

# Finite Element Modeling Services

ACTIVE

## Contract Opportunity

### Notice ID

RFP693JJ921R000006

### Related Notice

### Department/Ind. Agency

TRANSPORTATION, DEPARTMENT OF

### Sub-tier

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

### Office

693JJ9 NHTSA OFFICE OF ACQUISITION

## General Information

- **Contract Opportunity Type:** Presolicitation (Original)
- **All Dates/Times are:** (UTC-04:00) EASTERN STANDARD TIME, NEW YORK, USA
- **Original Published Date:** Mar 25, 2021 07:02 am EDT
- **Original Response Date:** Mar 25, 2021 09:00 am EDT
- **Inactive Policy:** 15 days after response date
- **Original Inactive Date:** Apr 09, 2021
- **Initiative:**
  - None

## Classification

- **Original Set Aside:**
- **Product Service Code:** R412 - SUPPORT- PROFESSIONAL: SIMULATION
- **NAICS Code:**
- **Place of Performance:**

,

USA

## Description

The National Highway Traffic Safety Administration's (NHTSA) mission is to save lives, prevent injuries and reduce traffic-related health care and other economic costs. The agency develops, promotes and implements effective educational, engineering and enforcement programs with the goal of ending vehicle crash tragedies and reducing

economic costs associated with vehicle use and highway travel. The Office of Vehicle Safety Research (VSR) conducts extensive research, development, testing, crash investigation, and data collection and analysis activities to provide the scientific basis needed to support the Agency's motor vehicle and traffic safety goals.

The Office of Vehicle Safety Research (VSR) is the primary organization within NHTSA responsible for conducting research related to the improvement of motor vehicle performance to enhance safety. VSR conducts research and development programs to develop and advance the scientific knowledge to support NHTSA's mission.

The contract is for the development and usage of simulation models to evaluate potential crash conditions and their effects on the safety response of vehicles and human surrogates (dummies, human body models). Simulation studies may include vehicle-to-vehicle, vehicle-to-barrier, side impacts, sled tests, and other occupant safety impact simulations. Also, as part of this research, VSR develops interior and restraint models of vehicles and performs simulations with crash dummy and human models to simulate real-world situations and evaluate injury potential.

The objective of this contract is to provide research data so that NHTSA can achieve its mission of reducing death and injuries on American roadways. The scope of this contract is to develop and exercise crash simulations of vehicle safety research to assist in predict the impact of potential safety implications. These efforts will include full vehicle laser scanning and tear down for the development of new finite element models, material testing to define the behavior of vehicle materials under impact conditions, mesh development, component testing, and component integration to develop full vehicle and vehicle component finite element models. Some tasks may involve the use of lumped parameter modeling software such as MADYMO, but the majority of NHTSA's anticipated crash simulation efforts will involve non-linear finite element analysis. The resulting models will be exercised and refined to match available crash test data. The resulting LS-Dyna models shall be exercised using existing vehicle models in simulation parameter studies to improve understanding of vehicle crash safety. The specific crash simulation efforts will be issued through Task Orders.

## **Attachments/Links**

**Download All Attachments/Links**

Attachments

| Document   | File Size | Access | Updated Date |
|--|-----------|--------|--------------|
| <a href="#">Synopsis for Solicitation No. 693JJ921R000006 (Finite Element Modeling Services).pdf (opens in new window)</a> | 114 KB    | Public | Mar 25, 2021 |

## Contact Information

### Contracting Office Address

- OFFICE OF ACQUISITION MANAGEMENT 1200 NEW JERSEY AVE SE, ROOM W51-30
- WASHINGTON , DC 20590
- USA

### Primary Point of Contact

- Yvonne Green
- [yvonne.green@dot.gov](mailto:yvonne.green@dot.gov)

### Secondary Point of Contact

- Reba Dyer
- [reba.dyer@dot.gov](mailto:reba.dyer@dot.gov)