


# ISTA Advocate Research & Value Delivery Program

	<h2>Request For Proposal</h2>		
DATE ISSUED <b>12-14-18</b>	REQUIRED SUBMITTAL DATE <b>2-1-19</b>	DOCUMENT NO. <b>RFP – 0006A</b>	PAGE NO. <b>1 of 6</b>
TITLE <b>Single Parcel Shipping</b>			
Part 1 – <u>Data Collection</u> – Measuring the effect of packaged product size and weight on the drop heights experienced.			

## 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 objective a deeper understanding is needed of the following defined knowledge gaps:

1. Effects of packaged-product size and 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 TO ONLY PART 1 ONLY

**Part 1 correlates with Gap 1** – The effect of packaged-product size and weight on the drop heights experienced. This is viewed as a field data collection project to be conducted in the U.S. in the single parcel shipping environment.

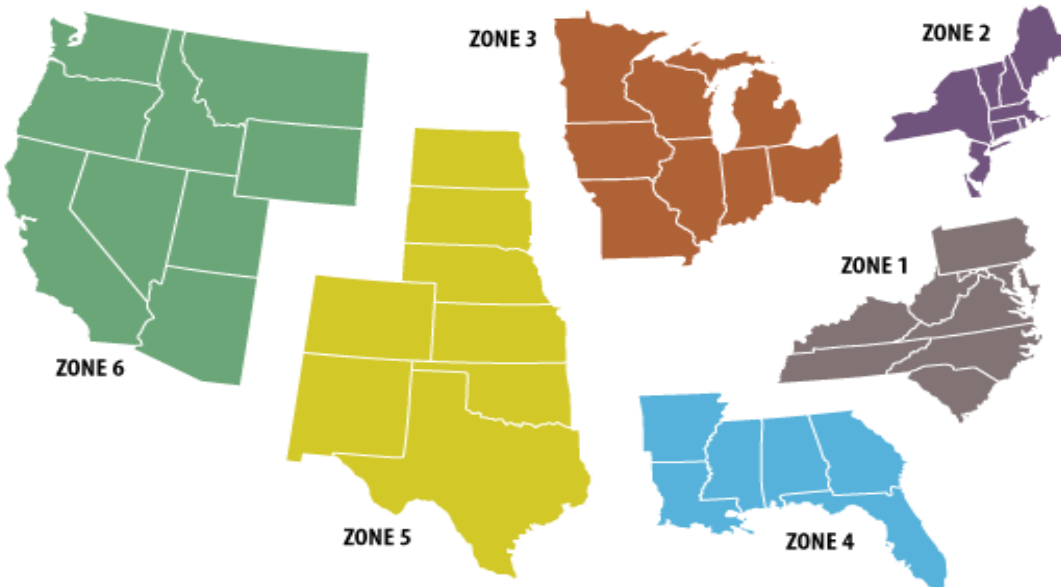
The Scope of Work states requirements for the project, including the services and the tangible work products to be delivered, and the tasks the Advocate Council has identified as necessary to meet those requirements.

Specifically, you will be asked to make 30 one-way shipments of 14 different instrumented package configurations or 420 total shipments through both UPS and FedEx. In addition, you will make 30 one-way shipments of 6 instrumented package configurations or 180 shipments through the USPS, which are denoted with an \* in the table below. The total shipments for this project will be 1,020 shipments.

	Package Type	Length (in)	Width (in)	Height (in)	Weights (lb.)
1	Standard	12	12	12	40*
2	Standard	18	18	18	40*
3	Standard	24	24	24	40*, 60*, 80
4	Standard	48	20	10	60*, 80, 110, 140
5	Flat	60	20	5	80, 110, 140
6	Elongated	60	12	12	60*, 80

Three packages of each configuration must be shipped to each of five locations on variable dates so there are 30 total measurements recorded for each as return trips from a destination count as a trip. These shipments can originate in any of the geographic zones shown below and travel on varying dates to any destination in each of the other 5 zones, but not to an interzone address.

Note: Your proposal should reflect your fee for services to build and ship the instrumented packages as well as accumulate and report the data, but ISTA will be responsible for covering the freight charges incurred.



Our goal in the Scope of Work statement is to answer the following questions:

1. How does package weight impact drop height? (Items 3,4 & 5)
2. How does package size impact drop height? (Items 1,2 & 3)
3. How does package geometry (flat vs. long vs. standard) impact drop height? (Items 3, 4, 5 & 6)
4. What is a reasonable drop height for packaged exceeding 50 pounds? (Items 3, 4, 5 & 6)
5. Are we getting information around the 70 pound cut-off in ISTA 3A? (Items 3, 4 & 6)

If you have suggestions of how to modify the package types tested to increase the efficiency of testing and to better meet the objective of this project and/or reduce the cost, please address this in your proposal

Your proposal must address the following:

1. The method to conduct a literature review to identify applicable prior art (data collection) regarding package size and weight in the single parcel environment.
2. Your approach to data collection from UPS, FedEx and USPS.
3. A detailed explanation of the methodology you'll follow as well as the instrumentation to be utilized.
4. How you'll report the results including a summary of the findings focusing on recommendations to improve the specific gap addressed in the existing version of ISTA 3A
5. How you'll provide the raw data collected for future analysis and validation for possible protocol revisions.

Raw data, where applicable, must be collected in compliance with ISTA Standards for Atmospheric, Shock and Vibration Data Collection (available upon request to interested researchers) and furnished in an agreed-upon format to allow for further analysis by ISTA.

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.

## DELIVERABLES

The deliverables, at a minimum, need to include a technical report which documents the findings for the effect of packaged-product size and weight on the drop heights experienced as laid out in the Scope of Work in this RFP. The deliverables include but are not limited to the following:

1. The results of the required literature search
2. The findings and conclusions of the data collection, including, but not limited to:
  - A description of the instrument(s) used and their detailed setup(s)
  - Data recorder calibration information
  - Mounting and mounting orientation
  - Related equipment
3. The provider's opinion of the rationale used for the current testing element.
4. The provider's opinions of how the 3A drop testing element could be improved (i.e. why the conducted research supports a different rationale).
5. Observations, data, photographs and videos to support improvement opinions
6. File monthly Status Reports using the report format in shown in **Attachment A**, Noting any requested deviations and explanations for the deviation.
7. The final report should be submitted in both written as well as PowerPoint format.
8. 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 past 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 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:

- 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.
- Experience: Potential contactors will be evaluated on their experience as it pertains to the scope of this project.
- Previous work: Potential contractors will be evaluated on examples of their work pertaining to similar research projects as well as testimonials and references.
- 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.
- Technical expertise and experience.
- The ability of the potential contractors to complete the project according to the proposed timeline.
- 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**.

## **RFP TIMELINE**

12-14-18 – Distribution of RFP

1-18-19 – Deadline for vendors to submit written questions and/or non-mandatory notice of intent.

1-23-10 – Questions with written answers provided to all interested researchers

2-1-19 – Deadline for submitting proposals

2-15-19 – Finalists notified & interviewed

3-1-19 – 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