona fide employee working solely for me or the KSU) to solicit or secure this Agreement,
- (b) agreed, as an express or implied condition for obtaining this Agreement, to employ or retain the services of any firm or person in connection with carrying out the agreement, or
- (c) paid, or agreed to pay, to any firm, organization of persons (other than a bona fide employee working solely for me or the KSU) any fee, contribution, donation, or consideration of any kind, for, or in connection with, procuring or carrying out the Agreement;

except as here expressly stated (if any):

I acknowledge that this certificate is to be furnished to the Secretary of Transportation of the State of Kansas in connection with this Agreement and is subject to applicable State and Federal laws, both criminal and civil.

1-6-10

(Date)

Paul R. Lowe

Paul R. Lowe

Assistant Vice President for Research

CERTIFICATION OF THE SECRETARY OF TRANSPORTATION

I hereby certify that I am the Secretary of Transportation of the State of Kansas, and that The Kansas State University or their representative has not been required, directly or indirectly as an express or implied condition in connection with obtaining or carrying out this Agreement to:

- (a) employ or retain, or agree to employ or retain, any firm or person, or
- (b) pay, or agree to pay, to any firm, person, or organization, any fee, contribution, donation, or consideration of any kind;

except as here expressly stated (if any):

I acknowledge that this certificate is to be furnished to the above referenced firm in connection with this Agreement, and is subject to applicable State and Federal laws, both criminal and civil.

11/14/10
(Date)

Debra L. Miller
Secretary of Transportation
By: Jerome T. Younger, P.E.
Deputy Secretary for Engineering and
State Transportation Engineer



KANSAS DEPARTMENT OF TRANSPORTATION

Special Attachment

To Contracts or Agreements Entered Into
By the Secretary of Transportation of the State of Kansas

NOTE: Whenever this Special Attachment conflicts with provisions of the Document to which it is attached, this Special Attachment shall govern.

THE CIVIL RIGHTS ACT OF 1964, AND ANY AMENDMENTS THERETO,
REHABILITATION ACT OF 1973, AND ANY AMENDMENTS THERETO,
AMERICANS WITH DISABILITIES ACT OF 1990, AND ANY AMENDMENTS THERETO,
AGE DISCRIMINATION ACT OF 1975, AND ANY AMENDMENTS THERETO
EXECUTIVE ORDER 12898, FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY
POPULATIONS AND LOW INCOME POPULATIONS (1994) AND ANY AMENDMENTS THERETO,
49 C.F.R. PART 26.1 (DBE PROGRAM), AND ANY AMENDMENTS THERETO

NOTIFICATION

The Secretary of Transportation for the State of Kansas, in accordance with the provisions of Title VI and Title VII of the Civil Rights Act of 1964 (78 Stat. 252), §504 of the Rehabilitation Act of 1973 (87 Stat. 355) and the Americans with Disabilities Act of 1990 (42 USC 12101), the Age Discrimination Act of 1975 (42 USC 6101) and the Regulations of the U.S. Department of Transportation (49 C.F.R., Part 21, 23 and 27), issued pursuant to such Act, and Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations (1994), and the DBE Program (49 C.F.R., Part 26.1), hereby notifies all contracting parties that, the contracting parties will affirmatively insure that this contract will be implemented without discrimination on the grounds of race, religion, color, gender, age, disability, national origin, or minority populations and low income populations as more specifically set out in the following nine "Nondiscrimination Clauses".

CLARIFICATION

Where the term "consultant" appears in the following seven "Nondiscrimination Clauses", the term "consultant" is understood to include all parties to contracts or agreements with the Secretary of Transportation of the State of Kansas.

Nondiscrimination Clauses

During the performance of this contract, the consultant, or the consultant's assignees and successors in interest (hereinafter referred to as the "consultant's"), agrees as follows:

- (1) Compliance with Regulations: The consultant will comply with the Regulations of the U.S. Department of Transportation relative to nondiscrimination in federally-assisted programs of the U.S. Department of Transportation (Title 49, Code of Federal Regulations, Parts 21, 23 and 27, hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- (2) Nondiscrimination: The consultant, with regard to the work performed by the consultant after award and prior to the completion of the contract work, will not discriminate on the grounds of race, religion, color, gender, age, disability, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The consultant will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

- (3) **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations, either competitive bidding or negotiation made by the consultant for work to be performed under a subcontract including procurements of materials or equipment, each potential subcontractor or supplier shall be notified by the consultant of the consultant's obligation under this contract and the Regulations relative to nondiscrimination on the grounds of race, religion, color, gender, age, disability, national origin or minority populations and low income populations.
- (4) **Information and Reports:** The consultant will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and the Secretary of Transportation of the State of Kansas will be permitted access to the consultants books, records, accounts, other sources of information, and facilities as may be determined by the Secretary of Transportation of the State of Kansas to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a consultant is in the exclusive possession of another who fails or refuses to furnish this information, the consultant shall so certify to the Secretary of Transportation of the State of Kansas and shall set forth what efforts it has made to obtain the information.
- (5) **Employment:** The consultant will not discriminate against any employee or applicant for employment because of race, religion, color, gender, age, disability, or national origin.
- (6) **Sanctions for Noncompliance:** In the event of the consultant's noncompliance with the nondiscrimination provisions of this contract, the Secretary of Transportation of the State of Kansas shall impose such contract sanctions as the Secretary of Transportation of the State of Kansas may determine to be appropriate, including, but not limited to,
- (a) withholding of payments to the consultant under the contract until the contractor complies, and/or
 - (b) cancellation, termination or suspension of the contract, in whole or in part.
- (7) **Disadvantaged Business Obligation**
- (a) Disadvantaged Businesses as defined in the Regulations, shall have a level playing field to compete fairly for contracts financed in whole or in part with Federal funds under this contract.
 - (b) All necessary and reasonable steps shall be taken in accordance with the Regulations to ensure that Disadvantaged Businesses have equal opportunity to compete for and perform contracts. No person(s) shall be discriminated against on the basis of race, color, gender, or national origin in the award and performance of Federally-assisted contracts.
- (8) **Executive Order 12898**
- (a) To the extent permitted by existing law, and whenever practical and appropriate, all necessary and reasonable steps shall be taken in accordance with Executive Order 12898 to collect, maintain, and analyze information on the race, color, national origin and income level of persons affected by the programs, policies and activities of the Secretary of Transportation and use such information in complying with this Order.
- (9) **Incorporation of Provisions:** The consultant will include the provisions of paragraph (1) through (8) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, order, or instructions issued pursuant thereto. The consultant will take such action with respect to any subcontract or procurement as the Secretary of Transportation of the State of Kansas may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a consultant becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the consultant may request the State to enter into such litigation to protect the interests of the State.

CERTIFICATION BY PROSPECTIVE PARTICIPANTS
AS TO CURRENT HISTORY REGARDING DEBARMENT, ELIGIBILITY,
INDICTMENTS, CONVICTIONS, OR CIVIL JUDGMENTS

PAUL R. LOWE, Assistant Vice President for Research, Kansas State University, being duly sworn (or under penalty of perjury under the laws of the United States), certifies that, except as noted below, the Kansas State University or any person associated therewith in the capacity of director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of federal funds:

- a) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
- b) has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years;
- c) does not have a proposed debarment pending; and,
- d) has not been indicted, convicted or has a civil judgment rendered against (it) by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

Exceptions: _____

Providing false information may result in criminal prosecution or administrative sanctions.

1-6-10
Date

Paul R. Lowe AMH
Paul R. Lowe
Assistant Vice President for Research
Kansas State University

This project or contract is being funded in part by federal funds, and therefore the following certification applies:

CERTIFICATION FOR FEDERAL AID CONTRACTS

The following provision shall apply to all applicants for or recipients of federal funding on federal contracts, grants, loans, or cooperative agreements in excess of \$100,000, pursuant to 31 U.S.C. Section 1352: Sect. 319 of P.L. 101.121.

Each applicant for or recipient of any amount of federal funding shall signify in writing below the amount of federal funding applied for or received by this contract, loan, grant, or cooperative agreement, if known.

The prospective participant certifies, by signing below and submitting this bid, proposal, grant, loan, cooperative agreement, or contract, to the best of his or her knowledge and belief, that:

- 1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, 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 the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) 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, load, or cooperative agreement, the undersigned shall complete Standard Form LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions. (A copy of Standard Form LLL is attached.)

A disclosure form must also be submitted at the end of each calendar year quarter in which there occurs any event which requires disclosure or that materially affects the accuracy of the information contained in any previously filed disclosure form. The original of the disclosure form shall be submitted to: Mr. Steve King, the KDOT Project Manager for this project or contract.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Signature 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.

The prospective participant also agrees by signing below that he or she shall require that the language of this certification be included in all lower tier subcontracts which exceed \$100,000, and that such subrecipients shall certify and disclose accordingly. The originals of all disclosure forms submitted to the prime contractor by lower tiers shall be sent to the KDOT Project Manager named above.

Paul R. Lowe
Signature Paul R. Lowe

Assistant Vice President for Research
Title

\$195,000
Amount of Federal Funds (if known)

1-6-10
Date

Kansas State University
Agency

TPF-5(220)
Project or Contract No.

Department of Administration
DA-146a (Rev. 1-01)

CONTRACTUAL PROVISIONS ATTACHMENT

Important: This form contains mandatory contract provisions and must be attached to or incorporated in all copies of any contractual agreement. If it is attached to the vendor/contractor's standard contract form, then that form must be altered to contain the following provision:

"The Provisions found in Contractual Provisions Attachment (Form DA-146a, Rev. 1-01), which is attached hereto, are hereby incorporated in this contract and made a part thereof."

The parties agree that the following provisions are hereby incorporated into the contract to which it is attached and made a part thereof, said contract being the _____ day of _____.

1. **Terms Herein Controlling Provisions:** It is expressly agreed that the terms of each and every provision in this attachment shall prevail and control over the terms of any other conflicting provision in any other document relating to and a part of the contract in which this attachment is incorporated.
2. **Agreement With Kansas Law:** All contractual agreements shall be subject to, governed by, and construed according to the laws of the State of Kansas.
3. **Termination Due To Lack Of Funding Appropriation:** If, in the judgment of the Director of Accounts and Reports, Department of Administration, sufficient funds are not appropriated to continue the function performed in this agreement and for the payment of the charges hereunder, State may terminate this agreement at the end of its current fiscal year. State agrees to give written notice of termination to contractor at least 30 days prior to the end of its current fiscal year, and shall give such notice for a greater period prior to the end of such fiscal year as may be provided in this contract, except that such notice shall not be required prior to 90 days before the end of such fiscal year. Contractor shall have the right, at the end of such fiscal year, to take possession of any equipment provided State under the contract. State will pay to the contractor all regular contractual payments incurred through the end of such fiscal year, plus contractual charges incidental to the return of any such equipment. Upon termination of the agreement by State, title to any such equipment shall revert to contractor at the end of State's current fiscal year. The termination of the contract pursuant to this paragraph shall not cause any penalty to be charged to the agency or the contractor.
4. **Disclaimer Of Liability:** Neither the State of Kansas nor any agency thereof shall hold harmless or indemnify any contractor beyond that liability incurred under the Kansas Tort Claims Act (K.S.A. 75-6101 *et seq.*).
5. **Anti-Discrimination Clause:** The contractor agrees: (a) to comply with the Kansas Act Against Discrimination (K.S.A. 44-1001 *et seq.*) and the Kansas Age Discrimination in Employment Act (K.S.A. 44-1111 *et seq.*) and the applicable provisions of the Americans With Disabilities Act (42 U.S.C. 12101 *et seq.*) (ADA) and to not discriminate against any person because of race, religion, color, sex, disability, national origin or ancestry, or age in the admission or access to, or treatment or employment in, its programs or activities; (b) to include in all solicitations or advertisements for employees, the phrase "equal opportunity employer"; (c) to comply with the reporting requirements set out at K.S.A. 44-1031 and K.S.A. 44-1116; (d) to include those provisions in every subcontract or purchase order so that they are binding upon such subcontractor or vendor; (e) that a failure to comply with the reporting requirements of (c) above or if the contractor is found guilty of any violation of such acts by the Kansas Human Rights Commission, such violation shall constitute a breach of contract and the contract may be cancelled, terminated or suspended, in whole or in part, by the contracting state agency or the Kansas Department of Administration; (f) if it is determined that the contractor has violated applicable provisions of ADA, such violation shall constitute a breach of contract and the contract may be cancelled, terminated or suspended, in whole or in part, by the contracting state agency or the Kansas Department of Administration.

Parties to this contract understand that the provisions of this paragraph number 5 (with the exception of those provisions relating to the ADA) are not applicable to a contractor who employs fewer than four employees during the term of such contract or whose contracts with the contracting state agency cumulatively total \$5,000 or less during the fiscal year of such agency.
6. **Acceptance Of Contract:** This contract shall not be considered accepted, approved or otherwise effective until the statutorily required approvals and certifications have been given.
7. **Arbitration, Damages, Warranties:** Notwithstanding any language to the contrary, no interpretation shall be allowed to find the State or any agency thereof has agreed to binding arbitration, or the payment of damages or penalties upon the occurrence of a contingency. Further, the State of Kansas shall not agree to pay attorney fees and late payment charges beyond those available under the Kansas Prompt Payment Act (K.S.A. 75-6403), and no provision will be given effect which attempts to exclude, modify, disclaim or otherwise attempt to limit implied warranties of merchantability and fitness for a particular purpose.
8. **Representative's Authority To Contract:** By signing this contract, the representative of the contractor thereby represents that such person is duly authorized by the contractor to execute this contract on behalf of the contractor and that the contractor agrees to be bound by the provisions thereof.
9. **Responsibility For Taxes:** The State of Kansas shall not be responsible for, nor indemnify a contractor for, any federal, state or local taxes which may be imposed or levied upon the subject matter of this contract.
10. **Insurance:** The State of Kansas shall not be required to purchase, any insurance against loss or damage to any personal property to which this contract relates, nor shall this contract require the State to establish a "self-insurance" fund to protect against any such loss of damage. Subject to the provisions of the Kansas Tort Claims Act (K.S.A. 75-6101 *et seq.*), the vendor or lessor shall bear the risk of any loss or damage to any personal property in which vendor or lessor holds title.
11. **Information:** No provision of this contract shall be construed as limiting the Legislative Division of Post Audit from having access to information pursuant to K.S.A. 46-1101 *et seq.*
12. **The Eleventh Amendment:** "The Eleventh Amendment is an inherent and incumbent protection with the State of Kansas and need not be reserved, but prudence requires the State to reiterate that nothing related to this contract shall be deemed a waiver of the Eleventh Amendment."

