Memorandum

To: CHAIR AND COMMISSIONERS

CTC Meeting: June 29-30, 2022

From: MITCH WEISS, Executive Director

Reference Number: 4.16, Action

Prepared By: Tim Sobelman,
Chief Engineer

Published Date: June 17, 2022

Subject: Commission Comments on the Draft 2022 California Transportation Asset Management Plan

Recommendation:

Staff recommends the California Transportation Commission (Commission) approve and transmit the comment letter set forth in Attachment A on the Draft 2022 California Transportation Asset Management Plan.

Issue:

Senate Bill 486 (DeSaulnier, 2014) requires the California Department of Transportation (Caltrans), in consultation with the Commission, to prepare a "robust" Transportation Asset Management Plan (Plan) to inform and guide the selection process for the State Highway Operation and Protection Plan (SHOPP). Specifically, the legislative intent that supports an asset management plan that serves as a policy document to inform future transportation investment decision making. Subject to Government Code section 14526.5, the Commission adopts the SHOPP, but may decline adoption if it is determined that the SHOPP is not sufficiently consistent with the Plan. Government code 14526.4 establishes the requirements for the development of the Plan and the Commission's roles and responsibilities.

The Commission's responsibilities include adopting targets and performance measures reflecting state transportation goals and objectives for the State Highway System, as well as reviewing and approving the Plan. The Commission is also required to annually evaluate the effectiveness of Caltrans in reducing deferred maintenance and improving road conditions on the State Highway System and to include any findings in its annual report to the Legislature pursuant to Government Code 14535.

Background:

Federal Regulations (12 Code of Federal Regulations [CFR] 515) require each State Department of Transportation to update their asset management plan at least every four years. While the Draft 2022 California Transportation Asset Management Plan represents the first formal update to meet the federal requirements, the current Plan has been revised twice:

March 2021:

- Revised Asset Management Targets for Bridge and Drainage Systems to better align investments to focus on Poor Assets. (Revised targets did not impact the Senate Bill 1 performance metrics)

December 2021:

- Supplemental Asset Class targets were revised to be more appropriate based on the maturity of the asset management program and a more robust evaluation of the supplementary assets conditions, including their expected deterioration rates.
- Removed “Sidewalks, Park and Ride, and ADA Infrastructure” and added “Bicycle and Pedestrian Infrastructure” as a Supplementary Asset Class. This change was made to give Caltrans the ability to better manage bicycle and pedestrian assets, which was the original intent of this asset class. In recent years, Caltrans has also established an inventory of existing bicycle and pedestrian assets. These changes will help support Caltrans Complete Streets implementation efforts.

Commission Staff has reviewed the Draft 2022 California Transportation Asset Management Plan and appreciates Caltrans’ efforts to be nationwide leaders in the area of asset management and for being collaboratively proactive in helping non-State Agencies capture and report data for the locally overseen portions of the National Highway System. The Draft 2022 Transportation Asset Management Plan highlights areas of importance for California’s infrastructure investments by including references to the *Infrastructure Investment and Jobs Act*, *Climate Action Plan for Transportation Infrastructure*, and strategies to address fire resiliency, climate change adaptation, and equity in transportation investments.

Attachments:

- Attachment A: Transmittal Letter - Comments on the Draft 2022 California Transportation Asset Management Plan
- Attachment B: Draft 2022 California Transportation Asset Management Plan – Executive Summary

CALIFORNIA TRANSPORTATION COMMISSION

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June 22, 2022

Mr. Tony Tavares
Director
California Department of Transportation
1120 N Street, MS 49
Sacramento, CA 95814

RE: California Transportation Commission Comments on the Draft California TransportationAsset Management Plan

Dear Director Tavares:

In alignment with the statutory responsibility of the California Transportation Commission(Commission) for the development and oversight of the California Transportation Asset Management Plan (TAMP), the attached comments are provided to the California Department of Transportation (Caltrans) to incorporate and address in the final TAMP.

The Commission places a high priority on the TAMP as it is a critical tool to ensure the effective,transparent, and accountable use of transportation funds to rehabilitate and reconstruct both the national and state highway system in California.

The Commission appreciates your consideration of these comments. If you have any questions, please contact Timothy Sobelman, Chief Engineer, at (916) 653-0218.

Sincerely,

LEE ANN EAGER
Chair

Attachment

The California Transportation Commission (Commission) offers the following comments on the Draft 2022 California Transportation Asset Management Plan (TAMP):

1. On page IV, under Federal and State Requirements, it says, “The Commission’s approval authority in the TAMP is limited to assets on the SHS.” According to Government Code section 14526.5, the Commission approves the entire Transportation Asset Management Plan. Please update the language to align with the statute.

2. On page V, Executive Summary, under Roles and Responsibilities for MPOs/RTPAs/Local Agencies, it says “Develop long-range transportation plans reflective of TAMP goals.” What is the status of the development of these long-range plans? Where can they be found?

3. On page V, Executive Summary, the “Asset Inventory” for Complete Streets shows a value of 7,623,345 linear feet. Please clarify what complete streets assets are included in this total and how they can all be quantified with a unit of “linear feet.”

4. On page VII, Executive Summary, under “Making an Impact”, it states the State Highway System (SHS) is on track to meet the Desired State of Repair 10-year targets. However, under the current funding expectations it says, it is “narrowing the gap” for the National Highway System pavement and bridges targets. What strategies are being considered for non-State Agencies to try to meet the 10-year National Highway System (NHS) Targets? Does the new federal funding included in the *Infrastructure Investment and Jobs Act* provide enough funding ensure the National Highway System is on a trajectory to meet the 10-year Targets?

5. On page VIII, Executive Summary, under NHS and SHS Projected Asset Conditions, please provide additional detail (or a link provided) documenting the basis of the yearly investment for each performance scenario? For example, although the yearly investment for State Highway System Pavement is the same for both the 10-year Expected Performance and the 10-year Desired State of Repair Performance scenarios, the resulting Good/Fair/Poor conditions are different. Please document the nuances of this analysis in a manner that is understandable to the public.

6. On page 4, under Section 1.2 Making Progress, it states, “A new Sea Level Rise Adaptation objective was introduced in the 2021 State Highway System Management Plan that provides a high level, rough order of magnitude cost estimate for adapting roadways and bridges on the State Highway System to the projected impacts of climate change and rising seas.” Are similar climate change adaptation cost analysis being conducted for all roadways and bridges on the National Highway System?

7. On page 5, the Transportation Asset Management Plan discusses the Performance Target Analysis Tool the California Department of Transportation (Caltrans) provided to

regional transportation agencies to evaluate National Highway System pavement bridge conditions and targets. Will this be proposed as a requirement for inclusion in the Regional Transportation Plans for the purposes of reporting progress for the entire National Highway System?

8. On page 14, under Pavement Data, it says “For the 2022 TAMP, NHS pavement data is reflective of the 2019 HPMS (Highway Performance Monitoring System).” Now that Caltrans has received the pavement condition data through the annual Automated Pavement Condition Survey for 2020 and 2021, can the pavement data be updated to be more current?

9. On Page 18, Table 2-2 Inventory and Conditions of NHS Pavements in California, by Lane Miles, the percentage of Poor condition pavement for the Locally-owned National Highway System – Non-Interstate is high, and the percentage of Good-condition pavement is low. What strategies are being considered to reduce the amount of Poor condition pavement and increase the amount of Good-condition pavement for the Locally Owned National Highway System?

10. On pages 19-36, Table 2-3, Inventory and Conditions of Local NHS Pavements, Listed by Geographical Jurisdiction. Is this table being used to prioritize investments on the Locally Owned Pavements on the National Highway System?

11. On pages 40-53, Table 2-5, Inventory and Conditions of Non-SHS NHS Bridges, Listed by Geographical Jurisdiction. Is this table used to prioritize investments on the Locally Owned Bridges on the National Highway System?

12. On page 56, Table 2-8, SHS Drainage Asset Inventory and Conditions. What is the basis of the conditions of the “Projected Additional Inventory” drainage systems? As Caltrans has continued inspecting drainage systems and adding to the inventory, have the projected conditions been validated?

13. On page 67, Section 3.5, Additional Performance Targets on the SHS. Under the second bullet, it states Caltrans has met the “fix an additional 500 bridges” performance target. Based on the Final Report on the Audit of SB 1 Performance Measures and Targets from the Independent Office of Audits and Investigations, will Caltrans revise the date by which this performance target will be met?

14. On page 69, Under PM 1: Transportation Safety it states, “Asset Management provides performance targets for each of our districts consistent with PM 1 and budgets that incentivize projects that work in high reward locations.” Please document how Caltrans will “incentivize projects?”

15. On page 81, Table 4-3. Unit Cost for Pavement Treatments. Do these unit costs reflect recent trends for all Transportation Asset Management Plan assets?

16. On page 122, Climate Change Policies and Actions. This section describes climate change initiatives listed in Caltrans' 2020-2024 Strategic Plan. Have these initiatives been incorporated into the State Highway System Management Plan and costs considered to determine what strategies may be needed to ensure the ability to meet the Transportation Asset Management Plan performance targets?

17. On page 123, Climate Change Adaptation Measures. This section describes Caltrans' District vulnerability assessments and regional transportation agency efforts focused on climate adaptation. Have these assessments been incorporated into planning documents and costs considered to determine if additional strategies will be needed to meet the Transportation Asset Management Plan performance targets?

18. On page 124, under Improving Roadside Fire Resilience Strategies. It mentions the baseline inventory of roadside resilience will be completed by 2022 and is expected to be a new performance objective in the next State Highway System Management Plan. Have unit costs been assigned to this strategy and considered to determine if they will impact the ability to meet the Transportation Asset Management Plan performance targets?

19. On page 161, under Closing the Performance Gap. What strategies are being considered for closing the gaps for bridge and pavement conditions where current investments strategies are not adequate? Will the funding from the *Infrastructure Investment and Jobs Act* be prioritized to help close these gaps?

20. On page 166, under Closing the Performance Gaps on the SHS (State Highways System), the Transportation Asset Management Plan states "With the addition of IIJA funding, Caltrans will evaluate performance gaps remaining including supplementary assets and address highest priority needs to improve asset conditions." With the competing initiatives and strategies how will meeting the Supplementary Asset performance targets be prioritized?

DRAFT - For Public Review

Executive Summary

California Transportation Asset Management Plan

Caltrans and its transportation partner agencies are responsible for supporting safe and efficient travel on California's transportation network. Maintenance and preservation of transportation infrastructure are critical aspects of this responsibility. Pavements, bridges, and other infrastructure assets require ongoing investment to sustain a state of good repair. As we maintain our existing assets, a dramatic shift is taking shape in California to low or no emission transportation modes to minimize climate impacts and to better serve people of all means.

This document presents a coordinated plan by Caltrans and its partner agencies to maintain California's highway infrastructure assets today and into the future.

STATE OF CALIFORNIA · CALIFORNIA TRANSPORTATION COMMISSION

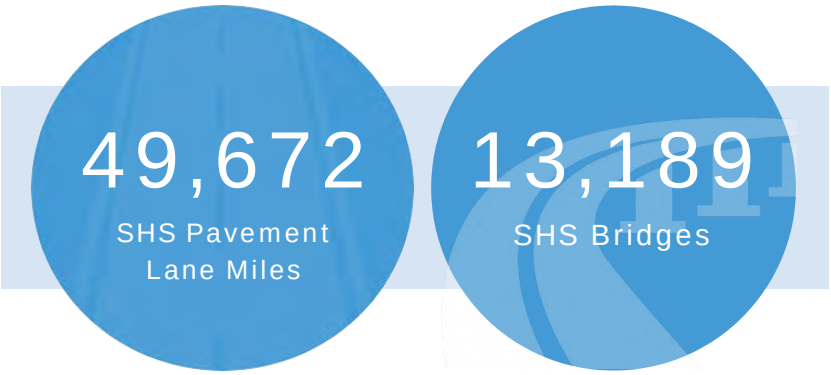
Caltrans

California's Transportation Assets

California's multimodal transportation system consists of a wide variety of physical assets. The most significant assets on the system, in terms of their cost and extent, are pavements and bridges. However, many other interconnected systems are needed to support mobility and improve safety, as depicted in the illustration below.

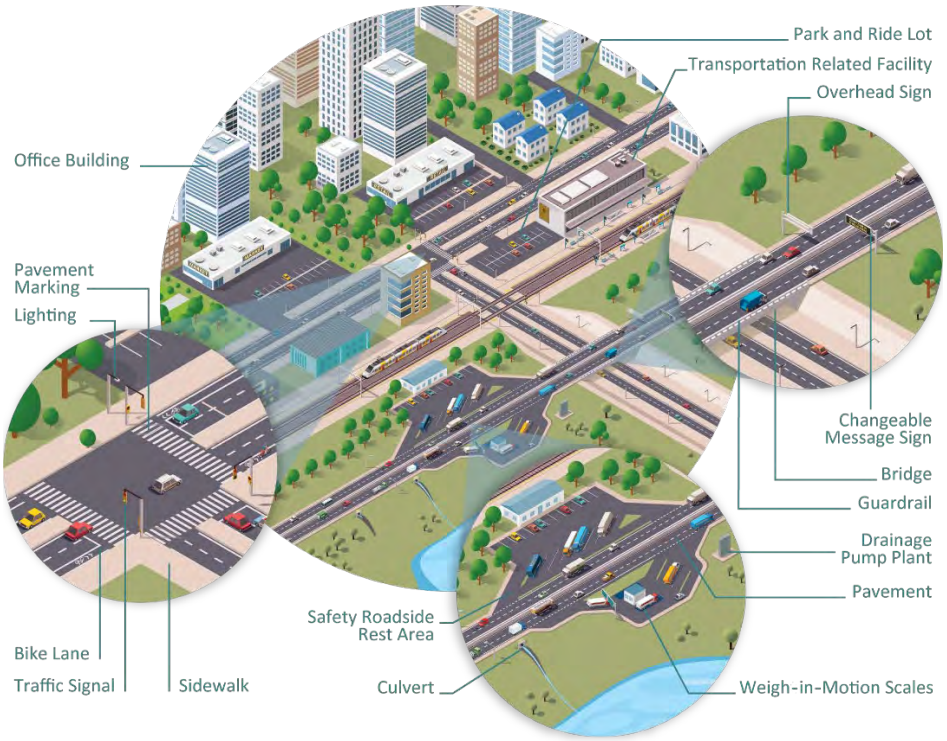
California's State Highway System

The California State Highway System (SHS) includes all assets within the boundaries of the highway system including 49,672 lane miles of pavements, 13,189 bridges, 212,759 culverts and drainage facilities, and 20,481 Transportation Management System (TMS) assets. Caltrans is the state agency responsible for planning, developing, maintaining, and operating the legislatively designated SHS.



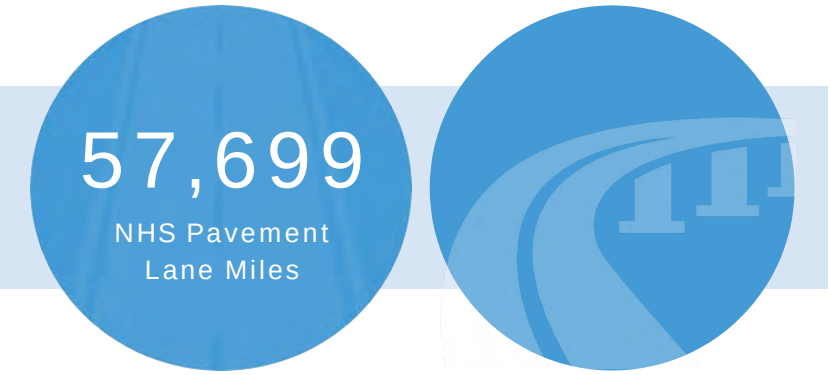
California's Multimodal Transportation System

The highway assets described in the California TAMP are an integral part of California's multimodal transportation system.



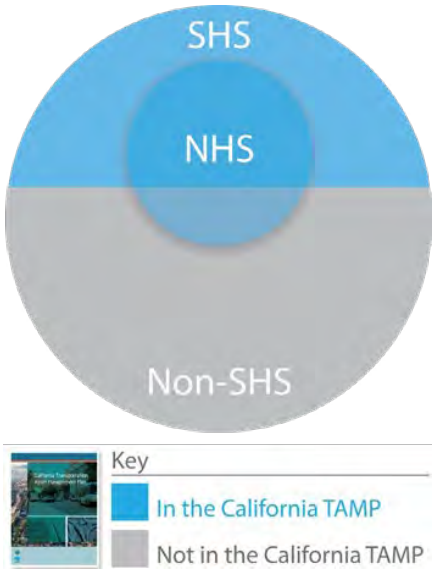
The National Highway System

The National Highway System (NHS) in California is owned by Caltrans as well as local, tribal governments, federal, and other state agencies. The system consists of 57,699 lane miles of pavements and 10,936 bridges totaling 243,347,047 square feet of bridge deck area.



A Coordinated Approach

California's transportation system includes assets owned by the state, cities and counties, toll authorities, tribal governments, and state and federal agencies. These assets intersect across federal, state and local ownership, meaning that a statewide view of the system is critical to maintaining and improving asset condition and meeting national and state performance goals. In particular, a significant number of NHS bridges and pavements are under local control in California. Caltrans and its partners can maximize limited resources by understanding the inventory and condition of the California transportation system.



California TAMP Scope

The scope of the California Transportation Asset Management Plan (TAMP) is primarily determined by federal and state requirements.

The California Transportation Commission (Commission) adopted TAMP guidelines in 2017, following the requirement of Senate Bill 486. These guidelines require that the California TAMP include pavement, bridge, drainage, TMS, as well as a list of supplementary assets on the SHS.

The Federal Highway Administration (FHWA) requires that California's TAMP include a summary listing of NHS pavements and bridges, including a description of the condition of these assets.

Managing California's Transportation Assets

Transportation asset management (TAM) is defined by United States Code (23 U.S. Code § 101) as "a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on both engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets at minimum practicable cost."

Caltrans and its transportation partners have long recognized the importance of asset management, using asset performance targets to drive investment decisions as part of performance management and asset management best practice. State law requires the development of a state highway system needs assessment that uses performance targets to estimate current needs. Performance measures and targets are used to track progress and guide state and local agencies towards short, medium, and long-term objectives.

Strong asset management practices help to ensure Caltrans and its partners continue to make the best use of resources by carefully balancing multiple competing needs for infrastructure preservation and improvement.

In addition to the condition of physical assets, Caltrans and our partners are increasing focus on low or zero emission transportation options to reduce emissions and improve transportation access to people of all means. As the modal options expand in California, the breadth of the asset management plan will need to expand to reflect the new system components.

Federal & State Requirements

FHWA requires that a state's TAMP include pavements and bridges on the NHS. The Commission requires inclusion of pavements, bridges, drainage, and TMS, in addition to nine supplementary SHS asset classes. The Commission's approval authority in the TAMP is limited to assets on the SHS.

System	Asset Class				
	Pavement	Bridges	Drainage	TMS	Supplementary Assets
NHS Federal Requirements	✓	✓			
SHS State Requirements	✓	✓	✓	✓	✓

Roles & Responsibilities

Four key stakeholders (Caltrans, MPOs/RTPAs, Commission, and FHWA) play a coordinated role and share a common vision in assuring that strategies for achieving performance targets in the TAMP are sound.

FHWA

- Establish national standards for performance measures for bridges and pavement.
- Adopt targets and performance measures reflecting state transportation goals and objectives.
- Review and approve the TAMP.
- Monitor progress of the State towards achieving 2 and 4- year performance targets.

Caltrans

- Prepare a robust TAMP to guide transportation investments through the SHOPP to achieve performance targets.
- Ensure the TAMP is consistent with applicable state and federal requirements.
- Establish 10-year performance targets to support long-range investment strategies.
- Develop 2 and 4-year performance targets.
- Plan, design, and oversee construction of projects.

Commission

- Approve SHS assets for inclusion in the TAMP.
- Adopt targets and performance measures.
- Review and approve the TAMP.
- Report progress to the state legislature on Caltrans' progress towards meeting SHS performance targets.
- Review and adopt the SHOPP, consistent with the TAMP.

MPOs/RTPAs/Local Agencies

- Establish 4-year performance targets or adopt the state DOT's performance targets.
- Develop long-range transportation plans reflective of TAMP goals.
- Plan, design, and oversee construction of local projects.

Asset Condition at a Glance

California's transportation asset information is summarized in two ways: for the entire Caltrans-maintained SHS (portions of which are on the NHS), and for the entire NHS (which includes a portion of the state system and a portion of the local system managed by regions, cities, counties as well as tribal governments). This approach is used to provide a complete picture of SHS assets to meet state mandates, as well as to meet federal requirements for all NHS pavements and bridges in the TAMP.

Inventory and Conditions for NHS and SHS Assets in California

Whether based on age, condition, level of service, or simply frequency of repair, a performance measure is critical to actively managing the preservation of an asset. In the California TAMP, asset performance refers to asset condition and performance measures to report on the percentage of the asset classes in good, fair, and poor condition.

NHS	Asset Inventory	Good	Fair	Poor	
Pavement	57,699 Lane Miles	29.8%	62.2%	7.9%	
Bridges	243,347,047 Square Feet	48.5%	46.1%	5.4%	
SHS	**Asset Inventory**	**Good**	**Fair**	**Poor**	
		Primary Asset Classes			
Pavement	49,672 Lane Miles	57.0%	42.0%	1.0%	
Bridges	251,703,052 Square Feet	54.1%	42.4%	3.5%	
Drainage	21,449,336 Linear Feet	72.9%	17.5%	9.6%	
TMS	20,481 Each	79.0%	n/a	21.0%	
		Supplementary Asset Classes			
Drainage Pump Plants	288 Each	15.3%	34.4%	50.3%	
Lighting	97,745 Each	37.9%	15.3%	46.7%	
Office Buildings	2,669,524 Square Feet	43.6%	28.9%	27.6%	
Overhead Sign Structures	16,433 Each	57.3%	35.5%	7.1%	
Safety Roadside Rest Areas	86 Locations	36.0%	36.0%	27.9%	
Complete Streets	7,623,345 Linear Feet	70.6%	22.5%	6.9%	
Transportation -Related Facilities	4,382,000 Square Feet	22.8%	17.6%	59.6%	
Weigh in Motion Scales	140 Stations	44.3%	17.9%	37.9%	

Risks to the System

Managing transportation assets entails managing risk. California must balance a wide variety of transportation related risks on an ongoing basis. This includes day-to-day concerns such as risks that assets will deteriorate faster than expected or projects will cost more than budgeted, to the potentially catastrophic risks of asset failure caused by factors such as natural disasters. Climate change also presents a looming risk that will exacerbate all weather-related damage. Caltrans and its partners are undertaking several activities to better characterize and help reduce or potentially avoid risk to the transportation system such as vulnerability assessments to identify potential stressors.

California's Investment Strategies

Asset management best practices emphasize the use of performance management for transportation programs, shifting the decision-making framework towards data-driven, proactive, goal-oriented investment choices. Asset management investment strategies are the policies for resource allocation that will deliver the best asset performance given available funds and the goals and objectives of state and local agencies. Strategies documented in the California TAMP represent an investment philosophy of prioritizing preservation activities, adopting complete streets, implementing clean and sustainable practices, seeking progress towards broad goal areas, and focusing on selected asset classes. The investment strategies of the 2022 TAMP focus on the following:

- Preventive maintenance through Stewardship activities, also known as a "fix it first"approach.
- Embrace the principles outlined in CAPTI in all our investment decision making
- Embrace equitable transportation solutions to serve citizens of all means
- Selected asset classes: pavement, bridge,drainage, and TMS. These were designated as focus areas by the Commission, as they represent a significant portion of SHS.
- Leverage investments to support the full range of Caltrans goals: Safety and Health; Stewardship and Efficiency; Sustainability, Livability and Economy; System Performance; and Organizational Excellence.

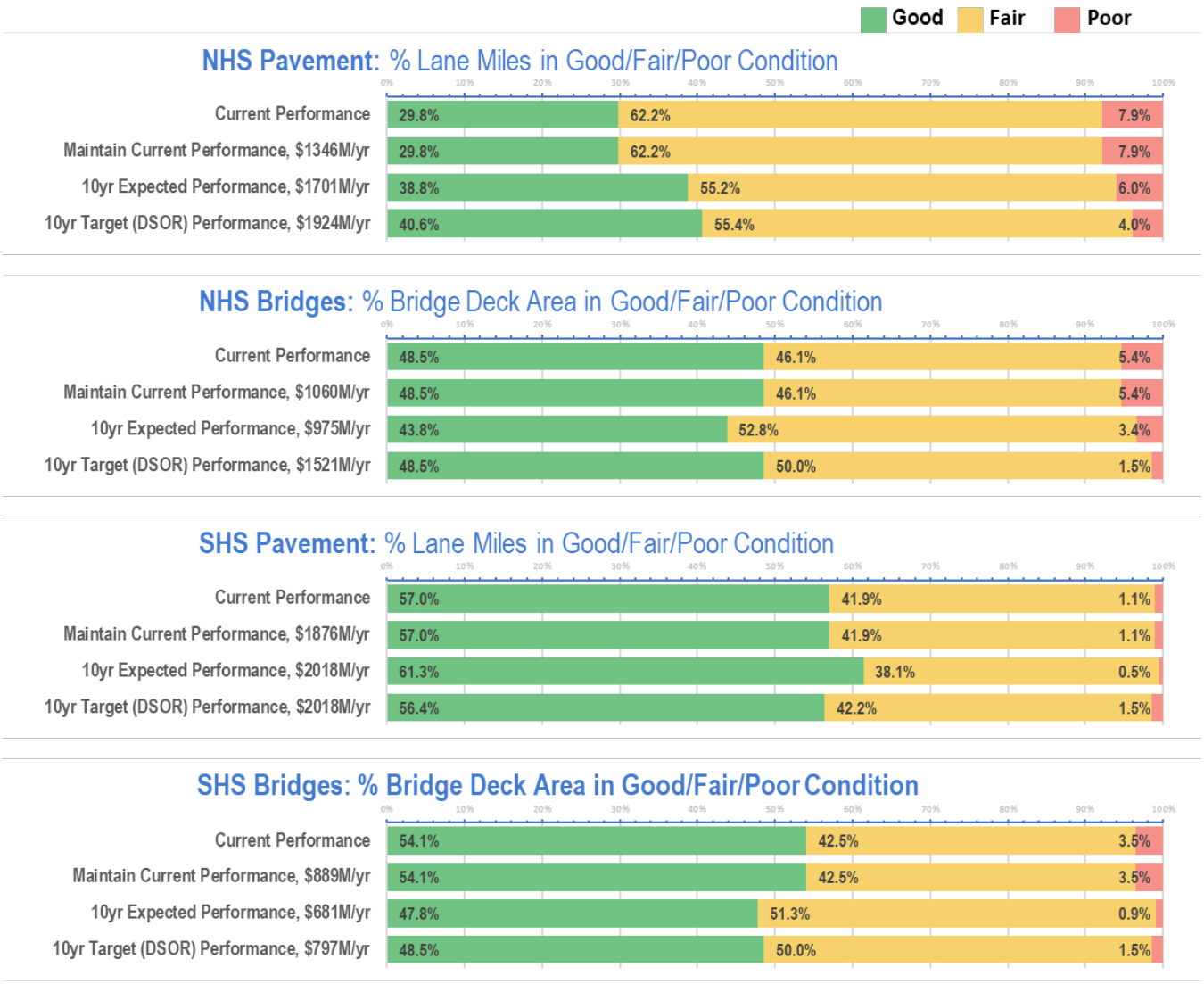
Making an Impact

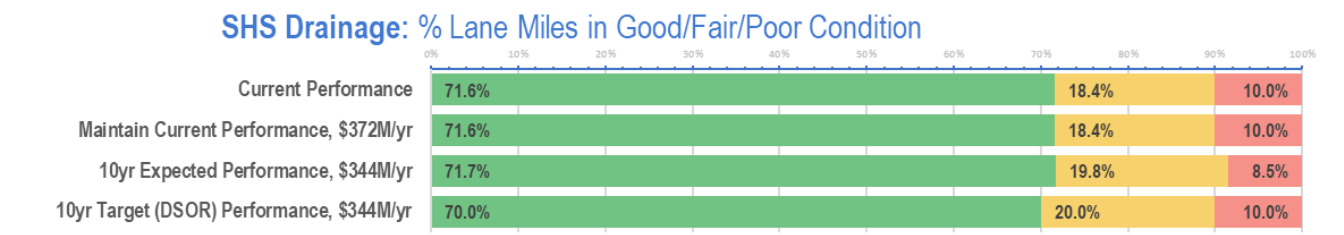
California's NHS and SHS will require substantial investment to achieve established Desired State of Repair 10-Year Targets. However, California is currently on track to achieve these targets for all of its SHS while narrowing the gap for NHS pavements and bridges under current funding expectations. The additional funding included in the infrastructure Investment and Jobs Act will be put to use furthering California's "Fix it First" management of existing assets at the same time we expand modal choice in transportation and focus on the equity of our decisions and projects. The Climate Action Plan for Transportation Infrastructure (CAPTI) has provided a framework for change in how we deliver transportation options to the people of California.

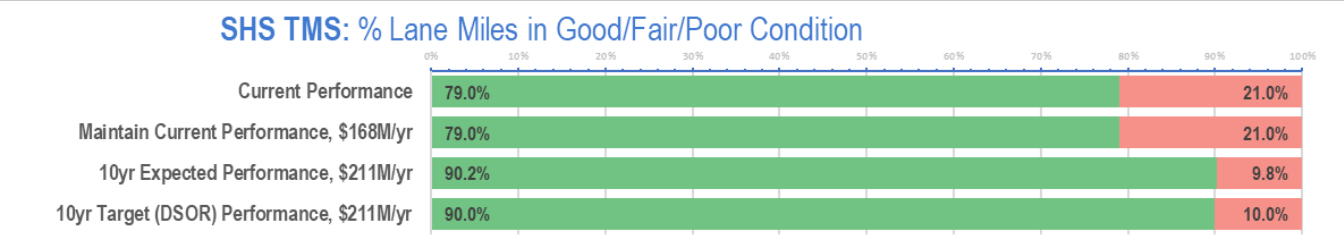
The development of the TAMP will help California to direct major investment in its existing transportation system components serving all non-rail modes.

National Highway System and State Highway System Projected Asset Conditions

Current Performance, Maintain Current Performance, 10-Year Expected Performance, and 10-Year Target Desired State of Repair (DSOR) Performance are summarized for NHS and SHS asset classes. Note, the 10-Year Target includes additional maintenance funding required to sustain the target level of performance over the long term.







Expected 10-Year Accomplishments