2026 California Transportation Asset Management Plan (TAMP)

Performance Target Assessment Tool (PTAT)

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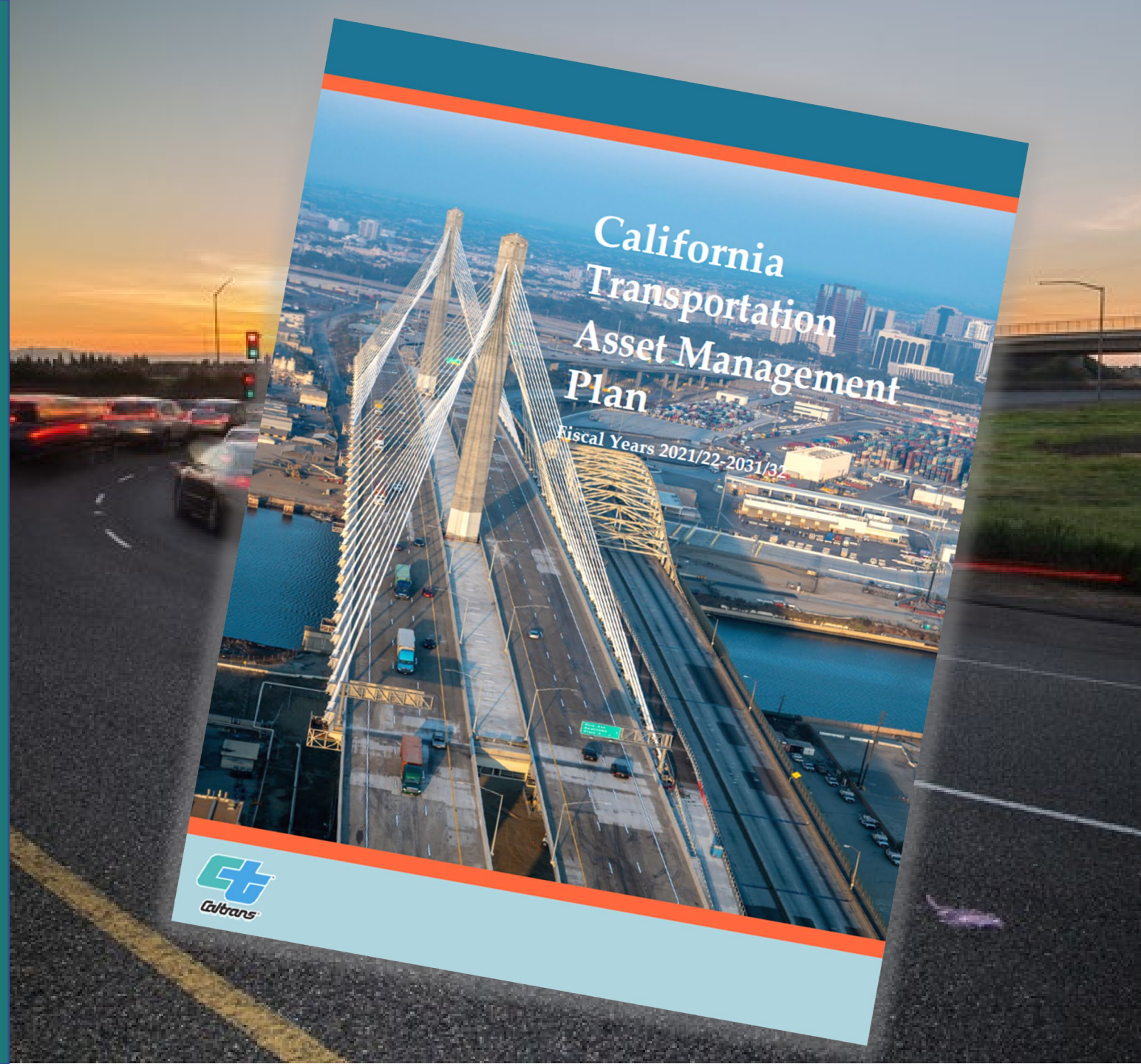
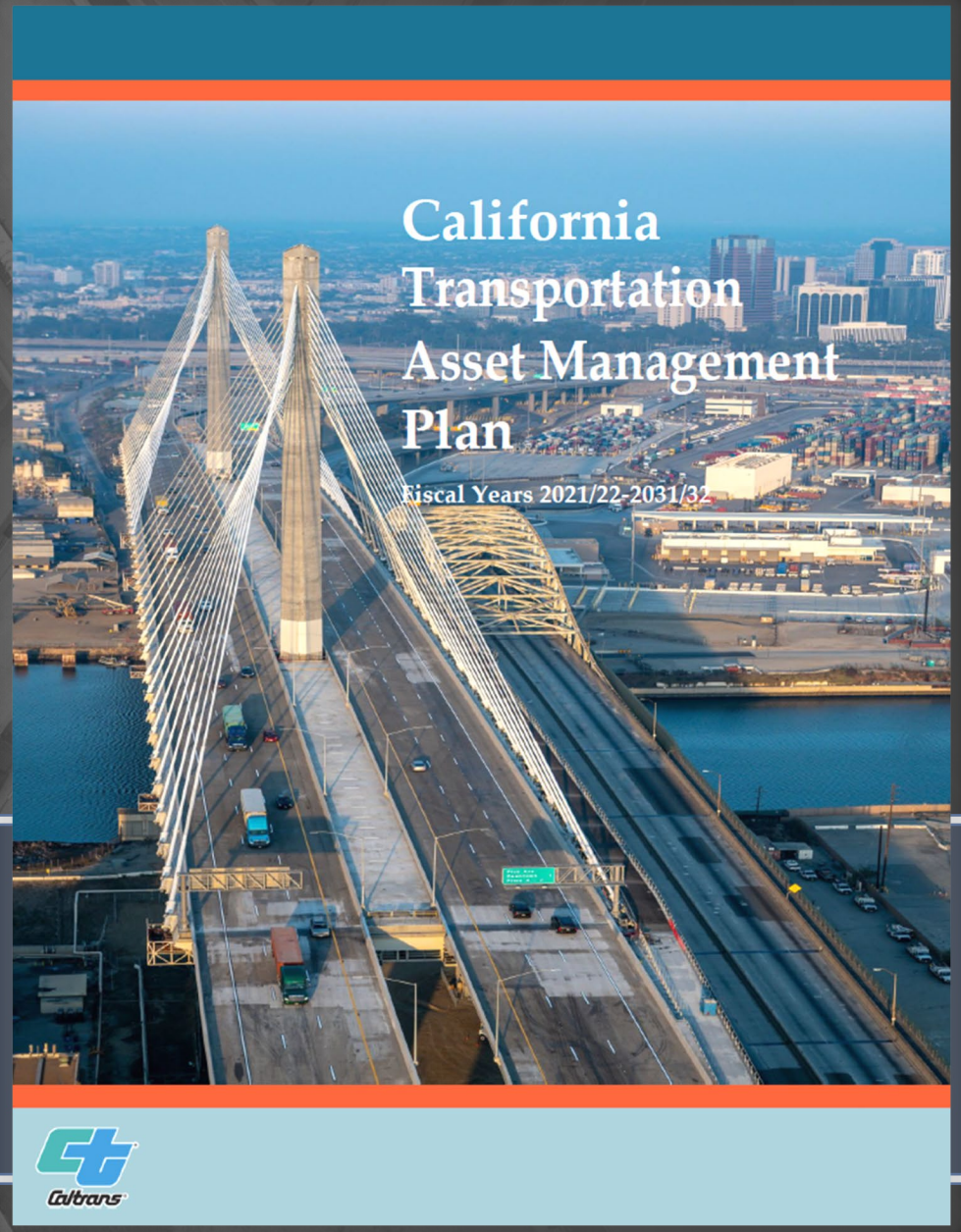


Agenda

10:15 – 10:20 AM	Welcome & Opening Remarks
10:20 – 11:00 AM	Overview of Performance Target Assessment Tool
11:00 – 11:40 AM	Example Scenarios
11:40 – 11: 45 AM	Wrap-Up
11:45 AM	Adjourn

Welcome


California
Transportation
Asset Management
Plan
Fiscal Years 2021/22-2031/32
Caltrans

TAMP Performance Target Assessment Tool (PTAT)

- Tool calculates projected condition of NHS pavement and bridges over the TAMP 10-Year period
- Results are based on the “building blocks”/input values used to calculate conditions over time
- Input values color-coded in green are available for override in the spreadsheet
- Tool can be used to evaluate or simulate impacts to performance outcomes
- Risk Mitigation has been included as a percentage of investments
- Results will be used for development of Statewide TAMP targets

Building Blocks for Performance Gap Analysis

Baseline Inventory and Condition of NHS pavement and bridges

Available funding for NHS pavement and bridges by federal work types

Unit cost of work to improve condition

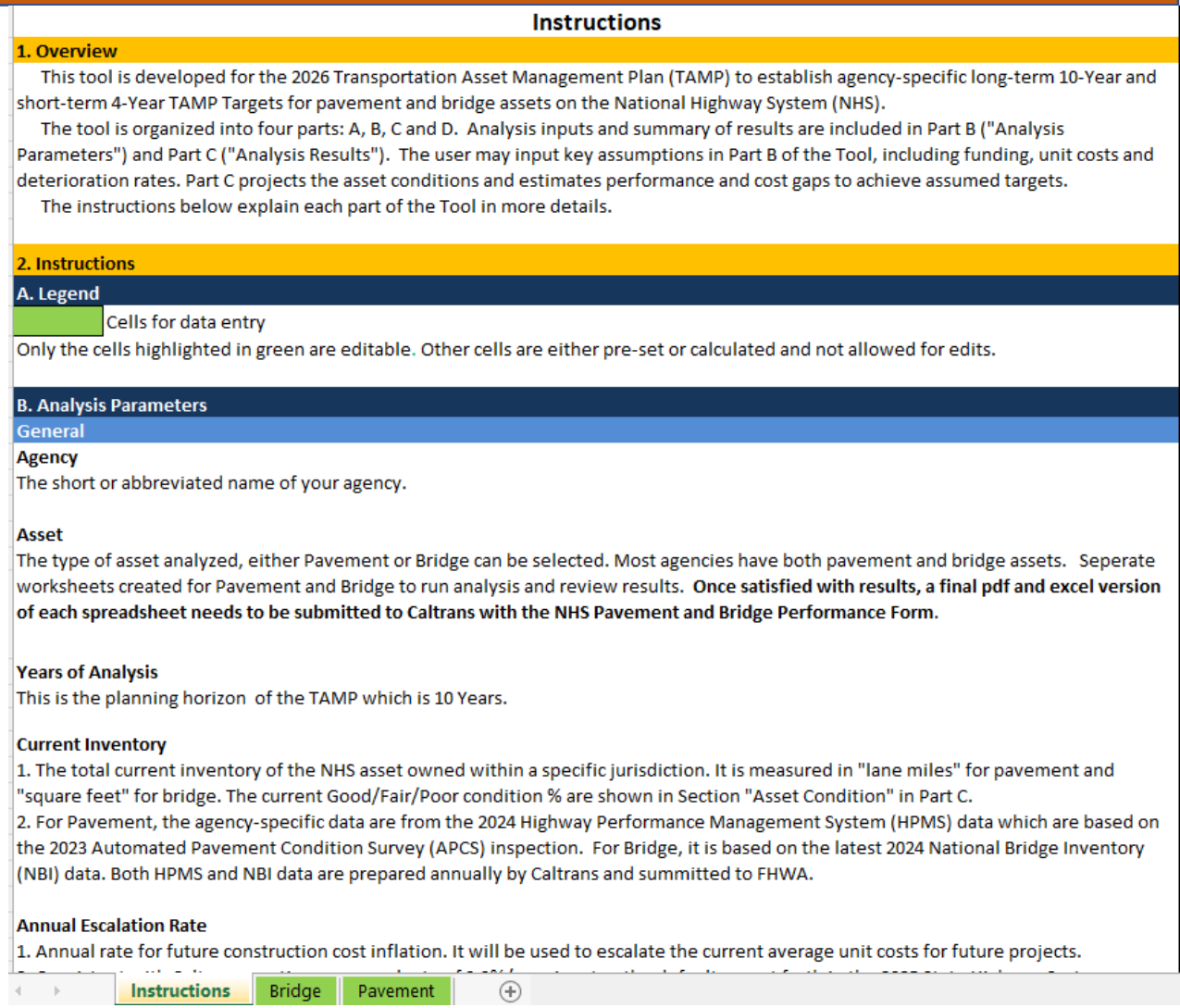
Type of work to improve fair to good or poor to good

Deterioration rates of NHS pavement and bridges

10-Year pavement and bridge Targets

Tool Overview

- PTDAT is Excel-based tool developed for the 2026 TAMP to establish agency-specific long-term 10-Year and short-term 4-Year TAMP Targets for pavement and bridge assets on the NHS.
- Instructions Tab
- Two Tool Tabs (Bridge and Pavement)
  - Part A: Legend
  - Part B: Analysis Input
  - Part C: Analysis results
  - Part D: Notes



Instructions

1. Overview

This tool is developed for the 2026 Transportation Asset Management Plan (TAMP) to establish agency-specific long-term 10-Year and short-term 4-Year TAMP Targets for pavement and bridge assets on the National Highway System (NHS).

The tool is organized into four parts: A, B, C and D. Analysis inputs and summary of results are included in Part B ("Analysis Parameters") and Part C ("Analysis Results"). The user may input key assumptions in Part B of the Tool, including funding, unit costs and deterioration rates. Part C projects the asset conditions and estimates performance and cost gaps to achieve assumed targets.

The instructions below explain each part of the Tool in more details.

2. Instructions

A. Legend

Cells for data entry

Only the cells highlighted in green are editable. Other cells are either pre-set or calculated and not allowed for edits.

B. Analysis Parameters

General

Agency

The short or abbreviated name of your agency.

Asset

The type of asset analyzed, either Pavement or Bridge can be selected. Most agencies have both pavement and bridge assets. Seperate worksheets created for Pavement and Bridge to run analysis and review results. **Once satisfied with results, a final pdf and excel version of each spreadsheet needs to be submitted to Caltrans with the NHS Pavement and Bridge Performance Form.**

Years of Analysis

This is the planning horizon of the TAMP which is 10 Years.

Current Inventory

1. The total current inventory of the NHS asset owned within a specific jurisdiction. It is measured in "lane miles" for pavement and "square feet" for bridge. The current Good/Fair/Poor condition % are shown in Section "Asset Condition" in Part C.
2. For Pavement, the agency-specific data are from the 2024 Highway Performance Management System (HPMS) data which are based on the 2023 Automated Pavement Condition Survey (APCS) inspection. For Bridge, it is based on the latest 2024 National Bridge Inventory (NBI) data. Both HPMS and NBI data are prepared annually by Caltrans and summitted to FHWA.

Annual Escalation Rate

1. Annual rate for future construction cost inflation. It will be used to escalate the current average unit costs for future projects.

Instructions | Bridge | Pavement

A. Legend

A. Legend	
	Cells for data entry

B. Analysis Parameters (General)

General	Investment	Unit Cost	Deterioration	Targets

General

Agency		Asset	Bridge		Annual Escalation Rate	3.30%
Years of Analysis	10	Current Inventory	142,746.8	Square Feet	Escalation Period (Years)	5

- Inventory
  - Bridge Inventory – Latest NBI data (2024)
  - Pavement Inventory – Latest HPMS data (2024)
  - Data locked for your agency.
- Cost escalation assumptions
  - Consider future cost increase or inflation from the baseline unit cost
  - Default Escalation rate consistent with 2025 State Highway System Management Plan (2025 SHSMP)
  - Default Escalation period (5 Years) is to the mid-point of the Years of Analysis for TAMP which is 10 Years.
  - Default escalation factor (from the start of the 10Y plan to the mid of the plan) is 1.033^5 =1.176

B. Analysis Parameters (Estimated Investments)

General	Investment	Unit Cost	Deterioration	Targets

Estimated Investment (Expected Annual Funding)

Use Default or Override Parameters? Override

Annual Funding by Work Type	Initial Const.	Maint.	Preser/Rehab	Reconstruction	Total
Default	$ -	$ -	$ -	$ 3,480,347	$ 3,480,347
Override	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 4,000,000
% on Risk Mitigation			0%	50%	
% Dollars Applied to Fair to Good			50%	0%	
% Dollars Applied to Poor to Good			50%	100%	

% Spending on Fair to Good	12.5%
% Spending on Poor to Good	25.0%
% Spending on Adding New	25.0%
% Spending on Risk Mitigation	12.5%
% Spending on Maint. Investment	25.0%

- Annual funding
  - Default is the average of prior 2-Year expenditures
  - Override if better funding projection available
- Risk Mitigation
  - Not improve asset condition (bridge scour/seismic retrofit, slope stabilization, etc.)
  - Assumed a portion of Preservation/Rehabilitation and/or Reconstruction
- Post-work asset condition assumptions
  - Maintenance: maintain but not improve (good to good, fair to fair)
  - Preser/Rehab and Reconstruction: improve (fair to good, poor to good)

- The tool calculates the % spending to fix fair or poor assets to good condition
- The rest of the funding is the portion spent on adding new assets, risk mitigation and maintenance

B. Analysis Parameters (Average Unit Costs)

General	Investment	Unit Cost	Deterioration	Targets

Average Unit Costs

Use Default or Override Parameters? Default

Treatment	Default - Current			Override - Current			Unit Cost Used - Escalated			Improvement Adjustment
	Capital ($/LM)	Support Ratio	Total ($/LM)	Capital ($/LM)	Support Ratio	Total ($/LM)	Capital ($/LM)	Support Ratio	Total ($/LM)	
Fix Fair to Good	$ 698,461	0.24	$ 866,092	$ 698,461	0.24	$ 866,092	$ 821,568	0.24	$ 1,198,304	100%
Fix Poor to Good	$ 922,273	0.24	$ 1,143,619	$ 922,273	0.24	$ 1,143,619	$ 1,084,829	0.24	$ 1,345,187	100%
Add New	$ 1,067,089	0.24	$ 1,323,190	$ 1,067,089	0.24	$ 1,323,190	$ 1,255,169	0.24	$ 1,556,410	-

- Capital (Construction) Unit Cost and Support Ratio
  - Current/Baseline Unit Cost
  - Default from 2025 State Highway System Management Plan
  - Override if better agency-specific information available
- Escalation (cost inflation)
  - Based on the assumption in “General”
  - UC escalated to the mid of 10-Year Period as the average UC
- Improvement Adjustment
  - Preser/Rehab not always fix Fair/Poor to Good
  - Should be < = 100%

B. Analysis Parameters (Annual Deterioration Rates)

General	Investment	Unit Cost	Deterioration	Targets

Annual Deterioration Rate		
Use Default or Override Parameters?		Default
Condition Change	Default	Override
Good to Fair (%/Year)	5.0%	5.0%
Fair to Poor (%/Year)	0.7%	0.7%

- Default from 2025 State Highway System Management Plan
- To override annual deterioration rates, revise green cells

B. Analysis Parameters (TAMP Targets)

General	Investment	Unit Cost	Deterioration	Targets

Current MPO 10-Year TAMP Targets

Use Default or Override Parameters? Default

Condition	Default	Override
Good	22.6%	7.0%
Fair	72.3%	84.0%
Poor	5.1%	9.0%

- Default TAMP Targets: 10-Year Expected(Invested) Targets established by each MPO in 2022 TAMP
- Override TAMP Targets by revising green cells

C. Analysis Results (Annual Deterioration if do nothing)

Deterioration	Improvement	Projected Inventory	Asset Condition	Performance Gap	Cost Gap/Needs	Condition Charts

Annual Deterioration if do nothing		
Condition Change	**Square Feet**	**% Curent Total**
Good to Fair	1,545.2	0.7%
Fair to Poor	1,023.8	0.4%

C. Analysis Results (Annual Improvement from Investments)

Deterioration	Improvement	Projected Inventory	Asset Condition	Performance Gap	Cost Gap/Needs	Condition Charts

Annual Improvements from Investment		
Improvement	**Square Feet**	**% Current Total**
Fix Fair to Good	-	0.0%
Fix Poor to Good	2,074.1	0.9%
Add New Inventory	-	0.0%

C. Analysis Results (Projected Inventory)

Deterioration	Improvement	Projected Inventory	Asset Condition	Performance Gap	Cost Gap/Needs	Condition Charts

Projected Inventory	
231,280.0	Square Feet

= Current inventory + added “New” inventory

C. Analysis Results (Asset Condition)

Deterioration	Improvement	Projected Inventory	Asset Condition	Performance Gap	Cost Gap/Needs	Condition Charts

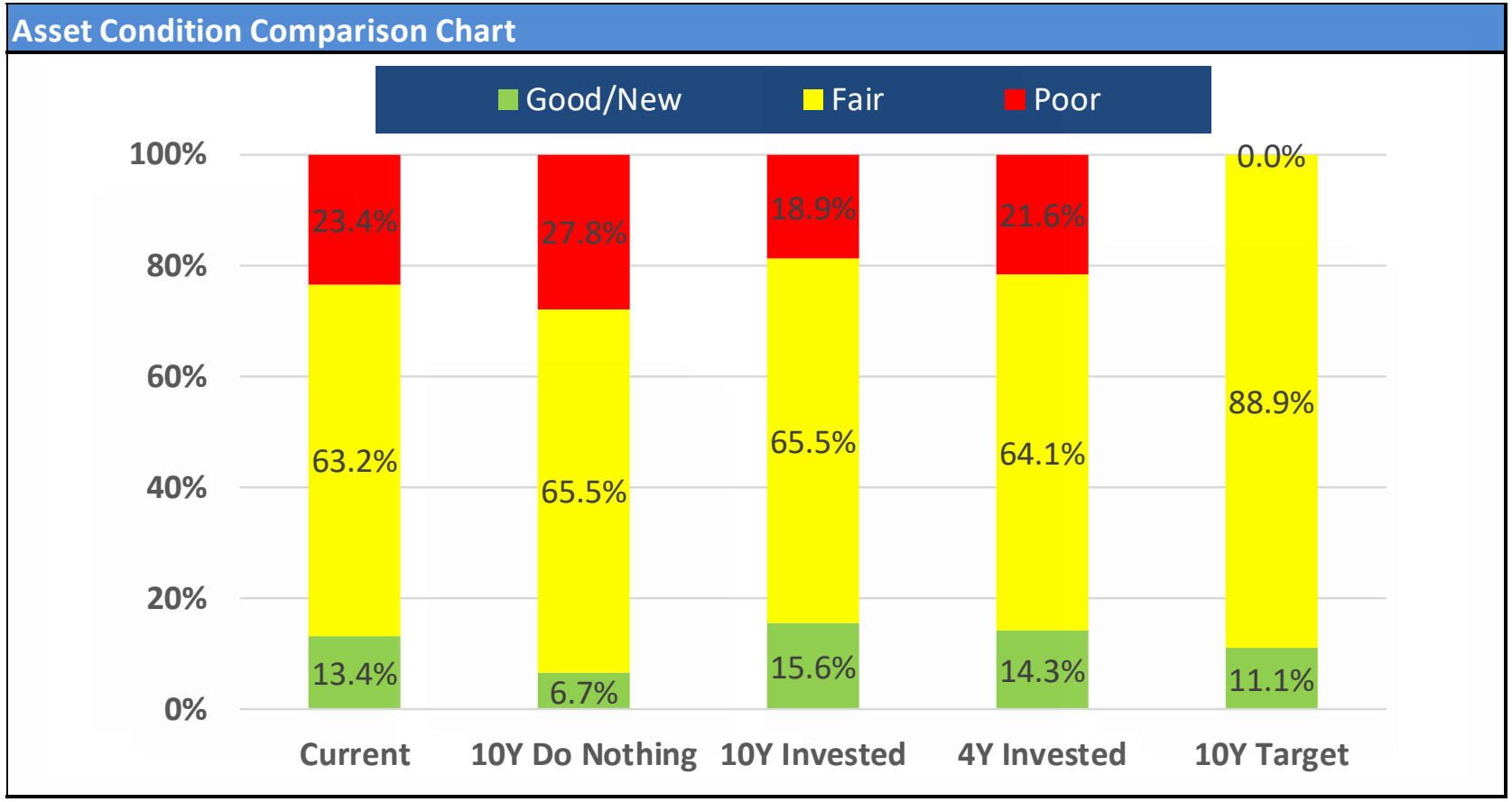
Asset Condition

Condition	Current		Do Nothing: 10Y End		Invested: 10Y End		Invested: 4Y End		10Y TAMP Target	
	Square Feet	%	Square Feet	%	Square Feet	%	Square Feet	%	Square Feet	%
Good/New	30,903.0	13.4%	15,451.5	6.7%	36,192.7	**15.6%**	33,018.9	**14.3%**	25,672.1	11.1%
Fair	146,256.0	63.2%	151,469.6	65.5%	151,469.6	**65.5%**	148,341.4	**64.1%**	205,607.9	88.9%
Poor	54,121.0	23.4%	64,358.9	27.8%	43,617.7	**18.9%**	49,919.7	**21.6%**	-	0.0%

- Current Condition
- Projected Condition
  - Do Nothing: 10Y End – “Free fall” from deterioration
  - **Invested: 10Y End - Basis for Performance Target Setting Form**
  - **Invested: 4Y End - Basis for Performance Target Setting Form**
- 10 TAMP Target Condition

C. Analysis Results (Condition Comparison)

Deterioration	Improvement	Projected Inventory	Asset Condition	Performance Gap	Cost Gap/Needs	Condition Charts



C. Analysis Results (10Y Performance Gap Analysis)

Deterioration	Improvement	Projected Inventory	Asset Condition	Performance Gap	Cost Gap/Needs	Condition Charts

10Y Performance Gap Analysis		
Condition	Gap (10Y Invested - Target)	
	Square Feet	%
Good/New	10,520.6	4.5%
Fair	(54,138.3)	-23.4%
Poor	43,617.7	18.9%

- A red colored cell indicates that there is a performance gap and additional funding is needed to meet targets

C. Analysis Results (10Y Needs Assessment)

Deterioration	Improvement	Projected Inventory	Asset Condition	Performance Gap	Cost Gap/Needs	Condition Charts

10Y Needs Assessment			
Total Cost of Work			
Treatment	**Invested**	**Cost Gap**	**Total**
Fix Fair to Good	$ -	$ -	$ -
Fix Poor to Good	$ 18,219,017	$ 38,313,726	$ 56,532,743
Add New	$ -	$ -	$ -
Risk Mitigation	$ -	$ -	$ -
Maintenance	$ -	$ -	$ -
Total	$ 18,219,017	**$ 38,313,726**	$ 56,532,743

If a performance gap is determined, then the cost to address the gap is shown here

D. Notes

D. Notes				
1. The annual funding is based on xxx				
	Prepared by		Date	
	Signature			
	Reviewed by		Date	
	Signature			

Add notes that supports your tool analysis, which may include basis for % risk mitigation investment, Investment strategies, life cycle planning considerations, and overriding of default parameters.

Example Tool Scenarios

Tool Scenario Process

- Start by reviewing default values in the Performance Tool provided by Caltrans.
- Go to the Projected Condition Chart at the Bottom to review results
- Are the results of Good/Fair/Poor in 10 years reasonable? In 4 years?
- If reasonable, no additional work is needed

If Projected Conditions/Targets unreasonable?

- Go back to the input values and check the following:
  - Check estimated investments in the 5 work types for pavement and bridge
  - Check programmed projects on NHS which should align with the estimated investments
  - Check reasonableness of the default parameters (unit costs, deterioration rates, escalation, etc.) provided by Caltrans
  - If local agencies have pavement management systems, check pavement deterioration rates. Same for bridge, but more than likely they don't have one
  - Is there a need to include an adjustment factor?
- Simulate different inputs and review results. Use both the chart and the cost gaps to see if reasonable.

Example Scenarios

1. Bridge (includes risk mitigation)
2. Pavement (no risk mitigation)
3. Maintain Poor Pavement Conditions
4. Adjust Targets based on Local Input

Example Scenario 1: Bridge (includes risk mitigation)

- Annual Investments include risk mitigation (seismic & scour) at 15% for rehabilitation and reconstruction
- Annual Investments are updated for bridge to account for additional future funding for replacing poor bridges for NHS
- Capital and Support Unit Costs are adjusted to account for higher costs in region
- Use Default Annual Escalation rate and Escalation period
- Improvement adjustment factor not used (=100%)

Example Scenario 2: Pavement (no risk mitigation)

- Annual Investments do not include risk mitigation
- Annual Investments are based on default values
- Only Support Unit Costs are adjusted to account for higher costs in region. Default used for capital unit costs
- Use Default Annual Escalation rate and escalation period
- Use Improvement adjustment factor of 90% to account for pavement assuming that MAP-21 pavement condition measure tends to result in a fair classification for local urban pavements primarily for roughness

Example Scenario 3: Maintain Poor Pavement Conditions

- What would it take to maintain poor condition pavements?
- Review investments to see the impacts to performance in 10 years
- 50% of investments in preservation and rehabilitation are assumed to improve condition from fair to good. The other 50% improves poor to good
- 100% of investments in reconstruction assumed to improve poor to good

Example Scenario 4: Adjust Targets based on Local Input

- Local agencies are queried to ask whether they think conditions will get better or worse over the next 10 years
- In this example, local agencies, provide updated targets which can be aggregated at region level by a quantity weighted approach
- Use the Tool by overriding targets and adjusting investments and possibly other inputs like unit costs to meet the targets provided by local agencies
- In this scenario, what would the cost be to meet these ending conditions? Check the Cost Gap of the Tool.
- Review results to determine if they are reasonable.
  - Check G/F/P Chart, what if targets are achieved earlier than 10 years?
  - Would you meet target early and then maintain condition for the rest of the plan period?

Action Items

- Caltrans is requesting that each MPO use the PTAT to evaluate and determine expected NHS pavement and bridge conditions for the 4-Year and 10-Year TAMP targets.
- Final target values should be reported on the Performance Target Setting Form and signed by the agency's approving official.
- Please return both the Performance Target Setting Form and PTAT via email to CT-TAM@dot.ca.gov by Friday, August 15, 2025.

Q&A

Thank You


California Transportation
Asset Management Plan
Fiscal Years 2017/18-2026/27
Caltrans
January 2018