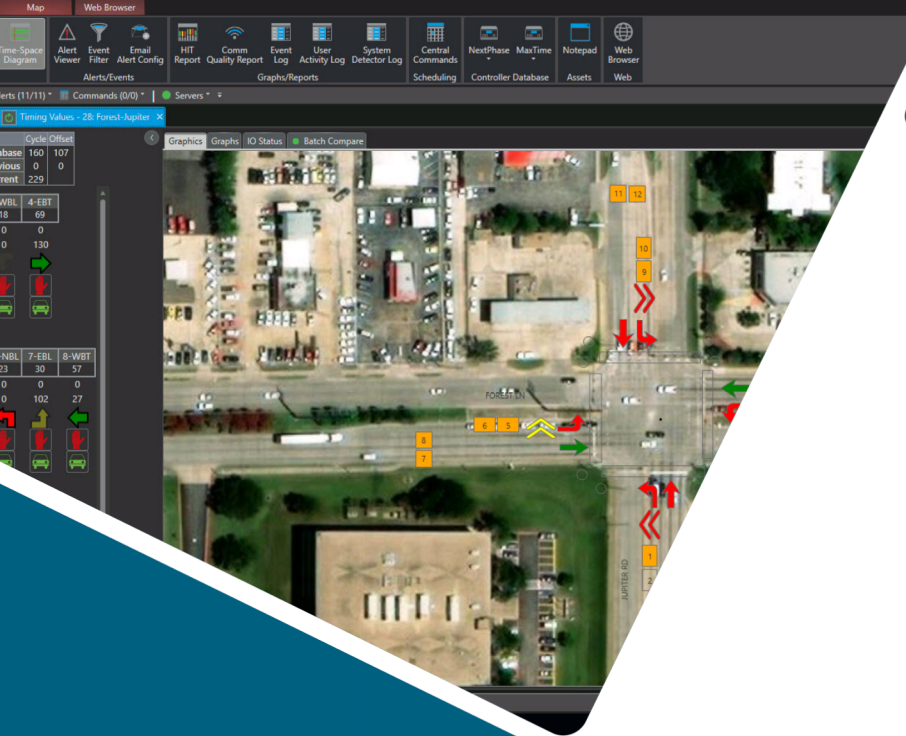


LEARN • COLLABORATE • SHARE • ENERGIZE



Kimley»»Horn

# SMART CITIES

TECHNOLOGY FORUM

## Web Based Solutions

»»KITS

A Kimley-Horn Software Solution

»»Kadence

A Kimley-Horn Software Solution

»»Traction

A Kimley-Horn Software Solution

# Agenda

- Strategic Highway Safety Plan (SHSP)
- Penn DOT Aviation Economic Impact Calculator
- Folsom ATIS
- Kansas Local Infrastructure Planning (KLIP)
- Metropolitan Transportation Commission (MTC) Intelligent Transportation Systems (ITS) Architecture

# Strategic Highway Safety Plan (SHSP)

- California Safe Roads
- Nevada Zero Fatalities
- Reduce traffic fatalities and serious injuries on public roads

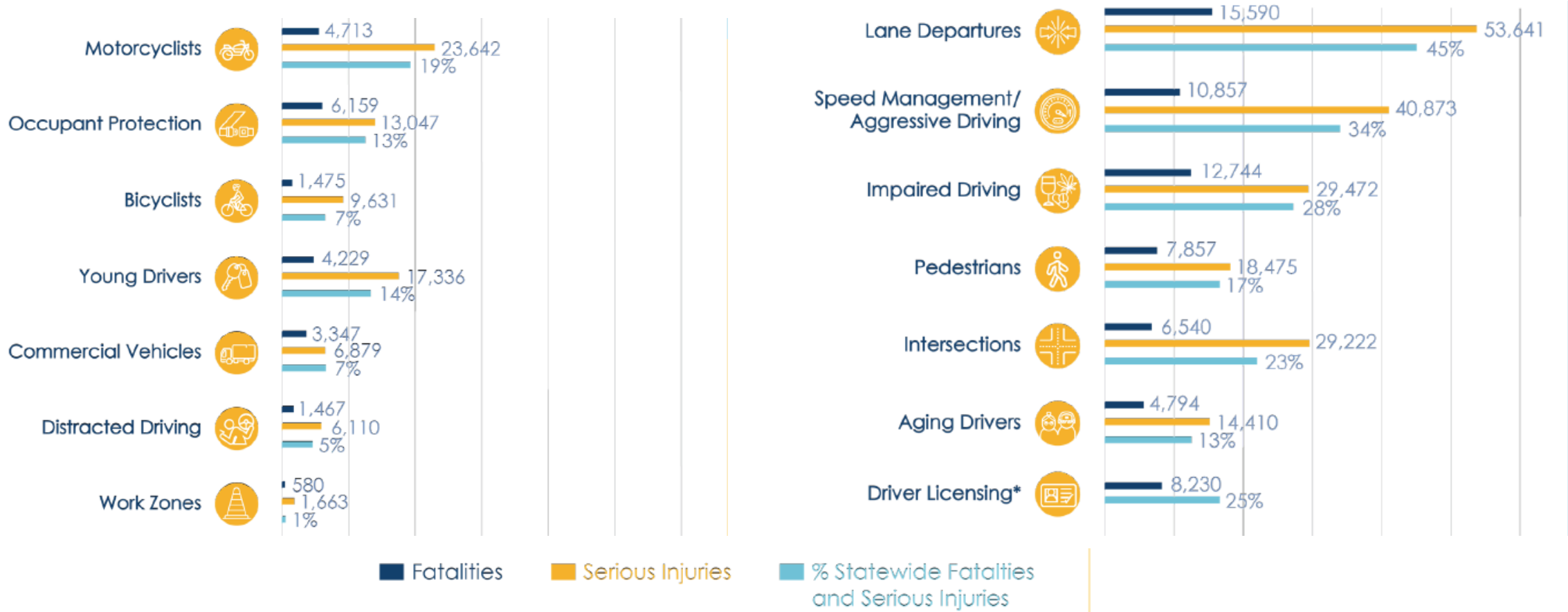


# SHSP: Background

- Data-driven Approach
- ID Challenge Areas represent the greatest opportunity to reduce fatalities and serious injuries across the state
- Data-sharing
- Track progress with transparency
- Stakeholder coordination



# SHSP: Challenge Areas



# SHSP: Action Tracking Tool



## California SHSP Action Tracking Tool



Joseph Joyce  
joseph.joyce@kimley-horn.com

- Home
- Challenge Areas
- Documents
- Calendar
- Reports
- Directory
- Resources
- Logout
- Learn More

### Home

#### Action Status by Challenge Area

● Completed 
 ● Substantial Progress 
 ● Early Progress 
 ● Underway 
 ● Not Started 
 ● Cancelled

#### Challenge Area

Challenge Area	Updated
Bicyclists (High Priority)	3/16/20
Impaired Driving (High Priority)	3/16/20
Intersections (High Priority)	3/16/20
Lane Departures (High Priority)	3/16/20
Pedestrians (High Priority)	3/16/20
Speed Management/Aggressive Driving (High Priority)	3/16/20
Steering Committee Actions	10/16/20
Aging Drivers (Focus Area)	3/16/20
Commercial Vehicles (Focus Area)	3/16/20
Distracted Driving (Focus Area)	3/16/20
Driver Licensing (Focus Area)	3/16/20
Emergency Response (Focus Area)	3/16/20
Emerging Technologies (Focus Area)	3/31/20
Motorcyclists (Focus Area)	3/16/20
Occupant Protection (Focus Area)	3/16/20
Work Zones (Focus Area)	3/16/20
Young Drivers (Focus Area)	3/16/20

#### All Actions

79

#### Early Progress

8

#### Completed

31

#### Cancelled

0

#### Not Started

0

#### Underway

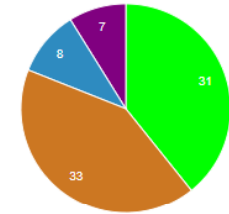
7

#### Substantial Progress

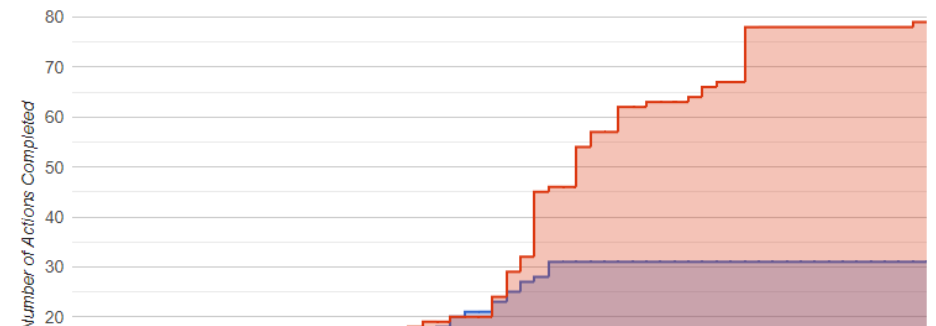
33

#### Number of Actions by Status

● Completed 
 ● Substantial Progress 
 ● Early Progress 
 ● Underway 
 ● Not Started 
 ● Cancelled



#### Actions Completed Over Time



# SHSP: Action Tracking Tool



Joseph Joyce  
joseph.joyce@kimley-horn.com

- Home
- Challenge Areas
- Documents
- Calendar
- Reports
- Directory
- Resources
- Logout
- Learn More

## Challenge Areas (17)

This page includes the challenge area action item descriptions, responsible parties, and updates on progress to each action item. Click on a challenge area name to expand the view to show the action items for that area. Use the Favorites star to keep certain challenge areas at the top of the list.

Expand All Collapse All

Name # of Actions Co-Leads # of Completed Actions Favorite?

Bicyclists (High Priority) 5 Action(s) Jessica Downing (Caltrans) Mike Gainor (SCAG) 3 / 5 ☆

Status Legend: ● Completed ● Substantial Progress ● Early Progress ● Underway ● Not Started ● Cancelled

No	Description	Action Leads	Completion (Est.)	Last Update	Status
B.1	Establish a Preferred Methodology for Developing a High Injury Network (HIN) for Bicyclists	Courtney Aguirre (SCAG)	Mar 2022	07/06/2021	●
B.2	Update the California "Complete Intersections" Guide in order to reduce intersection crashes for pedestrians and bicyclists by providing current design guidance to Caltrans and local staff	Jessica Downing (Caltrans)	Mar 2024	10/19/2023	●
B.3	Review current DMV Driver Handbook to find and provide recommendations for updates regarding new vehicle codes, new bikeway types, and/or modified text or images to more thoroughly explain lawful, safer, and courteous behaviors by people bicycling or driving	Jim Baross (CABO)	Dec 2022	03/02/2023	●
B.4	Create a California "Bicycle Driver Handbook" (similar to the DMV Driver Handbook) to increase the availability of authoritative information about best, lawful, and safer bicycling practices to encourage more and more effective bicycling thereby reducing crashes and fatalities, while increasing personal health and well being	Jim Baross (CABO)	Dec 2023	10/19/2023	●
B.5	Develop Recommendations to Update the Police Officer Standards and Training (POST)/Safety Training materials to accurately inform about current California Vehicle Codes regarding bicycling traffic law	Jim Baross (CABO)	Dec 2021	03/21/2022	●

Impaired Driving (High Priority) 8 Action(s) Elliotte Johnson (CHP) Steven Villafranca (DMV) Mattie Jetté (DMV) 3 / 8 ☆

Intersections (High Priority) 5 Action(s) Dennis Acuna (Riverside County) Joel Bareng (Santa Clarita) Ranjeet Bagha (Caltrans) 2 / 5 ☆

# SHSP: Action Tracking Tool

[Challenge Areas](#) > [Pedestrians](#) > [Action P.2](#)

Status: 

## Details

<b>Action Description</b>	Develop pedestrian count models to allow the estimation of the pedestrian count for various roadway locations in order to better evaluate the performance of active transportation related infrastructures and more accurately predict the pedestrian related crashes
<b>Status</b>	Substantial Progress <a href="#">Update</a>
<b>Start Date</b>	09/17/2020
<b>End Date</b>	01/01/2024 <a href="#">Update</a>
<b>Last Activity</b>	09/15/2022
<b>Category</b>	Data
<b>Es included</b>	Emerging Technologies, Engineering

## Action Leads (1)

[Copy Emails](#)

[Manage Action Leads](#)

Showing 1 of 1 items

First Name	Last Name	Email	AgencyID
Wen	Cheng	wcheng@cpp.edu	CalPoly Pomona

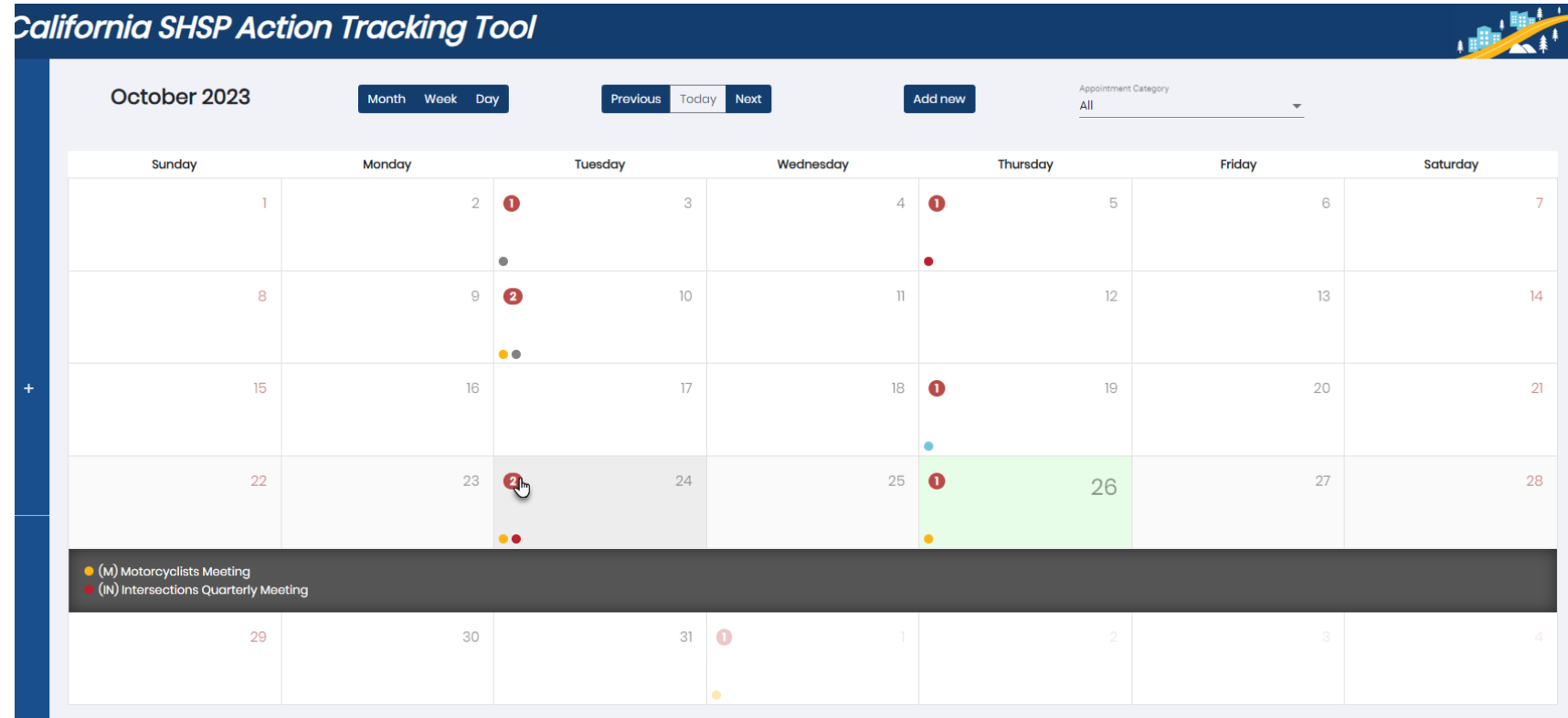
## Status (5)

Date	Author	Old Status	New Status	Comment
09/15/2022 09:17	Wen Cheng	Substantial Progress	Substantial Progress	The proposed models linking ped. counts and other influential factors are in the validation status.
04/21/2022 12:17	Jessica Downing	Substantial Progress	Substantial Progress	The raw ped. count data (about 5000 records) have been collected from the national archive for bicycle and pedestrian count data maintained by Portland State University. The data covers different functional classifications (major and minor arterials, collector, shared pathway, trails, etc.), different land use, and different cities in California. In addition, the data include annual average daily counts, hourly counts of specific time, the associated weather conditions, and so on. The data has been cleaned and pre-processed as well. The author is now in the process of developing the models for two purposes: 1. Estimating the hourly ped. counts with the given weather conditions, workday, hours, land use, transportation facility types. 2. Estimating the annual average daily ped. counts with the given the hourly ped. counts, annual average weather conditions, land use, and transportation facility types. The work is estimated to be finished by August 2022.
01/19/2022 10:40	Wen Cheng	Substantial Progress	Substantial Progress	the raw ped. count data (about 5000 records) have been collected from the national archive for bicycle and pedestrian count data maintained by Portland State University. The data covers different functional classifications (major and minor arterials, collector, shared pathway, trails, etc.), different land use, and different cities in California. In addition, the data include annual average daily counts, hourly counts of specific time, the associated weather conditions, and so on. The data has been cleaned and pre-processed as well. The author is now in the process of developing the models for two purposes: 1. Estimating the hourly ped. counts with the given weather conditions, workday,



# SHSP: Action Tracking Tool

- Document management
- Calendar
  - Roadmap: Outlook integration
- Reports
  - Define query
  - Print to PDF or Excel



# SHSP: Action Tracking Tool

## Action Tracking Details Report [change report options](#)

[Print Report](#)

Agency: All

Completion Year: 2023

Action Statuses: All

Challenge Areas:

Bicyclists (High Priority)

Impaired Driving (High Priority)

Intersections (High Priority)

### Bicyclists (High Priority) (1 Actions)

Challenge Area Leaders: [Jessica Downing \(Caltrans\)](#) [Mike Gainor \(SCAG\)](#)

No.	Description	Action Leads	Completion (Est.)	Last Update	Status	Last Update Comment
B.4	Create a California "Bicycle Driver Handbook" (similar to the DMV Driver Handbook) to increase the availability of authoritative information about best, lawful, and safer bicycling practices to encourage more and more effective bicycling thereby reducing crashes and fatalities, while increasing personal health and well being	<a href="#">Jim Baross (CABO)</a>	Dec 2023	10/19/2023	<span style="color: blue;">●</span> Early Progress	From Jim Baross - There is still hope for a second-year carry over effort for the bill, AB 1188, by Assembly Boerner. The estimated cost of printing and distributing the handbook was a challenge to moving the bill forward. Online only/web access will be considered in the future.

### Impaired Driving (High Priority) (2 Actions)

Challenge Area Leaders: [Elliott Johnson \(CHP\)](#) [Steven Villafranca \(DMV\)](#) [Mattie Jetté \(DMV\)](#)

No.	Description	Action Leads	Completion (Est.)	Last Update	Status	Last Update Comment
ID.4	Impaired Driving County-Crash Analysis Tool (ID C-CAT): Web-based Conversion	<a href="#">Steven Villafranca (DMV)</a>	Jul 2023	08/15/2023	<span style="color: green;">●</span> Completed	Web-based conversion of the ID C-CAT (2016-2021 SWITRS data) has been completed, including automatic scaling to accommodate a wider range of resolutions and screen sizes.
ID.5	Raising Public Awareness of Children in Vehicles with Impaired Drivers	<a href="#">Stephanie Tombrello (SafetyBeltSafe)</a>	Aug 2023	08/15/2023	<span style="color: green;">●</span> Completed	PSA campaign messaging completed (in English and Spanish) and digitally displayed in 500+ DMV Field Offices statewide from February - July 2023. PSA attached (SHSP_DMV_1024x768.pdf).

### Intersections (High Priority) (2 Actions)

Challenge Area Leaders: [Dennis Acuna \(Riverside County\)](#) [Joel Bareng \(Santa Clarita\)](#) [Ranjeet Bagha \(Caltrans\)](#)

No.	Description	Action Leads	Completion (Est.)	Last Update	Status	Last Update Comment
-----	-------------	--------------	-------------------	-------------	--------	---------------------

# SHSP: Action Tracking Tool

SHSP Progress by Challenge Area and Agency Report [change report options](#)

Print Report

Agency: All

Completion Year: All

Action Statuses: All

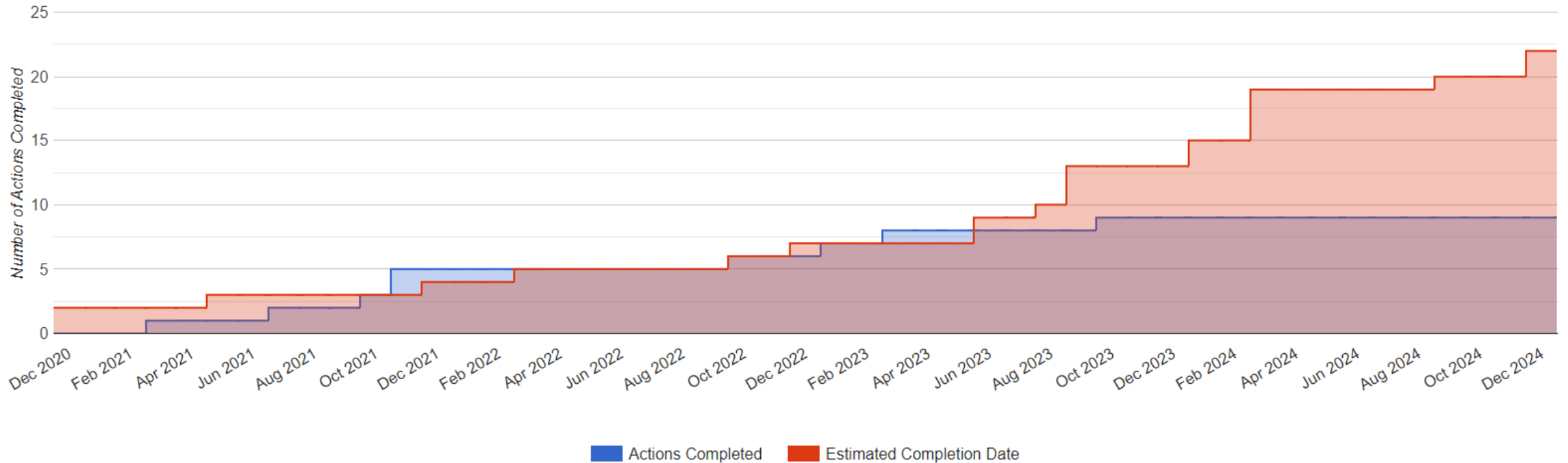
Challenge Areas:

Lane Departures (High Priority)

Pedestrians (High Priority)

Speed Management/Aggressive Driving (High Priority)

Actions Completed Over Time



# Penn DOT

- Aviation Impact Calculator
- Developed to integrate into their government website.
  - Including their internal authentication
  - Still hosted by Kimley Horn

The screenshot shows the 'Economic Impact Calculator' interface. At the top, there are logos for Pennsylvania Department of Transportation and the 2022 Pennsylvania State Budget. A 'Download User Guide' link and a 'Sign In' button are in the top right. The main section is titled 'Economic Impact Calculator' and features a dropdown menu for 'Select Airport' with 'Sky Haven Airport (76N)' selected. To the right, a table displays '2019 Total Airport Economic Impact Results (76N)'. Below the table is a navigation bar with tabs for 'Airport Administration', 'Tenant Activity', 'Visitor Spending', and 'Summary'.

	👤 Employment	💰 Payroll	📊 Output
Direct	133,473 Jobs	\$6,887,041,200	\$18,527,281,900
Multiplier	92,687 Jobs	\$5,605,286,000	\$15,606,623,500
<b>Total Impact</b>	<b>226,160 Jobs</b>	<b>\$12,492,327,200</b>	<b>\$34,133,905,400</b>

## Airport Administration

### Employment Headcount (Full and Part-Time)

	2019 Baseline Data	Updated Scenario
Total Annual Wages Paid	\$###	\$###
and/or		
Total Employees	###	###

### Operating Budget

	2019 Baseline Data	Updated Scenario
Average Annual Operating Budget	\$###	\$###

### Capital Expenditures

	2019 Baseline Data	Updated Scenario
Five-Year Average	\$###	\$###

## Airport Administration Impacts

	2019 Baseline Data			Updated Scenario		
	Employment	Payroll	Output	Employment	Payroll	Output
Direct	###	\$###	\$###	###	\$###	\$###
Multiplier	###	\$###	\$###	###	\$###	\$###
Total Impact	###	\$###	\$###	###	\$###	\$###

# Penn DOT

- Data portrayed in different styles to help identify aggregations.
- Users can download data to save and compare.

**Economic Impact Calculator**

Select Airport: Sky Haven Airport (76N) | Select Baseline: Baseline Name, 2019

**2019 Total Airport Economic Impact Results (76N)**

	👤 Employment	💰 Payroll	📊 Output
Direct	133,473 Jobs	\$6,887,041,200	\$18,527,281,900
Multiplier	92,687 Jobs	\$5,605,286,000	\$15,606,623,500
<b>Total Impact</b>	<b>226,160 Jobs</b>	<b>\$12,492,327,200</b>	<b>\$34,133,905,400</b>

**Summary**

Total Economic Impact

2019 Baseline Data | Updated Scenario

Legend: Airport Administration (Green), Tenant Activity (Yellow), Visitor Spending (Blue)

5% Total Impact (Updated Scenario)

Buttons: Back, Save New Airport Baseline, Download

# Penn DOT

- Allows users to run specific scenarios to simulate changes to individual airports as well as mass updates across multiple/all airports at one time.
- Airports are managed by region and General vs Commercial.

**Statewide Impacts**

**Comprehensive Adjustments**

Airport Administration Employment  +/- %

Airport Administration Operating Expenses  +/- %

Airport Administration Capital Expenditures  +/- %

Tenant Employment  +/- %

Tenant Capital Expenditures  +/- %

Commercial Visitors (Out of State Only)  +/- %

General Aviation Visitors (Out of State Only)  +/- %

Commercial Visitor Spend Per Day  +/- %

General Aviation Visitor Spend Per Day  +/- %

Cost of Living  +/- %

**Apply Updates**



Apply Updates to Dated Entries Only

Apply Updates to All Airports

**Total Statewide Impacts**

	2019 Total Impacts				Updated Total Impacts		
	Employment	Payroll	Output	Last Airport Update in System	Employment	Payroll	Output
Airport 1	###	\$###	\$###	yyyy-mm-dd	###	\$###	\$###
Airport 2	###	\$###	\$###	yyyy-mm-dd	###	\$###	\$###

# KDoT KLIP Remake and Upgrade

**Historic Data Viewer**

[Future Scenario Planner](#)

[User Guide](#)

## Kansas Local Infrastructure Planning (KLIP) Tool | *Historic Data Viewer*

---

**Selected County:**

**General County Statistics**

Road System Type: -  
 Population (2020): -  
 Road and Bridge Budget (2020): -  
 Additional Funding (2020): -

**County-Owned Roadway Miles by Material**

	Paved		Unpaved	
	Asphalt	Concrete	Gravel	Earth
	-	-	-	-

Source: Kansas County Engineers' Annual Reports (2020 is most recent full year of data).

**County-Owned Bridges by Condition**

Condition	Total # of Bridges	Total Bridge Deck Area (Sq Ft)
Good	-	-
Fair	-	-
Poor	-	-
<b>Total</b>	-	-

Source: Kansas National Bridge Inventory (2022).

**Historic Trend Graph**

Choose a metric to see a trend line from 2016-present in the graph below (Note: must have a County selected)

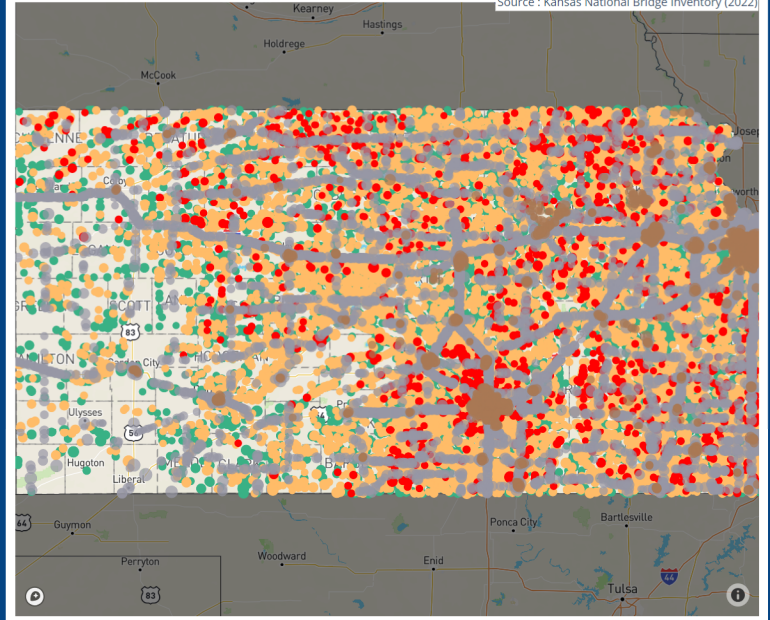
### Map of County-Owned Bridges and Conditions

Google
  Satellite
  Dark

**Bridge Condition**  
 Click legend items to toggle display on/off.

- Load Posted Bridges
- Good
- Fair
- Poor
- State-Owned
- Other

Source: Kansas National Bridge Inventory (2022)



In partnership with:





TECHNOLOGY FORUM

# What does KLIP do?

(Historic Data Viewer)

**Selected County:**  
Atchison

**General County Statistics**  
Road System Type: County Township  
Population (2020): 16,073  
Road and Bridge Budget (2020): \$3,176,143  
Additional Funding (2020): \$91,519

**County-Owned Roadway Miles by Material**

Paved		Unpaved	
Asphalt	Concrete	Gravel	Earth
134	0	156	0

Source: County Engineers Annual Report (2020 is most recent full year of data)

**County-Owned Bridges by Condition**

Condition	Total # of Bridges	Total Bridge Deck Area (Sq Ft)
Good	62	165,344
Fair	80	103,496
Poor	17	15,657
<b>Total</b>	<b>159</b>	<b>284,497</b>

Source: Kansas National Bridge Inventory (2022)

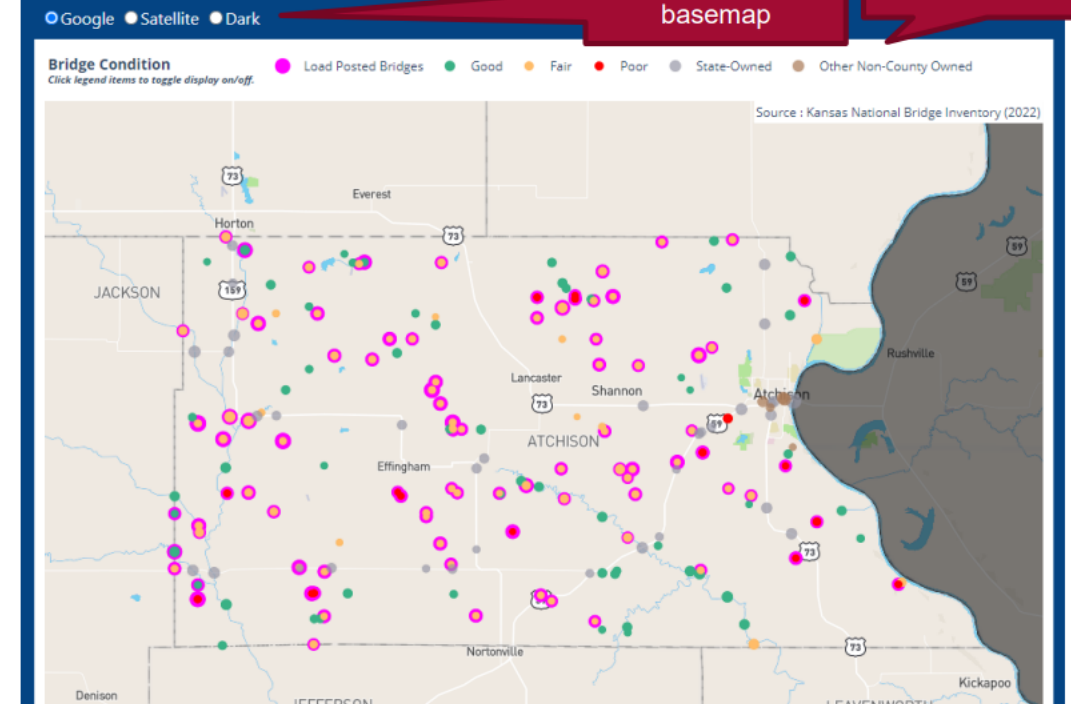
County population and budget information

County selection

Number of County-owned roadway miles (broken down by material)

Tabulation of County-owned bridges (broken down by condition)

## Map of County-Owned Bridges and Conditions



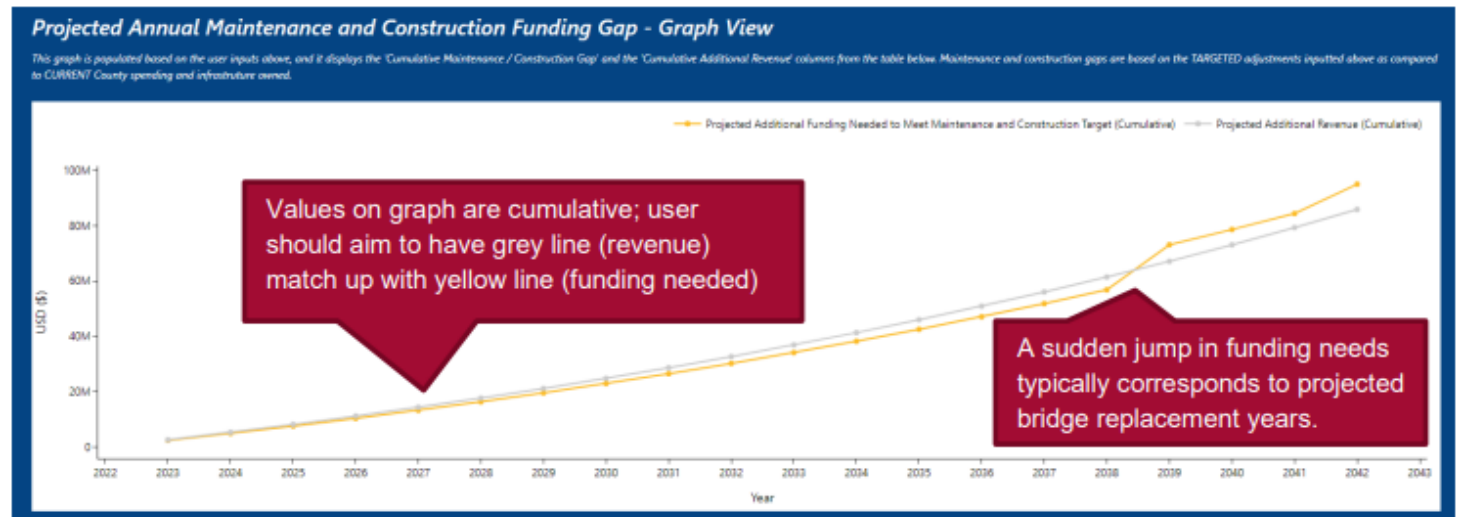
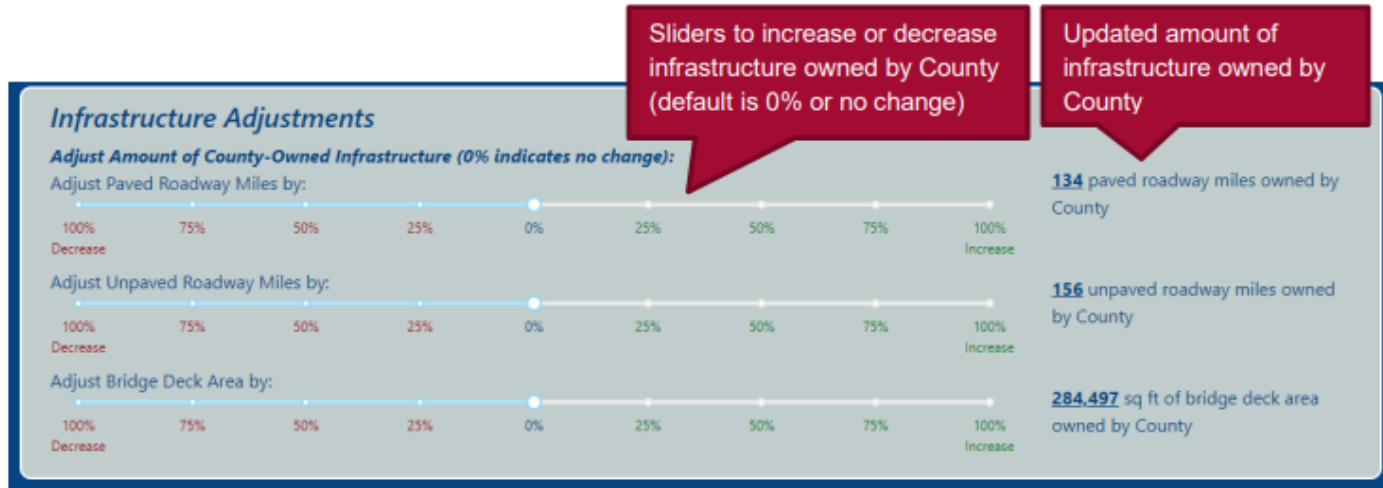
Toggle background basemap

Toggle bridges displayed on map



# What does KLIP do?

(Future Scenario Planner)



# What does KLIP do?

(Future Scenario Planner cont.)

Annual maintenance funding gaps (paved roads / unpaved roads / bridges); accounts for amount of infrastructure owned

Annual construction funding gaps (roads [paved/unpaved combined] / bridges / culverts)

Combined funding gaps, including cumulative totals, and additional revenue projections from any mill levy increases

Export												
Maintenance Gap (2022 \$)				Construction Gap (2022 \$)				Cumulative Totals and Gaps (2022 \$)				
Year	Paved Roads	Unpaved Roads	Bridges	Total Maintenance	Roads	Bridges	Culverts	Total Construction	Total Maintenance / Construction Gap	Cumulative Maintenance / Construction Gap	Additional Revenue	Cumulative Additional Revenue
2023	\$1,973,857	\$0	\$0	\$1,973,857	\$0	-\$196,396	\$5,682	-\$190,715	\$1,975,391	\$1,975,391	\$944,973	\$944,973
2024	\$2,072,541	\$0	\$0	\$2,072,541	\$0	-\$206,216	\$5,966	-\$200,250	\$2,074,161	\$4,049,552	\$992,222	\$1,937,195
2025	\$2,176,177	\$0	\$0	\$2,176,177	\$0	-\$216,527	\$6,264	-\$210,263	\$2,177,869	\$6,227,421	\$1,041,833	\$2,979,027
2026	\$2,284,988	\$0	\$0	\$2,284,988	\$0	-\$227,353	\$6,577	-\$220,776	\$2,286,762	\$8,514,183	\$1,093,924	\$4,072,952
2027	\$2,399,230	-\$25,630	\$259,315	\$2,632,915	\$0	-\$238,721	\$6,906	-\$231,815	\$2,401,100	\$10,915,283	\$1,148,621	\$5,221,572
2028	\$2,519,192	-\$26,912	\$272,281	\$2,764,561	\$0	-\$250,657	\$7,251	-\$243,406	\$2,521,155	\$13,436,438	\$1,206,052	\$6,427,624
2029	\$2,645,151	-\$28,257	\$285,895	\$2,902,789	\$0	\$1,511,151	\$7,614	\$1,518,765	\$4,421,554	\$17,857,992	\$1,266,354	\$7,693,978
2030	\$2,777,409	-\$29,670	\$300,190	\$3,047,928	\$0	-\$276,349	\$7,995	-\$268,355	\$2,779,574	\$20,637,566	\$1,329,672	\$9,023,650
2031	\$2,916,279	-\$31,154	\$315,199	\$3,200,325	\$0	\$8,694,376	\$8,394	\$8,702,770	\$11,903,095	\$32,540,661	\$1,396,155	\$10,419,805
2032	\$3,062,093	-\$32,711	\$330,959	\$3,360,341	\$0	-\$304,675	\$8,814	-\$295,861	\$3,064,480	\$35,605,141	\$1,465,963	\$11,885,769
2033	\$3,215,198	-\$34,347	\$347,507	\$3,528,358	\$0	\$1,980,411	\$9,251	\$1,989,666	\$5,518,024	\$41,123,165	\$1,539,261	\$13,425,030
2034	\$3,375,958	-\$36,064	\$364,583	\$3,704,476	\$0	-\$335,904	\$9,696	-\$326,208	\$3,377,270	\$44,500,435	\$1,622,622	\$15,047,652
2035	\$3,544,756	-\$37,868	\$382,477	\$3,889,365	\$0	\$9,846,512	\$10,196	\$9,856,708	\$3,547,466	\$48,357,143	\$1,716,244	\$16,763,896
2036	\$3,721,994	-\$39,761	\$400,812	\$4,082,045	\$0	-\$370,334	\$10,716	-\$359,618	\$3,722,651	\$52,079,804	\$1,818,888	\$18,582,784
2037	\$3,908,093	-\$41,749	\$419,661	\$4,285,905	\$0	-\$388,851	\$11,264	-\$377,587	\$3,913,804	\$56,001,698	\$1,931,082	\$20,513,866
2038	\$4,103,498	-\$43,837	\$439,028	\$4,498,689	\$0	-\$2,361,914	\$11,836	-\$2,350,078	\$4,106,603	\$58,351,724	\$2,053,131	\$22,566,997
2039	\$4,308,673	-\$46,028	\$458,905	\$4,721,550	\$0	-\$428,708	\$12,436	-\$416,272	\$4,313,542	\$60,668,266	\$2,185,758	\$24,752,755
2040	\$4,524,106	-\$48,330	\$479,282	\$4,955,058	\$0	-\$450,144	\$13,064	-\$437,080	\$4,527,633	\$61,601,086	\$2,165,895	\$26,508,344
2041	\$4,750,312	-\$50,746	\$500,061	\$5,200,627	\$0	-\$472,651	\$13,673	-\$458,978	\$4,754,014	\$86,355,101	\$2,274,190	\$28,858,534
2042	\$4,987,827	-\$53,284	\$521,445	\$5,455,988	\$0	-\$496,283	\$14,357	-\$481,926	\$4,991,715	\$91,346,816	\$2,387,900	\$31,246,433

Export results to CSV (can open in Excel)

Negative gaps indicate County spending is currently greater than targeted spending from inputs

Bridge construction annual gap is based on County's average spending coupled with a projected replacement schedule shown below

NOTE: Negative values indicate that the targeted/user input level of spending is less than the County's current level of spending.

## Projected Annual Bridge Replacement Schedule

Year	Number of Bridges Needing Replacement	Deck Area Needing Replacement (sq ft)	Cost
2023	1	1515	\$238,613
2024	0	0	\$0
2025	0	0	\$0
2026	0	0	\$0
2027	0	0	\$0
2028	0	0	\$0
2029	0	0	\$0
2030	3	2479	\$549,392
2031	0	0	\$0
2032	0	0	\$0
2033	0	0	\$0
2034	0	0	\$0
2035	0	0	\$0
2036	2	1275	\$378,662
2037	0	0	\$0
2038	0	0	\$0
2039	0	0	\$0
2040	0	0	\$0
2041	0	0	\$0
2042	0	0	\$0

Many years will not show any bridges needing replacement based on projections, but some years will show several bridges needing replacement.

**ALERT:** Construction along White Rock Road west of Prairie City Rd. Use alternative routes.

My Cameras

- > Street 1 & Street 2
- > Street 2 & Street 3

Blue Ravine and Prairie City/Sibley



Layers

Traveler Information

- Traffic Speeds  
Closed/Stopped Slow Fast
- Parking
- Parking (Historical District)
- Road Conditions
- Closures
- Incidents\*
- Construction\*
- Future Construction\*
- Special Events\*
- Waze Reports\*
- Mile Markers\*
- District Boundaries

Traffic Devices

- Cameras
- Message Signs\*

Weather

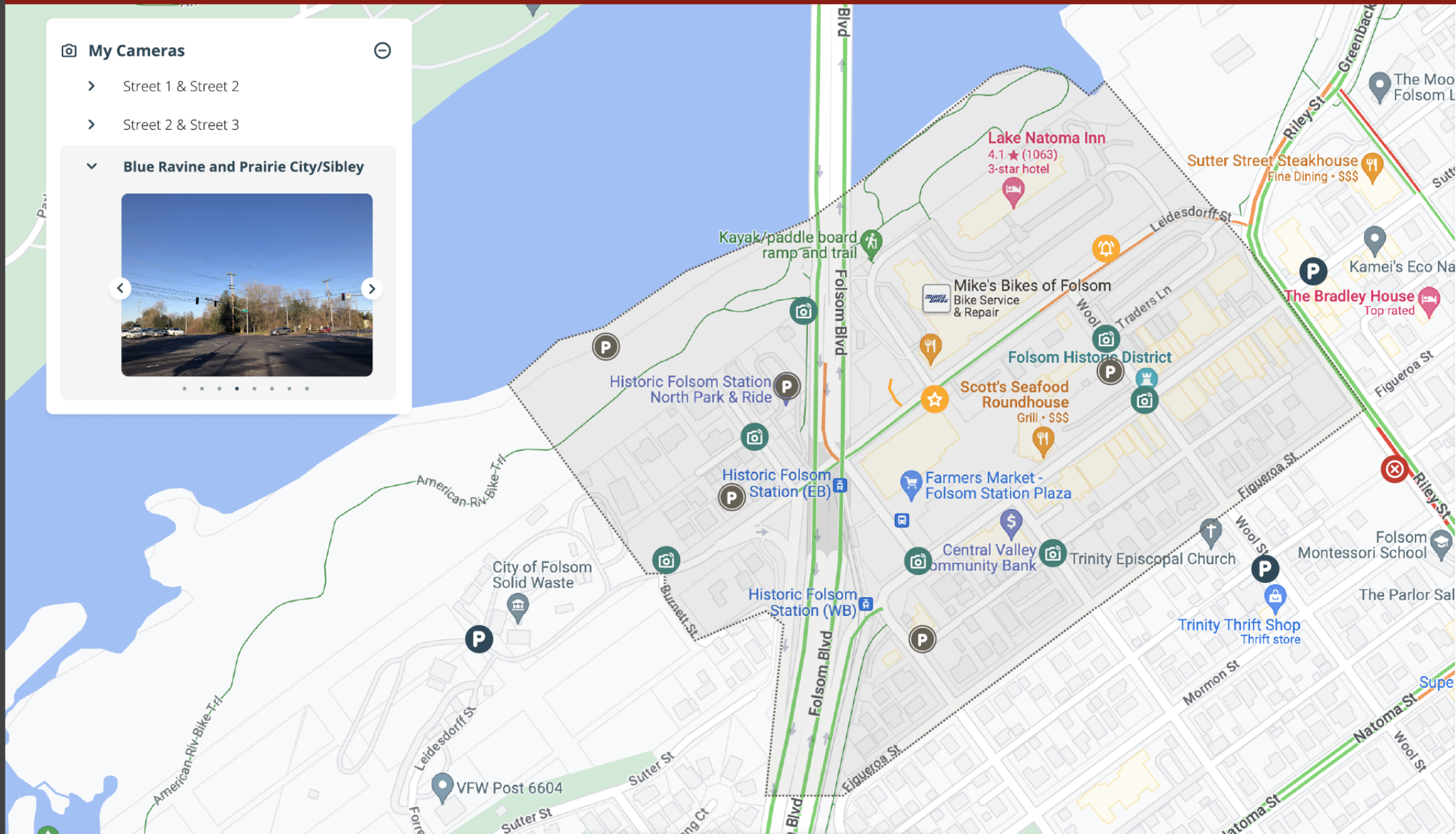
- Stations\*
- Radar\*
- Alerts\*
- Forecasts\*

Points of Interest

- Rest Area\*
- Welcome Center\*

Clear all

Apply



**ALERT:** Construction along White Rock Road west of Prairie City Rd. Use alternative routes.

### Blue Ravine and Prairie City/Sibley

#### My Cameras

> Street 1 & Street 2

> Street 2 & Street 3

#### Blue Ravine and Prairie City/Sibley



Layers



VFW Post 6604

Super Star Market  
Liquor store

The Moose -  
Folsom Lodge 2009

Bradley House  
Top rated

Folsom  
Montessori School

The Parlor Salon

Communit

Mill

Adrian Blanco

Joy of C

Kamei's Eco Nail Spa

House  
ing - \$\$\$



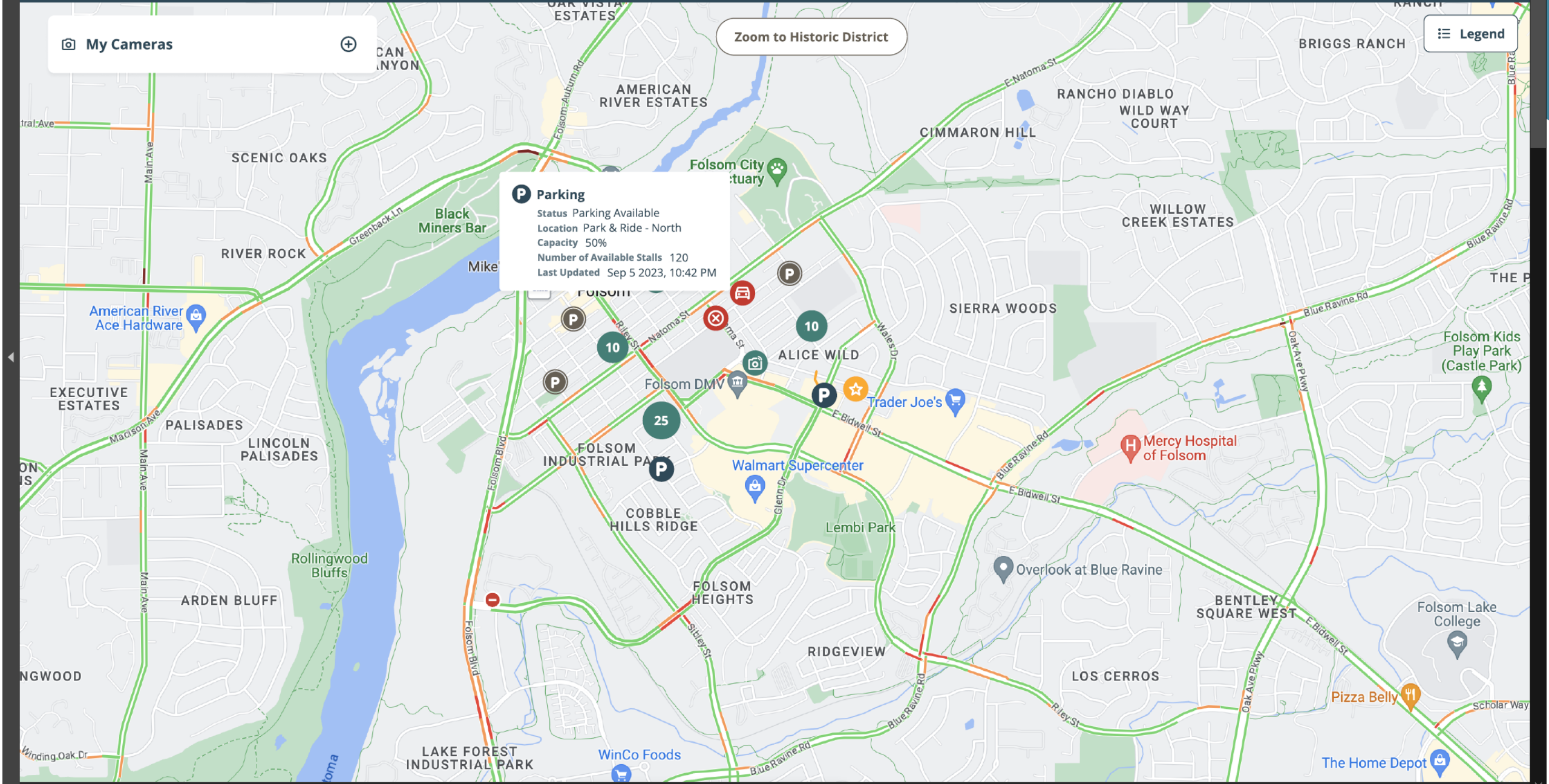
My Cameras



Zoom to Historic District

Legend

**P Parking**  
Status Parking Available  
Location Park & Ride - North  
Capacity 50%  
Number of Available Stalls 120  
Last Updated Sep 5 2023, 10:42 PM



# MTC ITS Architecture

- Website developed for the Bay Area in California.
- Assists in delivering ITS project information on a mass scale.

**BAY AREA**  
MOBILITY NETWORK

About | ITS Architecture | Connected Mobility | Support | Quick Links | User Account

## Our Purpose

MTC's regional ITS architecture (RITSA) is a blueprint for Intelligent Transportation Systems (ITS) project coordination and integration, for stakeholders all around the San Francisco Bay Area. This tool is designed to facilitate coordinated ITS project development, procurement, and delivery throughout the region. It gives anybody access to current and future projects and project-specific data and serves as a starting point for inter-jurisdictional and inter-agency collaboration and optimization. Users can browse existing and proposed projects, or input data regarding current projects for others to view.

After the major update to the Bay Area ITS Architecture in 2017, the National ITS Architecture (Version 7.1) was updated and re-named Architecture Reference for Cooperative and Intelligent Transportation (ARC-IT). ARC-IT covers all of the scope and content from both National ITS Architecture Version 7.1 and the Connected Vehicle Reference ITS Architecture (CVRIA) Version 2.2.

In early 2019, the Bay Area Architecture also migrated from the older version of the National ITS Architecture (Version 7.1), to ARC-IT (Version 8.2). The Bay Area ITS Architecture represented on this website is based on ARC-IT Version 8.2. At the same time, other changes to the Bay Area Architecture were made based on Bay Area Stakeholder input, primarily dealing with the depiction of Express Lanes in the region. Some other smaller updates were also addressed at that time.

MTC maintains this website. Take a look around!

**ITS Architecture**

About  
ITS Architecture

# MTC ITS Architecture

- Allows users to see how stakeholders, projects and elements interact and connect with each other.

The screenshot shows the Bay Area Mobility Network website. The header includes the logo and navigation links: About, ITS Architecture, Connected Mobility, Support, Quick Links, and User Account. The main content area is titled "AC Transit/BART Demand Response Vehicles" and provides detailed information about the system, including its status, description, and associated services.

**BAY AREA**  
MOBILITY NETWORK

About ▾ ITS Architecture ▾ Connected Mobility Support ▾ Quick Links ▾ User Account ▾

ITS Architecture / Stakeholders / AC Transit/BART Demand Response Vehicles

## AC Transit/BART Demand Response Vehicles


Status: Existing

Description: Demand Response vehicles that are dispatched by AC Transit.

Stakeholder(s):

- [AC Transit](#)

Systems Interconnected with the AC Transit/BART Demand Response Vehicles

Interconnect Diagram 

- [AC Transit Operations System](#)

Information Flow Diagrams which include AC Transit/BART Demand Response Vehicles

- [AC Transit/BART Demand Response Vehicles](#) ↔ [AC Transit Operations System](#)

National ITS Architecture Services associated with AC Transit/BART Demand Response Vehicles

- [PT03 - Dynamic Transit Operations - AC Transit](#)
- [PT09 - Transit Signal Priority - AC Transit](#)

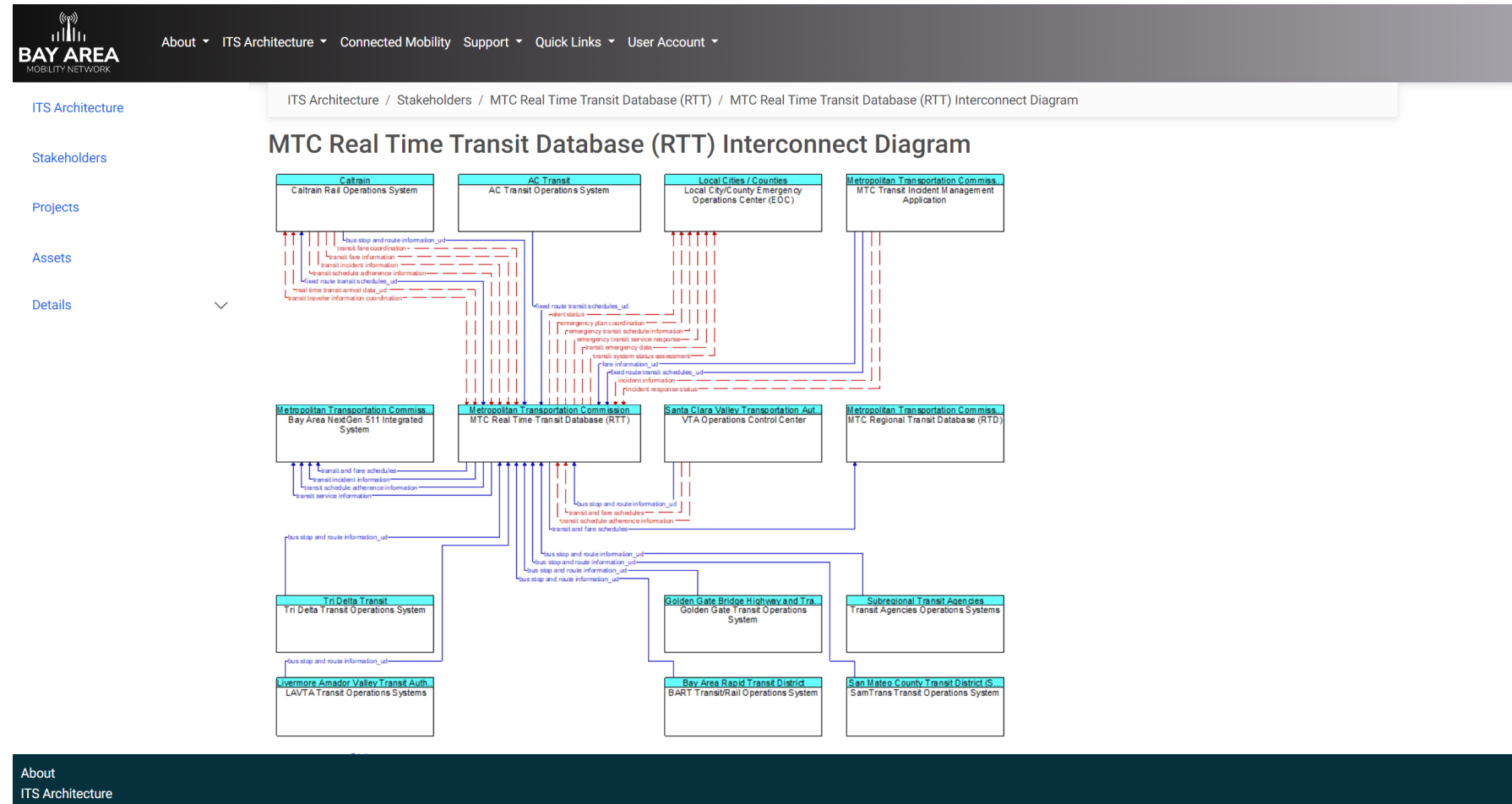
National ITS Architecture Functional Requirements associated with AC Transit/BART Demand Response Vehicles:

**Transit Vehicle On-Board Paratransit Operations**

- The transit vehicle shall manage data input to sensor(s) on-board a transit vehicle to determine the vehicle's availability for use in demand responsive and flexible-route transit services based on identity, type, and passenger capacity.
- The transit vehicle shall receive the status of demand responsive or flexible-route transit schedules and passenger loading from the transit vehicle operator.
- The transit vehicle shall provide the transit vehicle operator instructions about the demand responsive or flexible-route transit schedule that has been confirmed from the center.
- The transit vehicle shall provide the capability to log passenger boardings and alightings and make passenger use data available to the transit center.

# MTC ITS Architecture

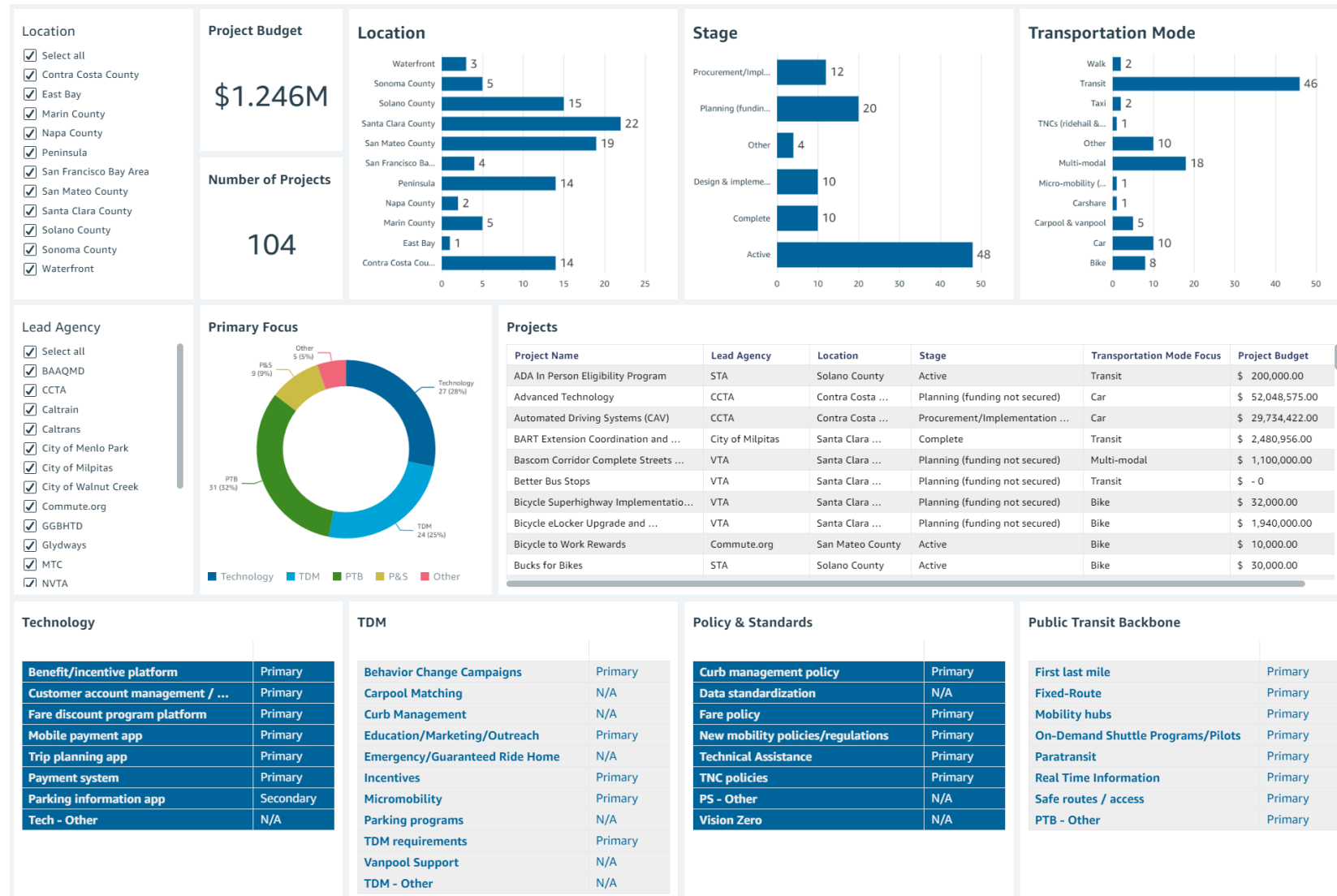
- Diagrams are generated from the National ITS Reference Architecture application (RAD-IT) and imported to the MTC website.





# MTC ITS Architecture

- AWS Quicksight dashboard displaying data for different projects.
- Allows users to filter data for unique locations or agencies.



A dark gray background featuring a stylized, light gray silhouette of a city skyline at the bottom. The skyline includes several buildings of varying heights and widths, with some having grid-like patterns representing windows. On the left side, there are large, overlapping, dark gray shapes that resemble abstract architectural elements or a stylized sun/moon. The word "Questions?" is written in a large, white, sans-serif font in the upper right quadrant.

Questions?