2026 TAMP Workshop Identified Risks

May 15, 2025

	Risk Statement	Mitigation Strategies	Monitoring Strategies
1	If we make projects more complex during design (e.g. addition of multiple assets, inclusion of complete streets, etc.), project delivery may be delayed.	 Complete project planning work on schedule. Define project scoping elements earlier in the projection development process. Engage agency and community stakeholders earlier in the project development process to reduce the need for changes. Build contingency for cost and schedule. 	 Keep the project on schedule, and make sure project is moving according to plans. Track project milestones. Conduct regular check-ins with critical stakeholders (e.g. biweekly meetings with project managers and larger stakeholder meetings such as council and governing bodies).
2	If we do not coordinate the needs of each asset class or project work, we may not be as efficient as possible (e.g., removing new pavements to place new culvert, or working on TMS by replacing both technology and structural components when only one component is needed).	 Ensure coordination and communication between project development functional units to bring common understand of the needs of each asset so they may be addressed efficiently in the project. 	Frequent communications including meetings to ensure coordination of asset needs and project development.
3	If available transportation funding is insufficient resulting in deferred preventive maintenance, then maintenance and operational needs will not be met and future costs may be higher.	 Implement proactive risk-based maintenance planning to optimize resource allocation and utilize whole lifecycle analysis to quantify long-term impacts. Examine maintenance strategies, priorities, and investment strategies and consider future long-term maintenance costs. Explore funding strategies such as alternative funding sources, funding through ballot bond measures, transition to Road User Fees, and termination of one funding source for another. Increase collaboration between state and local agencies. Transfer assets from State to Local agencies. 	 Conduct periodic condition assessments and risk analyses to update impacts and take appropriate action. Continue monitoring projected funding in legislative reporting and TAMP reporting. Assess potential political challenges and implications. Develop and utilize dashboards to provide insights on funding.

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4	If rainfall intensity continues recent trends, then existing culverts and bridges may not perform adequately.	 Increase investments towards inspecting and upgrading deficient culverts. Develop performance models to identify overtopping or washout potential relative to rainfall intensity, and perform necessary maintenance prior to rain season. Incorporate trash and debris collection devices into projects. 	 Increase frequency of inspections and work with local agencies to address deficiencies at high rainfall locations.
5	If we don't (a) optimize the available safety funds, (b) prioritize their use, and (c) implement projects with the highest benefits, then fatal and serious injuries could exceed our annual performance measure.	 Adopt a proactive approach to: (a) Identify additional funding sources and efficiencies in current safety funding investments; (b) Identify the most beneficial safety improvements (e.g., Proven Safety Countermeasures) and associated risk locations using crash history or AI identified attributes of high crash potential); and (c) Incorporate into existing projects at high-risk locations or bundle complimentary Proven Safety Countermeasures. 	 Assess progress through: (a) Annual funding sources report or metrics to identify safety investments vs expected reductions in annual fatal and serious injuries; (b) Monitoring and/or modification as necessary the benefit metric for the safety improvements; and (c) The number of projects completed per year relative to an efficiency metric.
6	If we don't plan for extreme weather and climate events (e.g., rainfall, sea level rise, fire, heat), then our transportation system components (bridges, roadways, etc.) could be damaged, pose safety risks, and/or cost more.	 Develop SOPs (Standard Operating Procedures) to prepare for events in advance. Identify alternative transportation modes for rerouting travel. Communicate processes for emergency response and restoration with the local agencies and partners. Where funding allows, design projects to mitigate extreme weather. Establish reservation funding for emergency restoration work. Establish design standards for climate risks that consider criticality of facility. 	 Communication with the stakeholders who would be involved in the extreme events. Deploy temperature sensors network and heat stress, such as on bridges for fire, or flow rate sensors for drainage assets. Deploy smart drainage monitor sensors to detect blockages and measure flow rate. Deploy thermal drones to monitor for smoke or wildfires.
7	If vegetation management is not performed, the transportation system will face increased risk of closure due to wildfire, falling trees, or landslides.	 Treat locations and combine recovery efforts with restoration or vegetation structure enhancement. Rank and classify locations based on vulnerability to fire and other related hazards. Map roadside inventory. Seek opportunities for collaboration and partnerships with local agencies (e.g., utilities, RCDs, etc.). 	 Adopt early detection technologies, such as satellite, UAV, etc. Conduct routine field inspections and scheduled reassessments. Share information with regional partner agencies.
8	If stable funding for local bridges is not secured, then necessary maintenance and repairs of bridges will be delayed, and bridges in good	 Prioritize bridge investments on the NHS at the expense of other routes/asset classes. Delay building new bridges and transfer funding to repairs of existing bridges. 	 Monitor the level of discretionary, formula funding, and project completion over time and optimize funding and outcomes by category.

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	condition could slide into fair and/or poor condition.	 Advocate for stable funding in policy forums at the federal, state, local levels. Analyze and market the funding gaps to help sway funding decisions. 	 Monitor that California is getting a fair share of federa; transportation funding relative to other states.
9	If we do not have reliable asset performance models (including reliable deterioration rates and reasonable goals), then investment decisions will not be optimal.	 Advocate for agency asset owners to procure tools with the necessary capabilities. Utilize data to better inform modeling and update regularly 	 MPOs assess which local agencies have these tools in place.
10	If TMS infrastructure is exposed or vulnerable to IT security/ ransomware/ hacking issues, then asset or data systems can be out of function or have potentially significant safety and/or operational impacts for an extended time.	 Harden physical assets to attacks. Enhance password protections. Implement routine diagnostics and frequent IT security checks. Increase IT security training and personnel specialized in security vulnerabilities. Establish contingency plans or recovery strategies for possible hacks. Identify critical TMS elements and specific security measures. 	• Run daily and periodic diagnostics.