ATTACHMENT B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS
OMB No. 1652-0013

1. Describe the potential respondent universe and any sampling methods to be used.

The respondent universe is the population of passengers who proceed through the security checkpoints at a given airport during the survey period. TSA plans to conduct a passenger survey at airports nationwide. The survey will be administered using an intercept methodology or a systematic sampling methodology. Under the intercept methodology, the data collection team will randomly select times and checkpoints to invite passengers to complete the survey in an effort to gain survey data representative of all passenger demographics. During the randomly selected times when using the intercept methodology, all passengers at the selected checkpoints will receive the survey until the data collection team has received a target number of survey responses. Under the systematic sampling methodology, the data collection team will approach a subset of passengers in fixed intervals (e.g., every tenth passenger) and invite those passengers to complete the survey. On a selected day, only a specific time period for distribution will be selected, and not the entire day. The systematic sampling methodology will require longer periods of data collection but will likely have a smaller impact on checkpoint operations during data collection periods than will the intercept methodology.

Under both methodologies, TSA personnel, who are not in uniform, hand deliver business card style forms to passengers that contain a url address to access an online survey; the forms are delivered immediately following the passenger's experience with the TSA's checkpoint security functions, such as new innovation lanes.[1] Passengers are invited, though not required, to view and complete the survey via an online portal, to respond to TSA personnel capturing verbal responses to the survey in real time on portable on-line devices, or to respond in writing to the survey questions on the customer satisfaction card and depositing the card in a drop-box at the airport or using U.S. mail; prior to each survey event at an airport, TSA personnel decide one method by which passengers will be asked to complete and return the survey based on the expected impact of the methodology on operations at each particular airport and on the resources available to support data collection at that airport.

TSA seeks to sample a representative subset of passengers soon after they pass through the security checkpoint. Federal Security Directors (FSD) at all airports have the option of conducting this survey, and will coordinate their desire to participate with TSA headquarters. We anticipate that 25 airports will conduct this survey annually. All airports have at least one passenger security checkpoint, and some airports have as many as 20. A requirement of any sampling methodology is that each passenger in the population has an equal probability of receiving a survey. The data collection

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[1] Innovation lanes speed up wait times at security checkpoints. An automated bin system keeps empty bins circulating and routes bins that alarm the system to a separate area for inspection, ensuring an ongoing flow of people and bins.

methodology must also result in an unbiased sample (i.e., the characteristics of respondents are reflective of the population). We also seek to use methodologies that are simple and robust enough to be used consistently in all airports and monitored by TSA headquarters. We propose to randomly select times and checkpoints.

In order to meet a sample size with an error rate of no more than five percentage points, TSA would need to receive between 50 and 384 responses. Based on prior survey data and research, a sample size of 384 needs approximately 1,000 surveys. TSA assumes that there will be 384 respondents from 1,000 surveys distributed. At an individual airport, we assume the burden on passengers who choose to respond to be approximately five minutes per respondent. Therefore, 384 respondents x 1 airport = 384 respondents a year per airport. It takes approximately five minutes for each respondent to complete the survey so the total burden at one airport is 384 respondents x 5 minutes = 1,920 minutes or 32 hours per airport. We estimate that 25 airports will conduct the survey each year. Therefore, 384 respondents x 25 airports = 9,600 respondents a year. Since we assume it takes approximately five minutes for each respondent to complete the survey the total burden is 9,600 respondents x 5 minutes = 48,000 minutes, or 800 hours per year.

As an example of our sampling methodology, consider Baltimore-Washington International Thurgood Marshall Airport (BWI). Based on an average of approximately 12,000,000 enplaned passengers per year (source: Bureau of Transportation Statistics, 2015), and five major security checkpoints (Piers A, B, C, D, and E) open for an average of 20 hours each day (04:00AM-12:00AM) (source: Performance Management Information System), an average of approximately 332 passengers pass through each checkpoint in a given hour. Because we draw day-time-checkpoint combinations randomly, the operating assumption that passenger volume is uniformly distributed across days, times, and checkpoints is acceptable to design our sampling methodology.

Using the intercept methodology, assuming a sample size target of 384, we would need to distribute a total of 1,000 surveys given our response rate prediction. Thus, we need an estimated 3 hours and 20 minutes to distribute 1,000 surveys. To achieve this volume, we will randomly choose four, one-hour blocks and randomly select checkpoints.

2. Describe the statistical procedures for the collection of information

We propose to use a methodology, in which the selected passengers are handed a business card style form right after they pass through the security checkpoint. This form contains a url address for respondents to access to submit their survey data. The proposed intercept methodology:

- permits passengers to complete the survey at their convenience;
- does not obstruct the flow of passengers at the airport; and
- saves money compared to an interviewer-administered survey and avoids the cost of postage.

Using the intercept methodology, Transportation Security Officers (TSOs) or other TSA-authorized personnel not in uniform will act as survey administrators and will distribute the survey to every passenger who passes by their fixed point just inside the security checkpoint. In cases where airports opt for the systematic sampling methodology, TSOs or other TSA-sanctioned personnel not in uniform will approach every tenth passenger during data collection periods.

In both cases, survey administrators will be directed to say, "Please tell us about your experience at the security checkpoint today," as they distribute the survey. The survey administrators are briefed on the objectives of the survey, given an overview of the checkpoint layout, and informed of the location of the TSA checkpoint supervisor in case of a problem.

Survey administrators keep track of how many surveys they distribute each shift, using a shift tally sheet on which they record the airport name, date, time, and checkpoint of the shift, as well as serial number ranges of all surveys distributed.

<u>3. Describe methods to maximize response rates and to deal with issues of non-response.</u>

Based on previously tested techniques and industry-standards to increase the response rate, TSA employs the following:

- The questionnaire includes 10 to 15 questions. We estimate that it will take respondents no more than five minutes to complete the survey.
- The questionnaire was assembled professionally and is easy to read. The survey card includes the TSA logo. Passengers will be more willing to complete a survey sponsored by, and clearly identified with, TSA than with a commercial entity.
- Survey administrators are dressed professionally and will have airport badges. They identify themselves as representatives of the Federal government.

Assessing response bias is difficult because TSA does not know the characteristics of individuals who choose not to respond. Several industry-standard techniques exist to attempt to indirectly assess the prevalence of response bias, however, and our methodology includes the provisions necessary to employ these techniques:

- In previous years, we distributed surveys over a two- to three-week period at each site. We hypothesized that, assuming that conditions did not systematically change at the airport from one period to the next (which they did not), results should have been similar across the periods. Indeed they were, providing evidence of the stability of the samples across surveys.
- We know the passenger volume and wait time at the checkpoint during each shift (based on the tally sheets discussed in the previous section and other data collected at the checkpoint by TSA). In our experience, we have found that none of these demographics corresponded to any substantial difference in response rates. We will continue to monitor them throughout the survey efforts.

We believe that the combination of these analyses, combined with a sound methodology that is executed rigorously, will give TSA a high level of confidence in the results. To date, we have found no evidence of a response bias with similar efforts.

<u>4. Describe any tests of procedures or methods.</u>

TSA has tested the proposed procedures or methods on the use of tablets as well as enhanced use of smartphones. TSA intends to confirm the effectiveness of the sampling methods and projected response rates based on the intercept and systematic sampling survey methodologies.

<u>5. Provide the name and telephone number of individuals consulted on statistical aspects of the design.</u>

The following individual provides continued oversight of the statistical aspects of the design:

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