(a) Hypothetical Task

LOT A: Field Data Collection and Analysis

In order to provide an additional basis for evaluating the technical capability of the offeror, the offeror shall include a response in its proposal to the single research project described here for Lot A, Field Data Collection and Analysis. This task is hypothetical and there are currently no plans to fund this project under this contract.

Determine the Prevalence and Impact of Legal Marijuana Use on Motorcycle Riders

Background
The last few years have seen several states make significant changes to their laws regarding marijuana use. More states allow use of marijuana for medical use; and some states now allow recreational use of marijuana. Federal and state agencies, and health professionals are interested in whether the legalization, and assumed increase use, have an impact on safety – one area of prime concern is traffic safety.

Complete control over a motorcycle’s operation is essential for safe operation. Motorcyclists must be vigilant about riding conditions, road surface, other drivers, and their own operation of their bike – including their balance and ability to react quickly to emergency situations. THC, the active component of marijuana has the ability to impair cognitive and psychomotor responses – however, the effect on people can vary dramatically, and the safety community is still learning the effects of THC on driving performance, and THC’s relationship to crash risk.

Learning more about the relationships between motorcyclists’ use of marijuana, and any impact on riders’ experience or crash incidence, would be useful in refining laws and countermeasure programs to decrease motorcycle crashes and fatalities. Although traffic safety laws do not allow driver impairment, from any source, riders may be unclear about the laws in their state, and may also be unclear about marijuana’s effect on their body, and on their riding abilities.

Objectives for this Hypothetical Task
- Estimate the prevalence of THC-positive motorcycle riding within at least 3 states which allow recreational use of marijuana.
- Determine the change in THC-positive riding, and THC-impaired riding, from before the law change to after the law change.

The offeror shall develop data collection strategies for each of these objectives. The approaches must be cost-effective and feasible. Offerors must be aware of the complexities of collecting, and analyzing, and interpreting data on motorcycle riders and drug data – especially related to “impairment.” Strategies may include self-report data, arrest data, biological samples collected from riders on the road, or archival crash or fatality data. Offerors are encouraged to provide detail in their proposal regarding each step of their process, who will work on each task, and how
resulting information will be brought together in a scientifically-sound and reader-friendly final report.
In their discussion, the offeror shall, at a minimum, address:
- Needed approval processes (e.g., OMB, IRB, privacy assessments)
- Site recruitment / Site selection criteria
- Sample size
- Sampling strategies
- Experimental design issues
- Data collection protocols / data collection equipment
- Confounding factors
- Process for developing the draft final report, on time, in a polished and “ready for publication” format.

Throughout its discussion of the hypothetical task, the offeror shall justify why its approach is feasible, both in terms of achieving NHTSA’s overall objective, and in conducting a solid research project at a reasonable cost, within a reasonable time frame.

The offeror is encouraged to consider any data elements that would be appropriate to achieve the objective, however, the offeror must describe how each data element could actually be obtained, compiled, and analyzed, and under what constraints. The offeror shall also describe potential obstacles that could occur throughout the project. The offeror shall discuss the likely limitations of the study and the results.

Period of performance
The period of performance for this project is 30 months.

Cost Estimate
Offerors should submit an estimate of costs to complete this project. NHTSA will not hold the Offeror responsible after contract award for the Offeror’s cost projection for the hypothetical task; rather, the Government will use the cost estimate as part of the proposal evaluation process. Offerors should price this effort in a realistic manner to successfully meet the project objective while also being aware of the Government’s need to work in a cost-conscience manner.
- **Labor Categories:** Identify the labor categories, and the number of hours for each labor category that would be required for this effort.
(b) Hypothetical Task

LOT B: Literature Review

In order to provide an additional basis for evaluating the technical capability of the offeror, the offeror shall include a response in its proposal to the single research project described here for Lot B, Literature Review. This task is hypothetical and there are currently no plans to fund this project under this contract.

Conduct a Review of the Literature on Animal-Related Motor Vehicle Crashes, and Potential Countermeasures

Background
There have been great advances improving driving safety, and vehicles’ capability to avoid, and minimize the impact of crashes. One area that is not well documented is the extent animals are involved in motor vehicle crashes. This includes animals outside of the vehicle – such as a crash involving a deer, or a driver swerving to avoid a squirrel on the road. This also extends to pets in the car, such as dogs or cats traveling with their family, or even sitting on a driver’s lap. Potential countermeasures include devices warning drivers of animals approaching a road or scaring away an animal, overland by-ways for ranging animals, or laws requiring containment of animals in vehicles in motion.

Once this problem is better defined, safety advocates and government officials can work towards effective countermeasures.

Objectives for this Hypothetical Task
- Review and synthesize literature on animal-involved motor vehicle crashes.
- Review and synthesize literature on countermeasures for animal-related motor vehicle crashes.

The offeror shall develop a strategy for searching for appropriate literature, scanning the literature, culling articles, obtaining documents, and reviewing literature. Offerors are encouraged to provide detail in their proposal regarding each step of their process – including both reviewing and synthesizing the literature, who will work on each task, and how resulting information will be brought together in a scientifically-sound and reader-friendly final report. NHTSA is also interested in any work on this area from outside the United States.

In their discussion, the offeror shall, at a minimum, address:
- Document sources / search databases
- Search terms
- Review of abstracts
- Determination of which documents move forward in the review process
- Review of full articles
- Synthesis of articles into a cohesive discussion on components of animal-related crash topics
- Process for developing the draft final report, to coordinate information on problem identification, research needs, and potential countermeasures. The process should ensure the draft final report is delivered on time, in a polished and “ready for publication” format.

Throughout its discussion of the hypothetical task, the offeror shall justify why its approach is feasible, both in terms of achieving NHTSA’s overall objective, and in conducting a solid research-oriented literature review at a reasonable cost, within a reasonable time frame.

The offeror is encouraged to consider any information sources that would be appropriate to achieve the objective, however, the offeror must describe how each source could be obtained and analyzed. The offeror shall also describe potential obstacles that could occur throughout the project. The offeror shall discuss the likely limitations of the study and the results.

**Period of performance**
The period of performance for this project is 18 months.

**Cost Estimate**
Offerors should submit an estimate of costs to complete this project. NHTSA will not hold the Offeror responsible after contract award for the Offeror’s cost projection for the hypothetical task; rather, the Government will use the cost estimate as part of the proposal evaluation process. Offerors should price this effort in a realistic manner to successfully meet the project objective while also being aware of the Government’s need to work in a cost-conscience manner.

- **Labor Categories:** Identify the labor categories, and the number of hours for each labor category that would be required for this effort.
(c) Hypothetical Task

LOT C: Road Users and Stakeholders Survey Research

In order to provide an additional basis for evaluating the technical capability of the offeror, the offeror shall include a response in its proposal to the single research project described here for Lot D, Road User and Stakeholders Survey Research. This task is hypothetical and there are currently no plans to fund this project under this contract.

Attitudes and Self-Reported Use of Rear-facing Car Seats among American Indian Caregivers of Newborns

Background
Rear-facing car seats save lives, and to advance safety for infants, NHTSA, state and local public agencies, and community groups, as part of broader measures to improve motorcycle vehicle occupant safety promote the use of rear-facing seats for children under the age of 1 year. These promotions include outreach and educational campaigns for informing caregivers of newborns how to select and install a car seat; providing loaner or free seats to caregivers, and supporting the use of car seat inspections.

While the use of car seats has increased, there is room for improvement, particularly among caregivers in low-income or minority communities including on Indian Reservations. American Indian reservations may have a lower car-seat use rate compared to national averages for a variety of reasons, from a lack of resources, inconsistency in the delivery of safety programs, or insufficient number of inspection stations. Some caregivers of newborns may have not acquired a car-seat, or learned how to select and install a car seat for their child, due to unforeseen circumstances (for example, when a caregiver of a newborn becomes ill before acquiring a car seat; or parents who have a baby born earlier than expected; or parents who were expecting to have one baby but twins were born, etc.). The attitudes and awareness of caregivers towards car seats for newborns is an important component to car seat use, and understanding what these attitudes are in a community is a first step toward developing a strategy for increasing car seat use within the community.

Purpose of this Hypothetical Task
The purpose of this task is to understand the attitudes and use-rate (self-reported) of car seats among caregivers who reside on Indian reservations. By improving our understanding, we hope to develop ways for improve the safe and effective use of car-seats. The goal is to make sure each baby is properly secured on each trip, starting with the initial trip home from the birthing place. Data from this project will assist in targeting populations in need of increased protection of infants in motor vehicles. The focus of the study is on newborns (i.e., a child under 28 days of age) in Indian Reservations.

Objectives of this Hypothetical Task
- Develop a questionnaire on car seat attitudes, knowledge and practices that is based on previous surveys (e.g., from NHTSA surveys and other public health agencies)
• Develop a sampling plan that provides a nationally-representative sample of American Indians
• Conduct a survey American Indians who are caregivers and health-care providers of newborns using the questionnaire developed above to gain an understanding of their attitudes, awareness and self-reported use of car seats for newborns
• Report on the results, and compare the results to similar surveys of other populations
• Provide recommendations for improving car-seat use for this population

The offeror shall propose strategies for each of these objectives. The approaches must be cost-effective and feasible. Strategies may include self-report and/or in-person surveys, and use of pre-existing data sources. Offerors are encouraged to provide detail in their proposal by describing their approach to achieving the objectives, proposing individuals who will work on each task, and describing the process for analyzing the survey data and developing scientifically-sound final report. The offeror shall, at a minimum, address the means to:
• Obtain human subject approval processes (e.g., OMB, IRB, privacy assessments)
• Develop sampling strategies and defining sample size
• Contact potential research participants
• Develop the questionnaire
• Conduct the survey
• Analyze and report the data

Throughout its discussion of the hypothetical task, the offeror shall justify why its approach is feasible, both in terms of achieving NHTSA’s overall objective, and in conducting a solid research project at a reasonable cost, within a reasonable time frame.

The offeror is encouraged to consider any data elements that would be appropriate to achieve the objective, however, the offeror must describe how each data element could actually be obtained, compiled, and analyzed, and under what constraints. The offeror shall also describe potential obstacles that could occur throughout the project. The offeror shall discuss the limitations of the study and the results.

Period of performance
The period of performance for this project is 30 months.

Cost Estimate
Offerors should submit an estimate of costs to complete this project. NHTSA will not hold the Offeror responsible after contract award for the Offeror’s cost projection for the hypothetical task; rather, the Government will use the cost estimate as part of the proposal evaluation process. Offerors should price this effort in a realistic manner to successfully meet the project objective while also being aware of the Government’s need to work in a cost-conscience manner.
• Labor Categories: Identify the labor categories, and the number of hours for each labor category that would be required for this effort. Offerors may propose different or additional labor categories with justification.