


# ISTA Advocate Research & Value Delivery Program

		<h2>Request For Proposal</h2>	
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<b>TITLE Single Parcel Shipping</b> <b>Part 3 - <u>Method Development</u> - Develop a methodology to measure the effect of packaged-product dimensions on the flexing forces experienced.</b>			

## PROPOSED RESEARCH PROJECT

The International Safe Transit Association (ISTA) on behalf of the members of its Advocate Research & Value Delivery Program (ARVD) seeks proposals for the following 4-part project involving Data Collection and Methodology Development applicable in the Single Parcel Shipping Environment. A significant amount of effort has been expended in the past to characterize the handling of the high-volume package types, weights and sizes that go through the single parcel shipping channels. However, these projects have been scoped to address potential gaps that exist in ISTA 3A, Packaged-Products for Parcel Delivery System Shipment.

Parts 1 and 2 involve the collection of field data in the single parcel shipping environment and offering recommendations on potential improvements to ISTA 3A with focus in the following areas.

Part 1 - Measuring the effect of packaged-product size and weight on the drop heights experienced.

Part 2 - Measuring the dynamic compression forces experienced due to the combination of stacking and vibration.

Parts 3 and 4 relate to testing methodology development as is felt that the technique and tools required to conduct these studies are not currently defined or validated.

Part 3 - Develop a methodology to measure the effect of packaged-product dimensions on the flexing forces experienced.

Part 4 - Develop a methodology to measure the effect of packaged-product dimensions on the concentrated loading / impacts.

NOTE: There are four different RFPs (0006 A-D) associated with this project. If you will be submitting multiple proposals, they must be separate documents and your cover letter should indicate any pricing reduction based on increased efficiencies, lower overhead, etc. of being awarded multiple Parts and the impact on timing, if any.

## PROJECT PURPOSE AND DESCRIPTION

An Advocate Council technical workgroup was formed to discuss potential gaps with ISTA 3A where results from testing seemingly do not offer a high level of correlation between laboratory and field results. The purpose of this project is to offer insight backed by field data that could be leveraged to improve the predictive value of ISTA 3A. Three areas within 3A were identified as problematic for some shippers.

- Shock (drop) for packages defined as “standard” greater than 40 lbs., less than 150 lbs.
- Shock (drop) for packages meeting the ISTA 3a definition of:
  - Flats – shortest dimension is 200 mm (8 in) or less **and** next longest dimension is four (4) or more times larger than the shortest dimension, **and** volume is 13,000 cm<sup>3</sup> (800 in<sup>3</sup>) or greater.

- Elongated - longest dimension is 900 mm (36 in) or greater **and** both of the package's other dimensions are each 20 percent or less of that of the longest dimension.

**NOTE: If a packaged-product is both Flat and Elongated, the package should be tested as Elongated.**

- Dynamic Compression (i.e. top loaded vibration)

It is felt to accomplish our Total project objective a deeper understanding is needed of the following defined knowledge gaps:

1. Effects of packaged-product weight on the drop heights experienced
2. The location and magnitude of dynamic compression forces experienced on each surface of the package due to the combination of stacking and vibration
3. Effects of packaged-product dimensions on the flexing forces experienced
4. Effects of packaged-product dimensions on the concentrated loading / impacts

### **SCOPE OF WORK SOUGHT IN THIS REQUEST FOR PROPOSAL**

**This RFP pertains only to Part 3 – Method Development & Validation in the following areas:**

**Gap 3 – Effect of packaged product dimensions on the flexing forces experienced.**

This project funds research to understand flexing forces on packaging, and to develop methodology that can repeatably asses those forces in the single parcel shipping environment. A successful proposal and project will provide a tool and/or instrumentation to be used in subsequent field measurements on packaging in standard single parcel distribution processes.

The Scope of Work states requirements for the project, including the services and the tangible work products to be delivered, and the tasks the Advocate Council has identified as necessary to meet those requirements.

While we are open to a variety of approaches in the proposals submitted the following requirements should be covered:

1. Perform a literature review to identify prior art of flexing force experienced by the package measurement techniques.
2. Perform experimentation and develop a practical methodology including proof of concept documentation that can be subjected to third party validation and used for subsequent data collection
3. Report status monthly using the report format in shown in **Attachment A**, Noting any requested deviations and explanations for the deviation.
4. Report the results
  - a. Summarize findings and fully explain methodology and its validation to address the specific gap addressed in the existing version of ISTA 3A
  - b. Provide raw data collected for future analysis and additional validation

### **DELIVERABLES**

The Applicant must provide in its proposal a detailed scope of work showing how it will meet the RFP requirements. The deliverables, at a minimum, need to include a technical report which documents the findings for those gaps targeted in the proposal.

The deliverables must include but are not limited to the following:

1. The results of the required literature search.
2. Summarized findings and present a full explain of the methodology developed to address the specific gap in the existing version of ISTA 3A as well as its documentation of effectiveness. There also should be a full description of how it could be implemented in a testing laboratory setting along with an estimate of equipment cost and time to conduct the test.
3. Provide raw data collected for future analysis and validation as well as observations, photographs and videos to support the proposed solution.
4. Researchers' opinions of how the testing element should be incorporated into 3A (i.e. why the conducted research supports a different rationale).
5. The final report should be submitted in both written as well as PowerPoint format.
6. The primary researcher will be asked to present the report to the ISTA Advocate Council via WebEx at a mutually agreeable date.

### **MINIMUM QUALIFICATIONS FOR PRINCIPAL CONSULTANT/S**

Knowledge of single parcel supply chain components including transport systems, warehousing and handling systems is required, as is experience in transport distribution environment measurement or observational study of supply chains.

### **FORM OF THE PROPOSAL**

Proposals should be tailored specifically to the project at hand. The Advocate Council reserves the right, however, to modify specific requirements, based on changed circumstances, the proposal selection process, and contract negotiations with the Applicant(s) selected for negotiations, and to do so with or without issuing a revised RFP. In all cases the final contract will be the governing document of the project.

The Applicant must provide in its proposal a detailed scope of work showing how it will meet the RFP requirements. The Applicant's proposal should address each task from the Scope of Work specifically and describe in detail how the Applicant will achieve the objective, including a definition of your complete research methodology and expected outcome. In addition, please describe the instrumentation to be used, their anticipated setup, mounting information, format in which raw data will be delivered, and potential analysis techniques.

Provide one electronic version of the proposal that must include the following sections:

1. Qualifications:
  - A brief description of the proposing firm /research organization/ individual.
  - A detailed description of the proposed individuals that would be assigned to this project, including role, title, experience, and education.
  - Examples of similar research projects conducted in the past 5 years.
  - At least three references, including the names of individual contacts and telephone numbers.
  - Any other qualifications deemed necessary to complete the work if contracted by ISTA.

## 2. Fees:

Give a total cost estimate for time and materials within the scope and timeline you propose including payment terms and schedule. Progress payments can be considered provided the proposal identifies how project progress can be verified. (i.e. upon submission of completed literature search, initial draft, final report, etc.)

- The proposal must include the total cost to complete the tasks described in the project scope for this project.
- List any other fees applicable to the work requested by ISTA, acknowledging they must be approved in advance.

## 3. Project Timeline:

A detailed timeline should accompany the project plan.

## 4. Conflicts Analysis:

Assurance that the firm has conducted an initial conflicts analysis and has not uncovered any potential conflicts.

## **SELECTION PROCESS**

The ISTA staff, its Technical Division Board and the Technical Representatives of the ARVD consortium will evaluate all proposals and may conduct telephone conferences to clarify information such as approach, timing and cost. Final selection will be made by the voting members of the ARVD.

All proposals will be evaluated based on the following criteria:

- a. Overall proposal suitability: proposal must meet the purpose, scope and define how the deliverables will be achieved and be presented in a clear and organized manner.
- b. Experience: Potential contactors will be evaluated on their experience as it pertains to the scope of this project.
- c. Previous work: Potential contractors will be evaluated on examples of their work pertaining to similar research projects as well as testimonials and references.
- d. Value and cost: Potential contractors will be evaluated on the cost of their proposal based on the work to be performed in accordance with the scope of this project.
- e. Technical expertise and experience.
- f. The ability of the potential contractors to complete the project according to the proposed timeline.
- g. The willingness of the contractor to execute a services contract with ISTA as shown in **Attachment B** as well as an NDA, a draft of is shown in **Attachment C**.

NOTE: ISTA will provide a letter of introduction explaining the purpose of the research for use with those companies where direct contact needs to be made to assure accuracy of information.

## **RFP TIMELINE**

12-14-18 – Distribution of RFP

2-8-19 – Deadline for vendors to submit written questions and/or non-mandatory notice of intent.

2-13-19 – Questions with written answers provided to all interested researchers

2-22-19 – Deadline for submitting proposals

3-1-19 – Finalists notified & interviewed

3-15-19 – Researcher selected

## **SUBMISSIONS**

All proposals must be received by TBD Address proposals to:

Brian O'Banion  
ISTA  
1400 Abbot Road, Suite 160  
East Lansing, MI 48823

Or by email to [bobanion@ista.org](mailto:bobanion@ista.org) with a copy to [dwight@consultschmidt.com](mailto:dwight@consultschmidt.com).

Questions regarding this RFP or your proposal submission may be addressed to Dwight Schmidt, Advocate Program Manager by emailing [dwight@consultschmidt.com](mailto:dwight@consultschmidt.com) or calling 317-753-1437.

### Attachments:

- A. ISTA Advocate Project Status Report
- B. ISTA Sample Contract
- C. ISTA Sample NDA