

User Guide:

2023 Intelligent Transportation Systems Deployment Tracking Survey

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Acronyms

Acronym	Meaning
AV	Automated Vehicle
BIL	Bipartisan Infrastructure Law
CV	Connected Vehicle
DOT	Department of Transportation
GAO	General Accountability Office
IIJA	Infrastructure Investment and Jobs Act
ITS	Intelligent Transportation Systems
ITS JPO	Intelligent Transportation System Joint Program Office
NTD	National Transit Database
SME	Subject Matter Experts
USDOT	United States Department of Transportation

Chapter 1. Introduction

This document is a guide to using the survey data collected in the 2023 Intelligent Transportation Systems (ITS) Deployment Tracking Survey. The United States Department of Transportation's (USDOT) Intelligent Transportation Systems Joint Program Office (ITS JPO) administers the ITS Deployment Tracking Survey to freeway management, arterial management, and transit management agencies to track ITS deployment.

From 1999 – 2020, the ITS JPO administered the ITS Deployment Tracking Survey to a subset of large metropolitan areas in the U.S. Data, questionnaires, and reports from these historical surveys are located in “Past ITS Deployment Tracking Surveys (1999 to 2020).” During that same time period a number of Special Topic Deployment Surveys¹ also were administered. The *User Guide: ITS Deployment Tracking Surveys (1999-2020)* provides more information about both the past ITS Deployment Tracking Surveys and the Special Topic Deployment Surveys administered from 1999 – 2020 (<https://www.itskrs.its.dot.gov/deployment/past>).

With this most recent 2023 ITS Deployment Tracking Survey, a new survey methodology was implemented. The new methodology greatly expanded the geographic coverage of the ITS Deployment Tracking Survey to include smaller urban² and rural areas in addition to large metropolitan areas. The change in methodology reflects a need to (1) obtain a better understanding of ITS deployment nationwide and (2) obtain ITS deployment information from communities of all sizes, not just from large metropolitan areas.

Background

The ITS JPO initially developed the ITS Deployment Tracking Survey to track and manage progress made toward a ten-year ITS deployment goal announced by the U.S. Secretary of Transportation in 1996.³ The Secretary's goal focused on tracking ITS deployment rates in large metropolitan areas. At the time, ITS was a relatively new set of technologies that tended to be deployed in large metropolitan areas to address congestion, safety, and other transportation issues experienced most acutely by the nation's largest cities.

However, in the years following the goal period, it became clear that the ITS Deployment Tracking Survey no longer provided the most complete picture of the extent and nature of ITS deployment in the U.S. During this time, ITS technologies became more mainstream and, as such, were increasingly deployed

¹ These Special Topic Deployment Surveys include the 2019 Connected Vehicle (CV) and Automated Vehicle (AV) Survey, the 2019 Small Urban and Rural Transit Survey, as well as a series of surveys on Electronic Toll Collection, Incident Management/Public Safety, Statewide ITS Systems, Metropolitan Planning Organizations, and Transportation Management Centers.

² This term is used to refer to small metropolitan and micropolitan areas.

³ U.S. Transportation Secretary Peña's goal stated that the 75 largest metropolitan areas should be outfitted with an integrated ITS infrastructure in the next ten years.

outside of large metropolitan areas. The ITS JPO's Benefits, Costs, and Lessons Learned databases⁴ as well as the ITS JPO's 2019 Small Urban and Rural Transit Provider Survey showed increasing ITS deployments in smaller urban (i.e., small metropolitan and micropolitan) and rural areas. Based on these trends, the ITS JPO determined that an update to the survey methodology was necessary to address these important gaps in survey coverage to better reflect a full range of communities and situations where ITS technologies are deployed.

In addition to providing more comprehensive data about the extent of ITS deployment nationwide, the new ITS Deployment Tracking Survey methodology positions the ITS JPO to also baseline and, over time, track the growing pipeline of ITS projects that are currently being (and will be) deployed as a result of the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL).⁵ Grant programs established under the BIL provide numerous funding opportunities for a wide variety of projects in communities of all sizes and location types. Several of the BIL grant programs offer opportunities to fund ITS deployments to help communities solve their transportation challenges.

Summary of the 2023 ITS Deployment Tracking Survey Files

The 2023 ITS Deployment Tracking Survey files are organized according to the following categories:

2023 Survey Instruments – Freeway Management, Arterial Management, and Transit Management survey instruments used to collect data in 2023 – 3 survey files.

2023 Deployment Data – Excel data files and data dictionaries associated with the Freeway Management, Arterial Management (State DOT districts and local agencies), and Transit Management surveys – 4 data files.

2023 Final Reports – Final reports were prepared summarizing the findings from each of the three surveys (Freeway Management, Arterial Management, and Transit Management). The Key Findings Report synthesizes and compares the key findings across all surveys – 4 files.

2023 Infographics – Infographics were developed to highlight key findings from the Freeway Management, Arterial Management, and Transit Management Surveys.

⁴ For more information about the ITS Benefits, Costs, and Lessons Learned Databases, see: <https://www.itskrs.its.dot.gov/>.

⁵ See: <https://www.transportation.gov/bipartisan-infrastructure-law>

Chapter 2. 2023 ITS Deployment Tracking Survey Methodology

This chapter provides a high-level overview of the new methodology used for the 2023 ITS Deployment Tracking Survey.⁶

Sample Development

With the 2023 ITS Deployment Tracking Survey, a new survey methodology was implemented, which greatly expanded the geographic coverage of the survey beyond large metropolitan areas to include smaller urban and rural areas. The change in methodology enables the ITS JPO to obtain an understanding of ITS deployment nationwide, including from communities of all sizes. Sample development for each survey is described below.

Freeway Management Survey

The 2023 Freeway Management Survey is a **census of all State Department of Transportation (DOT) districts**⁷ and toll authorities managing freeways (i.e., controlled access roadways).⁸

Arterial Management Survey

The 2023 Arterial Management Survey was administered to two distinct survey populations – (1) State DOT districts managing arterial roads and (2) local arterial management agencies (also referred to as local agencies).⁹ While these two populations were asked the same set of survey questions, they required different sampling approaches.

⁶ Separate reports have been developed for each survey (Freeway, Arterial, Transit) and are posted on the Deployment Statistics webpage (see: <https://www.itskrs.its.dot.gov/deployment/2023DTS>). These reports contain more detailed information about the survey methodology used for each survey.

⁷ A few State DOTs refer to their agencies as “regions” or “divisions” rather than districts. For ease of reporting and consistency, the term “district” is used throughout this report.

⁸ Freeways are controlled access roads, such as interstates and other freeways and expressways (i.e., functional classifications 1 and 2 per the Federal Highway Administration’s Highway Functional Classification). https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/section00.cfm.

⁹ The survey defines arterials as all uncontrolled access roads, such as principal arterials, minor arterials, collectors, and local roads (i.e., functional classifications 3 through 6 per the Federal Highway Administration’s Highway Functional Classification). See: https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/section00.cfm.

Arterial State DOT District Survey

The 2023 Arterial State DOT District Survey is a **census of all State DOT districts managing arterial roads** (also referred to as arterials), which are roads with uncontrolled access.

Local Arterial Management Survey

The 2023 Local Arterial Management Survey is a **stratified random sample of places and counties of varying population size that manage arterial roads**. The term “places” is used by the U.S. Census to define cities, towns, villages, townships, and boroughs. “Place” agencies together with “county” agencies are referred to collectively as “local agencies”.

In developing the sampling frame, a minimum population threshold of 5,000 was set for both places and counties using 2020 U.S. Census definitions. The sampling frame excluded unincorporated places and counties which prior research indicated do not play a role in arterial management. Prior to developing the arterial local sampling frame, the largest places (population of 600,000 or higher) and counties (population of 950,000 or higher) were drawn with certainty (i.e., automatically included in the sample) and are referred to as the “certainties” in this report. The decision to select certainties ensured that the largest metropolitan areas are included in the sample, as it was expected that they are most likely to be deploying a range of ITS, and it allows the survey to preserve some continuity with the historical ITS Deployment Tracking Survey data.

The resulting sampling frame, which consisted of 9,329 local agencies, was then stratified by metropolitan, micropolitan, and rural census designations and then further sub-stratified by county and place population. A total of 1,030 local agencies were sampled.

Transit Management Survey

The 2023 Transit Management Survey is a stratified random sample of transit agencies from the National Transit Database (NTD) that operate vehicles.

In developing the sampling frame, transit agencies in rural areas were required to have more than 10 vehicles to be eligible.¹⁰ The sampling frame excluded private-for-profit corporations as these are not transit agencies managing public transportation. Prior to developing the transit sampling frame, the largest transit agencies (with 900 or more vehicles) were drawn with certainty (i.e., automatically included in the sample). The decision to select certainties ensured that the largest transit agencies are included in the sample, as it was expected that they are most likely to be deploying a range of ITS, and it allows the survey to preserve some continuity with the historical ITS Deployment Tracking Survey data.

The resulting sampling frame, which consisted of 1,376 transit agencies, was then stratified by large urban, small urban, and rural area types. The NTD reports agencies that are located in urban areas, rural

¹⁰ The Government Accountability Office (GAO) used this criterion in its 2015 survey of small urban and rural transit providers (see: <https://www.gao.gov/assets/gao-16-638.pdf>). GAO based this threshold decision on discussions with industry associations and a survey pretest. The ITS JPO adopted this same eligibility criterion in its 2019 Small Urban and Rural Transit Survey and the 2023 Transit Management Survey.

areas, or are tribal agencies.¹¹ Tribal transit agencies and agencies in rural areas were combined into the rural area type for the purposes of this survey. Urban agencies were split into agencies in large urban areas (population greater than 200,000) and small urban areas (population of 200,000 or less) using their urbanized area population. A total of 740 transit agencies were sampled.

Data Collection and Processing

Survey Questionnaire

Substantive changes to the questionnaire were largely driven by the input of subject matter experts (SME). Some questions about ITS coverage (i.e., number of freeway miles covered by X technology) were transformed into an adoption question (i.e., whether the agency has adopted the technology) due to their high respondent burden and data reliability issues.

In addition, minor modifications were made to some questions to improve clarity. New response options were also added to some questions, based on either common respondent input to open-ended responses in a previous survey, or the need to include ITS technologies thought to be relevant to smaller urban or rural areas (e.g., wildlife crossing warning systems). Another noteworthy change to the survey questionnaire was the increased use of definitions (via “hover boxes”) for ITS technologies and other terms to assist respondents in filling out the survey.

Selected questions are repeated each year so trends could be developed for tracking purposes, and other questions are added in program and/or practice (i.e., connected vehicle (CV) and automated vehicle (AV) technologies).

Data Cleaning and Weighting

The survey data went through an extensive review and cleaning process, and open-ended responses were reviewed and coded into existing response categories as appropriate. The survey team consulted with USDOT SMEs to ensure that write-in responses were accurately recoded.

The Freeway Survey and the Arterial State DOT District Survey did not require any data weighting; design weights were not applicable because each of these surveys was a census, and nonresponse weighting was not needed due to high response rates (i.e., there was no significant nonresponse bias).¹²

The data from the Local Arterial Agency Survey and the Transit Survey required data weighting. The purpose of design weights is to account for the sample design used when selecting a sample. They are calculated as the inverse of the probability of selection for each sampled unit, except “certainty” agencies were assigned weights of one (1) and removed from further calculations. Design weights were then adjusted to account for nonresponse bias. This involved calculating adjustment factors in each of the strata cells, defined as the sum of the weights for the full eligible sample divided by the sum of the

¹¹ Urban transit providers were identified as recipients of FTA's Urbanized Area Formula Grants, while rural transit providers and Tribes were identified as sub-recipients of the FTA's Non-urbanized Area Formula Grants (see: <https://www.transit.dot.gov/ntd>).

¹² For the 2023 Freeway Management Survey the response rate was 78 percent. The 2023 Arterial Management Survey of State DOT districts also achieved a response rate of 78 percent.

weights for the respondents. In a final step, the weights were scaled to sum to the number of responding agencies for each survey.

Chapter 3. Survey Data Files for 2023 ITS Deployment Tracking Survey

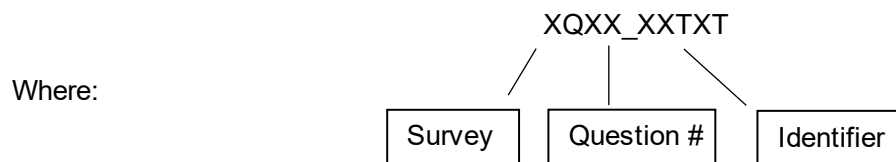
This chapter provides more detailed information on the development and contents of the raw data files and data dictionaries for the 2023 ITS Deployment Tracking Survey.

Data Preparation

Survey data were entered into Excel files using consistent coding formats and variable naming convention. Variables were coded using one of four formats:

- Numeric (integer value)
- Boolean (0,1)
- Multiple-Choice (integer value based on question selection options)
- Text

A consistent variable name structure was developed to ensure a unique variable name for each of the variables in the data base:



- Survey – Freeway (F), Arterial (A), Transit (T)
- Question # – Question number in survey
- Identifier – Sub-question code
- TXT – added if variable is text format.

Each Excel data file contains a raw data worksheet and a data dictionary.

Data Worksheet

Figure 1 presents an example **data worksheet**. One record was created for each completed survey (shown as a row in the data file). The first seven columns of the file contain the following agency characteristics for each record (these variables are also included in the data dictionaries, as appropriate):

- **AgencyID:** Unique ID number used in each survey to allow matching of survey respondents. These agency numbers are new to the 2023 ITS Deployment Tracking Survey, and do not match the historical survey respondent data found in the survey archives (1999-2020).
- **AgencyType:** Type of agency:
 - Freeway Management Survey includes State DOT districts and toll authorities
 - Arterial State DOT District Survey includes State DOT districts
 - Local Arterial Survey includes counties and places
 - Transit Management Survey includes transit agencies
- **AgencyName:** Name of the agency.
- **State:** State where agency is located.
- **Region:** U.S. Census region includes Midwest, Northeast, South, and West.
- **DTSHistorical** – Boolean variable indicating if the agency was included in the Historical Deployment Tracking Survey sample from 1999 to 2020.
- **LargeUrbanArea** (applicable only to the Freeway Management and Arterial State DOT Survey): This boolean variable indicates whether or not the State DOT district has at least one large urban area (defined as a place with population greater than 100,000 or county with population greater than 950,000).
- **StatisticalArea** (applicable only to the Local Arterial Survey): This variable lists the type of statistical area in which the local agency is located (i.e., large metropolitan, small metropolitan, micropolitan, or rural area).
- **AreaType** (applicable only to the Transit Management Survey): This variable lists the type of area in which the transit agency is located (i.e., large urban, small urban, or rural area).
- **Certainty** (applicable only to the Local Arterial and Transit Management Surveys): This boolean variable indicates whether or not the agency is a certainty within the sampling frame or was randomly sampled.
- **WEIGHTS** (applicable only to the Local Arterial and Transit Management Survey): The design/nonresponse weight given to the agency based on the sampling frame and response rates. This weight is critical when summarizing the data.

	A	B	C	D	E	F	G	H	I	J	K
1	AgencyID	AgencyType	AgencyName	State	Region	DTSHistorical	LargeUrbanArea	FQ01_01	FQ01_02	FQ01_03	FQ01_04
2	1	State DOT	Alabama - North Region	Alabama	South	1	1	0	0	1	0
3	2	State DOT	Alabama - East Central	Alabama	South	1	1	0	1	0	0
4	3	State DOT	Alabama - West Central	Alabama	South	0	0	0	1	0	0
5	4	State DOT	Alabama - Southeast	Alabama	South	1	1	1	1	1	0
6	5	State DOT	Alabama - Southwest	Alabama	South	0	1	0	1	0	0
7	6	State DOT	Alaska - Central Region	Alaska	West	0	1	1	0	0	0
8	7	State DOT	Alaska - Northern Region	Alaska	West	0	0	0	0	0	0
9	9	State DOT	Arizona - Central District	Arizona	West	1	1	1	0	1	1
10	10	State DOT	Arizona - Northcentral District	Arizona	West	0	0	1	1	1	0
11	11	State DOT	Arizona - Northeast District	Arizona	West	0	0	1	0	0	0
12	12	State DOT	Arizona - Northwest District	Arizona	West	0	0	1	1	1	0
13	13	State DOT	Arizona - Southcentral District	Arizona	West	1	1	1	1	1	0
14	14	State DOT	Arizona - Southeast District	Arizona	West	0	0	-9999	-9999	-9999	-9999
15	15	State DOT	Arizona - Southwest District	Arizona	West	0	0	1	1	1	0

Figure 1: Data Worksheet in Survey Date File

Data Dictionary

Figure 2 presents an example **data dictionary** worksheet. The data dictionary serves as a guide relating the questions contained in a survey to the Survey Variable Name, Variable Format, Variable Values, and Value Labels.

A	B	C	D	E	F	G
		Agency Characteristics	Survey Variable Name	Variable Format	Values	Value Labels
		Unique agency identification	AgencyID	Text		
		Agency type	AgencyType	Text		State DOT
		Agency name	AgencyName	Text		
		State	State	Text		
		US Census Region	Region	Text		Midwest, Northeast, South, West
		Historical Deployment Tracking Survey Sample (1999-2020)	DTSHistorical	Boolean	0,1	0=Not included in Historical DTS sample;1=Included in Historical DTS sample
		State DOT District with large urban area ¹	LargeUrbanArea	Boolean	0,1	0=State DOT District without large urban area; 1=State DOT District with large urban area
		Question	Survey Variable Name	Variable Format	Values	Value Labels
	01	Does your agency operate signalized intersections?	AQ01	Multiple Choice	1,2,-9999	1=Yes;2=No;-9999=No response provided
	02	What is the total number of signalized intersections operated by your agency? Asked if Q01=1	AQ02	Numeric		-9999=No response provided; -8888=Skip logic
	03	Does your agency deploy any of the following detection technologies at signalized intersections?				
		Inductive Loop	AQ03_01	Boolean	0,1,-9999,-8888	0=No;1=Yes;-9999=No response provided;-8888=Skip logic
		Radar/microwave detection	AQ03_02	Boolean	0,1,-9999,-8888	0=No;1=Yes;-9999=No response provided;-8888=Skip logic
		Video imaging detection	AQ03_03	Boolean	0,1,-9999,-8888	0=No;1=Yes;-9999=No response provided;-8888=Skip logic
		Magnetometers	AQ03_04	Boolean	0,1,-9999,-8888	0=No;1=Yes;-9999=No response provided;-8888=Skip logic
		Infrared/Thermal detection	AQ03_05	Boolean	0,1,-9999,-8888	0=No;1=Yes;-9999=No response provided;-8888=Skip logic
		Other (Please specify):	AQ03_06	Boolean	0,1,-9999,-8888	0=No;1=Yes;-9999=No response provided;-8888=Skip logic
		No detection technologies deployed at signalized intersections [EXCLUSIVE]	AQ03_07	Boolean	0,1,-9999,-8888	0=No;1=Yes;-9999=No response provided;-8888=Skip logic
		Other (Please specify): _____	AQ03_06TXT	Text		

Figure 2: Data Dictionary Worksheet in Survey Data File

Trend Analysis Using the Historical ITS Deployment Tracking Surveys (1999 – 2020)

This chapter provides information on how trend analyses may be performed using the 2023 ITS Deployment Tracking Survey and the historical ITS Deployment Tracking Surveys (1999 – 2020).

Since the 2023 ITS Deployment Tracking Survey is the first year in which the survey population was expanded to include agencies in smaller urban and rural areas, trend data are not available for the “total” response. However, trend analyses may be possible for the **subset** of 2023 agencies **in large metropolitan areas** that have been previously surveyed as part of the historical ITS Deployment Tracking Survey (i.e., part of the sample from 1999 – 2020).

In order to perform trend analysis with the 2023 survey questions, the first step is to review the relevant questionnaires to determine if the survey question(s) of interest are comparable. For example, if the user wants to analyze a trend regarding ramp meters from 2016 to 2023, it will be necessary to confirm that the survey question on ramp meters is the same (or similar) in the 2016, 2020, and 2023 ITS Deployment Tracking Survey Instruments. In some cases, it may not be possible to perform trend analysis due to significant changes in question wording.

Trend Analysis Using a Panel

If the survey questions are comparable, the user can perform the trend analysis using a panel approach, which requires identifying the 2023 respondents that have been previously surveyed as part of the historical ITS Deployment Tracking Survey (1999-2020) and comparing their 2023 survey responses to previous ITS Deployment Tracking Survey responses.

The 2023 data file includes the variable, “DTSHistorical” which indicates whether an agency was included in the historical ITS Deployment Tracking Survey sample. This variable can be used to pull a subset of the data, creating a panel of 2023 agencies that have been part of the historical ITS Deployment Tracking Surveys. Once the panel dataset has been created, the survey question(s) of interest can be trended with comparable questions from historical ITS Deployment Tracking Surveys.

The 2023 ITS Deployment Tracking Survey Reports include trend analysis. The trend analysis performed with the **freeway management** and **transit management agency** data uses a panel approach. The 2023 responses of freeway management agencies that were surveyed as part of the historical ITS Deployment Tracking Survey (1999 – 2020) are compared to the responses from historical ITS Deployment Tracking Surveys. Likewise, for transit management agencies, the 2023 responses of transit management agencies that were surveyed as part of the historical ITS Deployment Tracking Survey (1999-2020) are compared to the response of previous transit management surveys.

It is important to note that while the overall sample of agencies invited to participate in the historical Deployment Tracking Survey (1999-2020) remained stable across surveys, the agencies responding to the survey varied, to some degree, with each survey effort. Some agencies consistently responded to the survey, whereas others did not. The data available for each survey year represents the data of responding agencies for that survey year.

For **State DOT districts managing arterials**, no trend analysis was performed. Due to the small sample sizes of State DOT districts managing arterials in the historical ITS Deployment Tracking Survey (1999 – 2020), the resulting panel was too small for trends to be generalizable.

For the **local arterial management** agencies, the sample size of the panel was small, and analysis suggested that the 2023 panel of local arterial management agencies was not representative of local agencies in large metropolitan areas. As a result, an alternate trend analysis approach using area type was adopted. The 2023 responses of agencies in large metropolitan areas were compared to the responses of previously surveyed local arterial management agencies. This subset of local agencies in large metropolitan areas includes both agencies that have been previously surveyed as part of the ITS Deployment Tracking Survey, as well as other agencies from large metropolitan areas.

Table 1 below shows the variables that should be used when conducting aggregate trend analysis.

Table 1. Key Variables for Performing Trend Analysis

Survey	Variable for Trend Analysis	Description
Freeway Management Survey	DTSHistorical = Yes (1)	Trend analysis could be conducted with a panel, using the subset of 2023 freeway agencies that were part of the historical ITS Deployment Tracking Survey sample.
Arterial Management Survey: State DOT districts	Not Applicable	Trend analysis is not recommended.
Arterial Management Survey: Local Agencies	StatisticalArea = Large Metro	Trend analysis could be conducted with an area type approach, using the subset of local arterial agencies in large metropolitan areas.
Transit Management Agencies	DTSHistorical = Yes (1)	Trend analysis could be conducted with a panel, using the subset of 2023 transit agencies that were part of the historical ITS Deployment Tracking Survey sample.

Trend Analysis Notes

This subsection describes some key notes that should be considered when performing trend analysis.

Arterial Management Survey

Users who plan to analyze trend(s) for the 2023 Arterial Management Survey with past Arterial Management Surveys (1999 – 2020) will need to separate the data of State DOT districts from local arterial management agencies in the historical ITS Deployment Tracking Survey datasets. In the historical Arterial Management Surveys (1999 – 2020), these two agency types were combined in the same dataset, whereas in the 2023 Arterial Management Survey, different methodologies were used for the two

arterial populations,¹³ resulting in two datasets. Users should not merge the 2023 data for State DOT districts managing arterials and local arterial management agencies. Rather, the trend analysis for these two populations will need to be performed separately, ensuring that the same agency types are being compared across surveys.

Additionally, users are cautioned against performing aggregate trend analysis of State DOT districts managing arterials. Due to the smaller sample sizes in the historical ITS Deployment Tracking Surveys (1999 – 2020), the results would not be generalizable.

Local Arterial Management Survey and Transit Management Survey

When analyzing the total responses for the 2023 local arterial management survey or transit management survey, the data weights should be used. However, when conducting trend analysis for either of these two surveys, the 2023 data should **not** be weighted, since the data from the previous ITS Deployment Tracking Surveys (1999 – 2020) were not weighted.

Table 2 summarizes key trend analysis notes for each survey type.

Table 2. Summary of Key Trend Analysis Notes by Survey Type

Survey Type	Key Trend Analysis Notes
2023 Arterial Management Survey: State DOT districts	The number of State DOT districts managing arterials surveyed in previous ITS Deployment Tracking Surveys (1999-2020) is relatively small, so users are cautioned against performing trend analysis, because these trends are not generalizable.
2023 Arterial Management Survey: Local Agencies	When performing trend analysis of 2023 local arterial management agencies, ensure the data from previous ITS Deployment Tracking Surveys only includes the responses of local arterial management agencies (i.e., State DOT districts managing arterials should be excluded). Since the previous ITS Deployment Tracking Surveys are unweighted, the 2023 local agency data should be unweighted when responses are compared to the previous survey responses of local arterial management agencies (1999-2020).
2023 Transit Management Agencies	Since the previous ITS Deployment Tracking Surveys are unweighted, the 2023 transit data should be unweighted when responses are compared to the previous survey responses of transit management agencies (1999-2020).

¹³ The Arterial Management Survey effort included: 1) a census of State DOT districts managing arterials, and 2) a stratified random sample of places and counties to identify local arterial management agencies. While both of these populations – State DOT districts and local agencies – received the same survey questions, there are separate datasets and reports for each population.

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