**Questionnaire of Transportation Agency’s Complete Streets Practice in Design, Implementation, Inventory, and Maintenance**

**Your agency:**

**Your name:**

**Email:**

**Phone:**

**Responder: Caltrans Responder A, Caltrans Responder B**

**Purpose of the survey:** Better understand the challenges and needs transportation agencies face regarding complete streets so that we may provide useful recommendations to bridge these challenges and satisfy these needs.

This Questionnaire contain 12 parts and 3 sections that will help us understand your transportation agency’s complete streets practice in terms of design, implementation, inventory, and maintenance. The questions are organized as shown below.

Only answer questions your agency has the answer to. If you do not know the answer to a question, please leave the option blank or give the questionnaire to someone who would know the answer. These questions are intended to gauge your agency’s perspective not your personal opinion.

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# Category 1: Complete Streets Design and Implementation

## Part I: Complete streets policy adoption and implementation: *This part of the questionnaire tries to determine how developed your agency’s complete streets policies/plans are.*

1. Does your agency currently have a complete streets policy or plan to implement complete streets design in your roadway network?

|  |  |
| --- | --- |
| **🗆** Yes | **🗆** No |

1. If yes, please provide a short description on the policy or the plan:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How long has your agency been implementing complete streets projects?
* Not yet implemented
* 0-5 years
* 5-10 years
* More than 10 years.

	1. What is your agency’s complete streets program’s implementation status? (Select all that apply)
* **Implemented at project level** (fragmented)
* **Implemented at network level** to ensure complete streets connectivity.
* The network level complete streets project implementation plus the inclusion of **inter-agency collaboration to improve street network connectivity across jurisdictions** (among state, county and city network connectivity)
1. Is inter-agency (e.g. state, county, city, etc.) collaboration formalized into part of your agency’s complete streets project planning development process?

|  |  |  |
| --- | --- | --- |
| **🗆** Yes | **🗆** Mostly | * No
 |

## Part II: Motivation for Complete Streets Implementation: *This part of the questionnaire tries to determine why your agency has a complete street policy/plan.*

1. What are the most important impetuses for agency initiating the complete streets program?

(Select 2 options)

🗆­­­­ Community Development 🗆 Public opinion 🗆 Political pressure 🗆 Other

1. What are your agency’s objectives for adopting a complete streets design policy? (Select all that apply)

|  |  |  |
| --- | --- | --- |
| **🗆** Improve mobility  | **🗆** Improve safety | **🗆** Comply with regulation  |
| **🗆** Promote community engagement  | **🗆** Improve community health | **🗆** Quality of Life |
| **🗆** Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |  |

## Part III: Funding for Complete Streets Implementation: *This part of the questionnaire tries to determine how your agency funds and prioritizes aspects of complete streets implementation.*

1. In an **urban** environment, what increase in cost does your agency anticipate implementing complete streets design in a **reconstruction/new construction** project?
* Significant increase (30+ %)
* Noticeable increase (15 % - 30 %)
* Slight increase (5 % - 15 %)
* Relatively no change (0 % - 5 %)
* Decrease
1. In an **urban** environment, what increase in cost does your agency anticipate when implementing complete streets design in a **pavement maintenance/rehabilitation** project?
* Significant increase (30+ %)
* Noticeable increase (15 % - 30 %)
* Slight increase (5 % - 15 %)
* Relatively no change (0 % - 5 %)
* Decrease
1. Which of the following items is responsible for the majority of the cost increase (if any) in most complete streets’ projects?
* Additional cost for right-of-way purchase
* Additional cost for utility facilities repositioning
* Additional cost for infrastructure construction (e.g. sidewalk or curb ramp)
* Additional cost for design
* Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. How is complete streets implementation program funded in your agency?
* Funded through a separate dedicated funding program (e.g. transportation alternatives program)
* Funded as part of project component (project budget adjusted accordingly)
* Not funded
	1. If applicable, where is the dedicated funding coming from?
		+ Annual budget
		+ Additional taxation
		+ Community investment
		+ Federal funding
		+ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. Some agencies incorporate a complete streets program into their existing pavement preservation program to optimize the resources utilization for complete streets implementation (with roadway reconfiguration and restriping). Based on your agency’s experience, would it be beneficial to combine an existing pavement preservation program with complete streets implementation? (Combine complete streets implementation into maintenance and rehabilitation projects) If your answer is mostly beneficial or not beneficial, please provide a brief explanation why.

|  |  |  |
| --- | --- | --- |
| **🗆** Very Beneficial | * Mostly Beneficial\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 | * Not Beneficial\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 |

1. Has your agency incorporated complete streets into an existing pavement preservation program?

|  |  |  |
| --- | --- | --- |
| **🗆** Completely Incorporated | **🗆** Partially incorporated | * Not Incorporated
 |

1. What are the challenges for your agency to combine existing pavement preservation programs with complete streets implementation?
	* Coordination between different departments
	* Lack of funding to support additional maintenance work
	* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Has your agency incorporated complete streets into the following?

(Select all that apply)

* + 3R (Resurfacing, Restoration, and Rehabilitation) projects
	+ Reconstruction projects
	+ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. Which three of the following factors are most heavily weighted in your agency’s complete streets project selection and prioritization?

 (Select three)

* Local population density
* Roadway functional class
* Pedestrian related demands (volume, level of comfort)
* Bicyclist related demands (volume, level of comfort)
* Vehicle related demands (volume, level of service)
* Safety concerns (e.g. high injury network, high-risk location)
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. Of the options in question 9, please identify the factors that are important but are difficult for your agency to obtain due to lack of cost-effective data collection methods.

(Select all that apply)

|  |  |
| --- | --- |
| * Local population density
 | * Roadway functional class
 |
| * Pedestrian related demands (volume, level of comfort)
 | * Sidewalk level of comfort/walkability
 |
| * Bicyclist related demands (volume, level of comfort)
 | * Vehicle related demands (volume, level of service)
 |
| * Safety concerns (e.g. high injury network, high-risk location)
 | * Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 |

# Category 2: Complete Streets Safety and Operation

## Part IV: Complete Streets Implementation Strategy and Its Safety Impact: *This part of the questionnaire tries to determine how your agency incorporates safety into the design of complete streets. The goal is also to determine what strategies have been most successful and what challenges have been faced.*

1. Does your agency have “Vision Zero” or another equivalent initiative or plan to reduce traffic fatalities to zero?

|  |  |  |
| --- | --- | --- |
| **🗆** Yes. | **🗆** Mostly. | **🗆** No. |

1. What impact will complete streets design have on achieving “Vision Zero” in your agency.
	* Significant benefit
	* Moderate benefit
	* Minimal benefit
	* No benefit or close to no benefit
	* Digression from “Vision Zero” goal
	1. Other than the items listed below, are there any ways that complete streets design could help improve roadway safety?
		* + Change lane configuration to reduce conflict points
			+ Reduce vehicle speed on travel lane
			+ Provide separation between vehicle and vulnerable road users.
			+ Reduce crossing distance.
		* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. To accommodate the aging population in US, many states have implemented the following practices to improve safety for senior road users. Other than the practices listed below, are there any other practices that your agency has implemented?
	* + High contrast pavement markings
		+ Retimed signal timing to allow longer pedestrian crossing time
		+ Shorter crosswalk
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. Has your agency experienced an increase in crash numbers in areas where complete streets are implemented with sudden termini at the transition areas between “complete” and “incomplete” streets?

|  |  |  |
| --- | --- | --- |
| **🗆** High increase | **🗆** Small increase | **🗆** No increase |

* 1. Which aspects of fragmented complete streets segments will cause the most safety issues?

 (Select 2 options)

|  |
| --- |
| **🗆** Driver expectancy issues caused by discontinuity of travel lanes |
| **🗆** Pedestrian access issue caused by discontinuity of sidewalks**🗆** Bike/car lane share issue caused by discontinuity of bike lanes**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

* 1. Which of the following options is most successful for agencies to prevent and/or mitigate the negative impact of fragmented complete streets during the transition from project level to network level?

|  |
| --- |
| **🗆** Develop a network-wide complete streets implementation plan for maximizing network connectivity.**🗆** Inter-agency cooperation: coordinate a roadway development plan between different agencies (e.g. transit, state, counties, and cities) to provide complete streets connectivity between different jurisdictions).**🗆** Extend the project area when implementing complete streets to have a better transition between complete streets and non-complete streets segments.**🗆** Provide additional markings and signage to alert road users about the transition.**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  |  |  |

* 1. Has your agency implemented the item selected in question 4.2?
		+ Completely Implemented
		+ Mostly implemented
		+ Have not implemented

## Part V: Bike Lane Physical Condition Assessment: *This part of the questionnaire tries to determine what your agency inventories involving bike lane physical condition. The goal is also to determine what your agency prioritizes inventorying and what data has been challenging to collect.*

1. What are the important reasons for bike lane physical condition assessment in your agency?

(Select 2 options)

**🗆** Ensure bike safety

**🗆** Ensure bike mobility

**🗆** Identify and prioritize the maintenance and rehabilitation needs

**🗆** Justification for funding needed (e.g. maintenance and rehabilitation needs)

**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Does your agency have a database of the bike lane physical conditions besides bike lane presence/absence?

|  |  |
| --- | --- |
| **🗆** Yes. | **🗆** No. |

* 1. Is there a standard/practice that your agency follows when performing condition evaluation on bike lanes? If so, could you share the standard your agency used?

🗆 Yes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 🗆 No

* 1. Which of the following areas are evaluated when determining the physical condition of bike lanes?

(Select all that apply)

|  |  |
| --- | --- |
| * Bike lane pavement cracking
 | * Bike lane pavement pothole
 |
| * Bike lane pavement markings
 | * Bike lane ride smoothness
 |
| * Bike lane debris/obstacles
 | * Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 |

* 1. Which of the following items pose challenges for creating such a database?

(Select all that apply)

* + - Lack of method to determine sense of safety/level of comfort
		- Lack of data requirement (e.g. clearly defined data items to collect)
		- Bike lane pavement cracking
		- Bike lane pavement pothole
		- Bike lane pavement markings
		- Bike lane ride smoothness
		- Bike lane debris/obstacles
	1. How is the physical condition of bike lane being evaluated?

|  |  |
| --- | --- |
| **🗆** Manually. | **🗆** Automatic/Semi-automatically. |
|  |  |  |

* 1. How often is the physical condition of bike lane being evaluated?
		+ Once a year
		+ Once every two years
		+ Once every three to five years
		+ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.6 What types of pavement distress is your agency concerned about in bike-only facilities?

* + Potholes
* Raised/lowered manholes
* Grates
* Cracking
* Debris
* Slick or too rough texture
* Other:\_\_\_\_\_\_\_\_

## Part VI: Bicyclists’ Sense of Safety/Level of Comfort: *This part of the questionnaire tries to determine how your agency collects data on bicyclists sense of safety/level of comfort and challenges faced collecting data.*

To help citizens navigate through a city by bicycle, some agencies create a map of bike routes where the bicyclists’ sense of safety/level of comfort is shown.

1. Does your agency see value in creating a sense of safety/level of comfort map?
* Great benefit
* Some benefit
* No benefit
	1. What are the most important benefits of the sense of safety/level of comfort of bike routes?

(Select 2 Options))

|  |
| --- |
| **🗆** It has strong correlation with bike lane safety **🗆** It has strong correlation with bike lane usage  |
| **🗆** It is useful for agencies to identify problem areas within their bike lane network |
| **🗆** Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. Other than the items listed below, are there any other criteria that agencies should evaluate for sense of safety/level of comfort map in your agency’s bike facilities/routes?
* Physical condition
* Bike facility width
* Presence/types of separation between bike facility and roadway
* Motor vehicle traffic volume on the roadway
* Bicyclist volume
* Other criteria: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. Does your agency have a database for determining the sense of safety/level of comfort map for bike facilities in your agency’s roadway network?

|  |  |  |
| --- | --- | --- |
| **🗆** Comprehensive database | **🗆** Some useful data | **🗆** No database |

* 1. Is there a standard or practice that your agency follows when determining the sense of safety/level of comfort map in bike facilities? If so, could you share the standard/practice your agency used?

|  |  |
| --- | --- |
| **🗆** Yes. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **🗆** No. |

* 1. Which of the following items pose challenges for creating such database?

(Select 3 options)

* Lack of method to determine sense of safety/level of comfort
* Lack of data requirement (e.g. clearly defined data items to collect)
* Physical conditions
* Bike lane width
* Presence/types of separation between bike lane and roadway
* Motor vehicle traffic volume on the roadway
* Bicyclist volume on bike lane
* Other criteria\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Part VII: Sidewalk Physical Condition Assessment: *This part of the questionnaire tries to determine what your agency inventories involving sidewalk physical condition. The goal is also to determine what your agency prioritizes inventorying and what data has been challenging to collect.*

1. For your agency, what are important aspects of sidewalk physical condition assessment?

(Select 2 options)

**🗆** Ensure the safety of sidewalk users, including wheelchair users

**🗆** Ensure the mobility of sidewalk users, including wheelchair users

**🗆** Identify and prioritize the maintenance and rehabilitation need

**🗆** Justification for funding need

**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Does your agency have a database of the sidewalk physical conditions in your roadway network?

|  |  |  |
| --- | --- | --- |
| **🗆** Comprehensive database | **🗆** Some useful data | **🗆** No database |

* 1. Is there a standard or practice that your agency follows when performing condition evaluation on sidewalks? If so, could you share the standard or practice your agency used?

|  |  |
| --- | --- |
| **🗆** Yes.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **🗆** No. |

* 1. Other than the items listed below, are there any other criteria that agencies should evaluate for physical condition of sidewalks?
* Sidewalk cracking
* Sidewalk faulting (elevation drop)
* Sidewalk grade (greater than 12%)
* Sidewalk Potholes
* Insufficient sidewalk width
	+ - Other criteria\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. Which of the following items are particularly challenging when creating such a database?

(Select all that apply)

* Sidewalk cracking
* Sidewalk faulting (elevation drop)
* Sidewalk grade (greater than 12%)
* Sidewalk Potholes
* Insufficient sidewalk width
* Other criteria\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. How is the physical condition of sidewalks evaluated?

|  |  |
| --- | --- |
| **🗆** Manually. | **🗆** Automatic/Semi-automatically. |

* 1. How often is the physical condition of sidewalks evaluated?
		+ Once a year
		+ Once every two years
		+ Once every three to five years
		+ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Part VIII: Sidewalk Level of Comfort/Walkability Assessment: *This part of the questionnaire tries to determine how your agency collects data on bicyclists sense of safety/level of comfort and challenges faced collecting data.*

1. To what extent, have a sidewalk’s level of comfort/walkability been incorporated as design criteria into your agency’s complete streets design policy?
* To a great extent
* To a moderate extent
* To some extent
* To a small extent
* Not at all
	1. What aspects of level of comfort/walkability score are most important?

(Select 2 Options)

|  |
| --- |
| **🗆** It has strong correlation with sidewalk safety. |
| **🗆** It has strong correlation with sidewalk usage.**🗆** it is useful for agencies to identify problem areas within their sidewalk network**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. Does your agency have a database of the sidewalks’ level of comfort/walkability in your roadway network?

|  |  |  |
| --- | --- | --- |
| **🗆** Comprehensive database | **🗆** Some useful data | **🗆** No database |

* 1. Is there a standard or practice that your agency follows when determining the pedestrian’s level of comfort/walkability on sidewalks? If so, could you share the standard or practice your agency used?

 **🗆** Yes.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **🗆** No.

* 1. Other than the items listed below, are there any other criteria that agencies should evaluate for determining the sidewalk level of comfort/walkability?
* Physical condition (e.g. potholes, faulting, smoothness, no sharp grade, etc.)
* Sidewalk width
* Presence/types of buffer zone between sidewalks and roadway
* Motor vehicle volume on roadway
* Motor vehicle speed on roadway
* Pedestrian Volume on sidewalks
	+ - Other criteria\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. Which of the following items pose challenges for creating such a database?

(Select all that apply)

* Lack of method to determine sense of level of comfort/walkability
* Lack of data requirement (e.g. clearly defined data items to collect)
* Physical condition (e.g. potholes, faulting, smoothness, no sharp grade, etc.)
* Sufficient sidewalk width
* Presence/types of buffer zone between sidewalks and roadway
* Motor vehicle volume on roadway
* Motor vehicle speed on roadway
* Pedestrian Volume on sidewalks
* Other criteria\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Part IX: Sidewalk American Disabilities Act (ADA) Compliance Assessment: *This part of the questionnaire tries to determine what ADA guidelines your agency follows, how your agency collects ADA compliance data, and challenges your agency has faced following these guidelines and collecting data.*

For sidewalk design, there are ADA requirements for sidewalk and sidewalk curb ramps. ADA Accessibility Guidelines Amendments (ADAAG 2004), DOT’s ADA Regulations (2006), DOJ’s ADA regulations (2010), and Public Right of Way Access Guidelines (PROWAG) are the major regulations for ADA compliance.

1. In your agency, which regulation has your agency followed/applied on sidewalk curb ramp ADA compliance?

 (Select all that apply)

* Directly follow ADA Accessibility Guidelines Amendments (ADAAG 2004)
* Directly follow DOT’s ADA Regulations (2006)
* Directly follow DOJ’s ADA regulations (2010)
* Follow Public Right of Way Accessibility Guidelines (PROWAG) to achieve ADA compliance
* Follow your agency’s own policy to achieve ADA compliance
* Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. Other than cost, what are the challenges for implementing ADA compliance regulations in your complete streets’ sidewalk design criteria?

|  |
| --- |
| **🗆** Other challenges\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. How is sidewalk ADA compliance evaluated in your agency?

|  |
| --- |
| **🗆** Automatic/semi-automatic methods**🗆** Manual survey |

1. How often does your agency evaluate sidewalk ADA compliance?
	* + Once a year
		+ Once every two years
		+ Once every three to five years
		+ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the most challenging aspect when evaluating sidewalk ADA compliance?

|  |
| --- |
| **🗆** Lack of automatic/efficient means to perform evaluation |
| **🗆** Difficult to determine the version of ADA standard that the roadway must comply to.**🗆** It is time-consuming and subjective to collect ADA compliance data manually**🗆** Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. How successful has your agency been when evaluating these aspects of sidewalk ADA compliance?

3: Very Successful

2: Mostly Successful

1: Not Successful

|  |  |
| --- | --- |
|  |  |
|  1 – 2 – 3 Sidewalk presence |  1 – 2 – 3 Sidewalk longitudinal slope |
|  1 – 2 – 3 Sidewalk cross slope |  1 – 2 – 3 Sidewalk width |
|  1 – 2 – 3 Sidewalk vertical displacement |  1 – 2 – 3 Sidewalk pavement material |
|  1 – 2 – 3 Curb ramp presence |  1 – 2 – 3 Curb ramp slopes |
|  1 – 2 – 3 Curb ramp width |  1 – 2 – 3 Curb ramp cross slope |
|  1 – 2 – 3 Curb vertical displacement  |  1 – 2 – 3 Passing area above ramp landing |
|  1 – 2 – 3 Detectable warning surface presence |  1 – 2 – 3 Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

## Part X: Scooter Safety: *This part of the questionnaire attempts to deal with the rising challenges scooters cause when incorporated in Complete Streets.*

1. In what ways does your agency address safety of Scooter drivers?
	* + Geofencing
		+ Speed
		+ Incorporation of a separate scooter infrastructure
		+ Do not address this issue
		+ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What challenges has your agency faced when trying to incorporate scooters in street design?
* Lack of bike infrastructure
* Scooters becoming obstructions on sidewalks
* Public unwilling to follow regulations in place
* Speed differential between scooters and other road users
* Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Part XI: Automated Vehicle (AV) Operation in Complete Streets: *This part of the questionnaire attempts to deal with the rising challenges AVs cause when incorporated in Complete Streets.*

1. Which areas does your agency plan to adapt to accommodate AV in Complete Streets?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| * Bike Lane
 | * Bike Signal
 | * Street Parking
 | * Transit Lanes
 | * Pavement
 |
| * Pavement Markings
 | * Traffic Signals
 | * Traffic Lights
 | * Medians
 | * Pedestrian Refuge Areas
 |
| * Crash Barriers
 | Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. Does Separation of a bike lanes become more important as AV’s become prevalent?

|  |  |  |
| --- | --- | --- |
| **🗆** Yes | **🗆** Mostly | **🗆** No |

1. In what potential circumstances does your agency see conflicts arising between AV’s with pedestrians, bicyclists, and scooters?

(List up to 2 circumstances)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Category 3: Inventorying Complete Streets for Integration into Pavement Asset Management

## Part XII: Pavement Condition Assessment and data collection: *This part of the questionnaire tries to determine how comprehensive your agencies pavement condition assessment is and what the challenging aspects of collecting data are.*

1. Please explain what data is currently being collected for your agency’s roadway assets inventory/management and how it is being collected?

1: No systematic approach to inventory

2: Inventory pavement features manually

3. Inventory pavement features semi-automatically or automatically

|  |  |  |
| --- | --- | --- |
|  1 – 2 – 3 Pavement Condition |  1 – 2 – 3 Pavement Marking |  1 – 2 – 3 Sidewalk Presence |
|  1 – 2 – 3 Sidewalk ADA Facility |  1 – 2 – 3 Bicycle Facility Presence  |  1 – 2 – 3 Bicycle Facility Width |
|  1 – 2 – 3 Traffic Modes Separation Type |  1 – 2 – 3 Curb Presence/Type |  1 – 2 – 3 Bike lane debris  |
| 1 – 2 – 3 Median Barrier Presence/Type |  1 – 2 – 3 AADT |  1 – 2 – 3 Bicycle Count/Exposure |
|  1 – 2 – 3 Pedestrian Count/Exposure |  1 – 2 – 3 On-Street Parking Presence |  1 – 2 – 3 Roadway Lighting  |
| 1 – 2 – 3 Roughness Index | 1 – 2 – 3 Rutting | 1 – 2 – 3 Cracking |
| 1 – 2 – 3 Faulting | 1 – 2 – 3 Texture  | 1 – 2 – 3 Vertical Grade |
| 1 – 2 – 3 Horizontal Grade  | 1 – 2 – 3 GPS  | 1 – 2 – 3 Other: \_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. How often does your agency Inventory and assess roadways?

|  |  |  |
| --- | --- | --- |
| * Once every year
 | * Once every two years
 | * Once every three-to-five years
 |
| * Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 |  |  |

1. How much does it cost your agency to assess pavement condition per year?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How many lane-miles does your agency collect?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Would it be cost effective to include complete streets assets in the existing data collection processes for pavement evaluation?

|  |  |  |
| --- | --- | --- |
| **🗆** Very cost effective | **🗆** Somewhat cost effective | 🗆 Not cost effective |

1. Does your agency currently incorporate additional complete streets assets in existing data collection processes for pavement condition evaluation?

|  |  |  |
| --- | --- | --- |
| **🗆** Yes. | **🗆** Partially | **🗆** No. |

 If your answer is “Yes” or “partially” in the previous question, please answer the following question, otherwise go to question 6.2:

* 1. What is the approximated additional cost of data collection for both complete streets assets and pavement conditions compares to only pavement conditions? (in dollars per lane mile)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 If your answer is “No” in the previous question, please answer the following question:

* 1. What are the challenges for your agency to consolidate data collection effort?

(Select all that apply)

|  |
| --- |
| **🗆** Lack of appropriate technology/equipment. |
| **🗆** Difficult in coordination between different offices.**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. In the following areas, how challenging is it for your agency to collect data for complete streets?

1: Very challenging

2: Somewhat Challenging

3: Easily

|  |  |  |
| --- | --- | --- |
| 1 – 2 – 3 Pavement Condition | 1 – 2 – 3 Pavement Marking | 1 – 2 – 3 Sidewalk Presence |
| 1 – 2 – 3 Sidewalk ADA Facility | 1 – 2 – 3 Bicycle Facility Presence  | 1 – 2 – 3 Bicycle Facility Width |
| 1 – 2 – 3 Traffic Modes Separation Type | 1 – 2 – 3 Curb Presence/Type | 1 – 2 – 3 Bike lane debris |
| 1 – 2 – 3 Median Barrier Presence/Type | 1 – 2 – 3 AADT | 1 – 2 – 3 Bicycle Count/Exposure |
| 1 – 2 – 3 Pedestrian Count/Exposure | 1 – 2 – 3 On-Street Parking Presence | 1 – 2 – 3 Roadway Lighting  |
| 1 – 2 – 3 Roughness Index | 1 – 2 – 3 Rutting | 1 – 2 – 3 Cracking |
| 1 – 2 – 3 Faulting | 1 – 2 – 3 Texture  | 1 – 2 – 3 Vertical Grade |
| 1 – 2 – 3 Horizontal Grade  | 1 – 2 – 3 GPS  | 1 – 2 – 3 Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  |  |  |

8. Do your agency see an advantage of using LiDAR data from automated vehicles to collect data on complete streets attributes and features?

|  |  |  |
| --- | --- | --- |
| **🗆** Yes | **🗆** Mostly | **🗆** No |

## Part XIII: Qualitative and Quantitative Value of Complete Streets implementation: *This part of the questionnaire tries to determine if your agency would value assigning qualitive and quantitative value of complete streets would be useful and if your agency has tried to determine this value.*

1. How important would it be for your agency to account for the value of Complete Street/active transportation qualitatively and quantitatively?

|  |  |  |
| --- | --- | --- |
| **🗆** Very Important | **🗆** Somewhat important | **🗆** Not important |

1. Why does your agency need to account for the value of complete streets?

|  |
| --- |
| **🗆** Justification for funding. |
| **🗆** Legislature requirement.**🗆** Improve public opinion.**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. What does your agency include in the value of complete streets?

(Select at most 3 options)

|  |
| --- |
| **🗆** Economic (e.g. tax income)**🗆** Public health |
| **🗆** Traffic safety**🗆** Reduction in carbon footprint **🗆** Quality of life**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. How does your agency account for the value of complete streets qualitatively and quantitively?

|  |  |  |
| --- | --- | --- |
| **🗆** Well defined methods/plans | **🗆** Partial methods/plans | **🗆** No way to quantify benefit |

* 1. What does your agency value most for complete streets implementation?

(Select at most 3 options)

|  |
| --- |
| **🗆** Economic (e.g. tax income)**🗆** Public health |
| **🗆** Traffic safety**🗆** Reduction in carbon footprint **🗆** Quality of life**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. What are the challenges for your agency to account for the value of complete street?

(Select 3 Options)

|  |
| --- |
| **🗆** Determine pedestrian usage |
| **🗆** Determine bicyclist usage**🗆** Quantify safety improvement in dollar amount**🗆** Quantify health improvement in dollar amount**🗆** Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Technologies used for Complete Streets by Data Inventory and**

**Asset management Service Providers**

**Your name:**

**Your agency:**

**Email:**

**Phone:**

**Purpose of Survey:** Better understand the challenges and needs service providers face regarding complete streets so that we may provide useful recommendations to bridge these challenges and satisfy these needs.

Only answer questions you know the answer to. If you do not know the answer to a question, please leave the option blank or give the questionnaire to someone who would know the answer.

1. How challenging is it for your agency to use the following technologies to inventory pavement and complete streets assets/attributes?

1: Very challenging

2: Somewhat Challenging

3: Easily

|  |  |  |
| --- | --- | --- |
| 1 – 2 – 3 3D Laser Technology  | 1 – 2 – 3 LiDAR | 1 – 2 – 3 Acoustical Techniques  |
| 1 – 2 – 3 Aerial and Satellite Imaging | 1 – 2 – 3 Thermal Camera  | 1 – 2 – 3 Pneumatic Tube |
| 1 – 2 – 3 Inductance Loop | 1 – 2 – 3 Vehicle Mounted Camera | 1 – 2 – 3 UAV Mounted Camera |
| 1 – 2 – 3 Ground Penetration Radar | 1 – 2 – 3 Other |  |

1. Please explain what data is currently being collected for your agency’s roadway assets inventory/management, how it is being collected and how it is being processed?

(Select all that apply)

1: No systematic approach to inventory

2: Roadway feature data **collected** manually

3. Roadway feature data **collected** semi-automatically or automatically

4: Roadway feature data **processed** manually

5: Roadway feature data **processed** semi-automatically or automatically

|  |  |  |
| --- | --- | --- |
|  1 – 2 – 3 – 4 – 5 Pavement Condition | 1 – 2 – 3 – 4 – 5 Pavement Marking |  1 – 2 – 3 – 4 – 5 Sidewalk Presence |
| 1 – 2 – 3 – 4 – 5 Sidewalk ADA Facility |  1 – 2 – 3 – 4 – 5 Bicycle Facility Presence  |  1 – 2 – 3 – 4 – 5 Bicycle Facility Width |
|  1 – 2 – 3 – 4 – 5 Traffic Modes Separation Type |  1 – 2 – 3 – 4 – 5 Curb Presence/Type | 1 – 2 – 3 – 4 – 5 Bike lane debris  |
|  1 – 2 – 3 – 4 – 5 Median Barrier Presence/Type |  1 – 2 – 3 – 4 – 5 AADT |  1 – 2 – 3 – 4 – 5 Bicycle Count/Exposure |
|  1 – 2 – 3 – 4 – 5 Pedestrian Count/Exposure |  1 – 2 – 3 – 4 – 5 On-Street Parking Presence |  1 – 2 – 3 – 4 – 5 Roadway Lighting  |
|  1 – 2 – 3 – 4 – 5 Roughness Index |  1 – 2 – 3 – 4 – 5 Rutting |  1 – 2 – 3 – 4 – 5 Cracking |
|  1 – 2 – 3 – 4 – 5 Faulting |  1 – 2 – 3 – 4 – 5 Texture  |  1 – 2 – 3 – 4 – 5 Vertical Grade |
|  1 – 2 – 3 – 4 – 5 Horizontal Grade  |  1 – 2 – 3 – 4 – 5 GPS  |  1 – 2 – 3 – 4 – 5 Other: \_\_\_\_\_\_\_\_\_\_\_\_\_ |