

CSU Transportation Research & Workforce Development Request for Proposals

◆ Background

California's Road Repaid and Accountability Act of 2017 (SB 1) is a comprehensive transportation funding package designed to address a wide range of transportation-related needs across California. As part of SB 1, annual appropriations of up to \$2 million are made available to the California State University (CSU) for the purpose of conducting transportation research and transportation-related workforce education, training and development. The [Mineta Transportation Institute](#) (MTI) at San José State University (SJSU) leads the California State University Transportation Consortium (CSUTC). CSUTC comprises MTI/SJSU along with partners CSU Chico, CSU Fresno, and CSU Long Beach.

As part of the CSUTC comprehensive research portfolio, MTI/SJSU manages a CSU-wide competitive request for proposals to identify research projects aligned with SB 1 priorities.

◆ General Proposal Information

Who can apply? This research funding opportunity is available to faculty (permanent or temporary) at any California State University campus. Commercial organizations, non-profits, and other universities may not respond to this RFP. The Principal Investigator(s) must be CSU faculty; non-CSU personnel may participate on research teams but funding should be limited. Questions about budgets should be directed to Dr. Hilary Nixon (hilary.nixon@sjsu.edu). All proposals must include funding for CSU students. Proposals submitted by CSU campuses other than SJSU will be required to submit a subrecipient commitment form. **A researcher is limited to serving as PI or co-PI on one proposal and as a team member on two other proposals.** Prior on-time performance in a previously-funded CSUTC-project will be considered during the evaluation process.

Project funding. Proposal budgets, including indirect/F&A/overhead expenses (limited to 15%), must not exceed \$75,000. Applicants must use the budget template provided. The anticipated period of performance is 12 months. Approximately 10 awards will be issued through this competitive selection process.

Deadline. The deadline to apply to this funding opportunity is **11:59 p.m. (Pacific) on Monday, January 23, 2023.** All submissions must be submitted through Calstate InfoReady: <https://calstate.infoready4.com/> (search for CSU Transportation Research and Workforce Development RFP). For questions specifically about using InfoReady, please contact support@infoready.com.

Submission Deadline:

January 23, 2023

RFP Guidelines, Subrecipient Commitment Form, Proposal and Budget Template available at: <https://calstate.infoready4.com/>

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ALL AWARDS ARE SUBJECT TO THE AVAILABILITY OF APPROPRIATED FUNDS

Proposal review. Proposals will be reviewed by an external, independent, third-party review committee using the evaluation criteria listed below. No CSU-affiliated faculty or staff will serve as reviewers. The committee will make the final decision regarding projects selected for funding.

Distribution of funds. The authorized contracting entity for SJSU, the SJSU Research Foundation, will award funds for approved proposals. The Principal Investigator will be required to submit monthly progress reports to MTI as a condition of payment.

◆ **Targeted Research Needs and SBI High Priority Research Areas**

CSUTC works with stakeholders to identify priority research needs that align with SB 1. Proposals must address one of the nine targeted research needs listed or fall within one of the SBI high priority research areas listed below after the targeted research needs on page 5. Proposals that respond to a targeted research need will receive a 10% scoring bonus during evaluation. See the full list of evaluation and scoring criteria at the end of this document.

Targeted Research Needs

For questions about targeted research needs or to obtain contact information to request the required stakeholder letter of support, please contact Dr. Hilary Nixon (hilary.nixon@sjsu.edu).

0. **NEW** **The Return-on-Investment for Transit Apprenticeship, Training, and Mentoring.** Transit agencies and unions have often asked how best to make an economic case to leadership and funders for significant investments in quality training, mentoring, and apprenticeship programs. However, there is little quantitative information available. Research is needed to better understand the benefits, costs, and return-on-investment (ROI) for transit agencies that create such programs and for funding agencies that invest in them. In addition, research is needed to understand the degree to which training, apprenticeship, and mentoring programs improve diversity in the public transit workforce. There are a number of transit agencies in California who offer different types of training, apprenticeship, and mentoring programs, many at different stages of program development. Research that looks at the return on investment for these programs could benefit not only agencies in California, but also across the United States.

Research need submitted by the International Transportation Learning Center.

1. **Consistent VMT Mapping and Modeling.** Caltrans has addressed vehicle-miles traveled (VMT) as a negative environmental impact under the California Environmental Quality Act (CEQA) and its implementing regulations (“Guidelines”). In practice, this means analyzing, avoiding, and mitigating induced VMT that results from projects on the State Highway System. Lead agencies such as Caltrans have substantial discretion to determine the extent to which various public policies may warrant the approval of a project, notwithstanding the potential that the project may cause significant adverse impacts. Caltrans must forecast the induced VMT attributable to its projects and demonstrate efforts to identify and implement mitigation measures. CEQA requires all “feasible” mitigation be applied. Despite climate goals and guidance regarding VMT reduction from the California Air Resources Board (CARB) and Caltrans, VMT is increasing. According to CARB’s 2022 Scoping Plan, “Sustained VMT reductions have been difficult to achieve for much of the past decade, in large part due to entrenched transportation, land use, and housing policies and practices.” There is not a consistent model or metric used to 1) measure VMT impacts of transportation projects, 2) verify or validate the accuracy of the VMT calculation. Different

agencies/offices across the state use different models/methods. Without a consistent model and system to verify VMT, it is possible the impacts of state and local transportation projects are not being accurately assessed. The primary question the research may consider is; what are the differences/gaps in modeling between various COGs and Caltrans and how do these models impact the project selection process?

Research need submitted by California State Assembly Transportation Committee

2. ***Effects of COVID-19 on Public Transit Ridership in the Bay Area.*** While transit ridership on bus dependent transit agencies in the Bay Area, data suggest rail travel in the Bay Area has significantly declined. As of November 2022, BART has seen weekly ridership at 42% of previous levels, while Caltrain's ridership is only at 32% of pre-pandemic levels. Research is needed to understand this shift in transit ridership in the Bay Area, particularly to understand its decline. Specifically, is the decline a result of increased car usage, remote work, or both. With the sharp decrease in transit ridership in the Bay Area, it may also be helpful to better understand how to better right-size transit, with a look at when or whether bus rapid transit or micro-transit would better meet the needs of the 21st century commuter over permanent, fixed systems like light and heavy rail.

Research need submitted by California State Assembly Transportation Committee

3. ***Embracing All Sizes: Promoting Equity Through Inclusive Design.*** Over 70% of Americans in the United States are considered overweight. However, public transportation infrastructure and service, such as seating and waiting areas have not changed to meet the needs of the current population. In a Customer Experience Survey conducted with the National Association for the Advancement of Fat Acceptance (NAAFA), results showed that only 10 percent of survey respondents agreed that "public transit is comfortable." Furthermore, 70 percent reported feeling "anxious or nervous" when using public transit. The transit industry is currently facing extraordinary challenges with recovering ridership after plummeting due to the pandemic. Further research is needed to investigate the potential for ridership gain by creating transit systems that accommodate people of all sizes and the appropriate policy framework that could be implemented to provide people of all sizes requirements for accommodations. It is important to note that the standard ADA requirements provide little protection for those who are larger bodied.

Research need submitted by Sunline Transit Agency

4. ***Enforcing California's Parking Cash-out Law to Help Achieve Climate and Equity Goals.*** Free or subsidized employee parking is a valuable job perk, but there's one serious downside: It encourages commuting by car and hinders efforts to promote environmentally sustainable alternatives. One tool for countering this effect is parking cash-out, a policy that requires employers who provide free parking to offer the cash equivalent of the parking space to those who don't drive to work, leveling the playing field for commuters. In service of its air quality and traffic reduction goals, California enacted a parking cash-out law in 1992. In 2022, Governor Newsom signed AB 2206 (Lee) into law in to revive and update this monumental but underutilized and unenforced law, making it far easier for employers to implement parking cash-out. This law solves for implementation confusion; however, enforcement remains voluntary. Research is needed to understand the potential climate and equity benefits of enforcing parking cash-out in the state through Air Quality Management Districts.

Research need submitted by SPUR

5. **Reducing Non-commute Auto Trips.** The majority of all trips taken are not to get to or from work, but to non-work destinations like childcare, shopping, etc. Traditional transportation investment priorities have historically prioritized peak commute periods, but with higher levels of telecommuting post-COVID-19, efforts to reduce GHG and VMT will need to go beyond the commute. What multimodal investments are best poised to reduce non-commute, non-peak travel? What innovative approaches should be considered to, for example, nudge a traveler away from driving to the grocery store and consider active transportation modes? Given that non-commute travel often relies less on solo travel (i.e., transporting children to a play date, visiting family with your partner, driving with friends to a hiking trailhead), how does this change the calculus?

Research need submitted by California Association of Councils of Government

6. **Right on Red: Energy Saving Measure or Unsafe Maneuver.** Since 1939 California has permitted vehicles to make a right turn on a red light. When Congress passed the Energy Policy and Conservation Act of 1975, they included a provision requiring states to permit right turns on red lights in order to receive federal assistance for mandated conservation programs. Since 1980, all states have permitted right turns on red as a general rule. The National Highway Traffic Safety Administration submitted a report to Congress in 1994 to evaluate the policy on safety. The report looked at data from Illinois, Indiana, Maryland and Missouri and found approximately 84 fatal crashes from 1982 to 1992 involving a right-turning vehicle where a right turn on red is permitted. The report indicated that 44 percent of the crashes involved a pedestrian and 10 percent involved a bicyclist. In total, right turn on red crashes represented .06 percent of the total number of the fatal crashes in those four states. Recently Washington D.C. has banned making right turns on red, joining New York City, in an effort to protect pedestrians. The city of Berkeley is also considering a similar proposal. Research on pedestrian and bicyclist injuries at intersections with a focus on the potential danger of right turns on red is needed as more jurisdictions are considering this change in an effort to reduce traffic fatalities to zero.

Research need submitted by California State Assembly Transportation Committee

7. **VMT Mitigation Bank – Value and Structure.** California does not have enough tools for locals and the state to mitigate the impacts of increased VMT. Caltrans is in the process of considering a “VMT Mitigation Bank.” According to Caltrans’ [Mitigation Paybook](#), the agency and many stakeholders are interested in organizing mitigation efforts through banks or exchanges whereby an entity would collect and validate VMT mitigation opportunities – from land-use developers, transit agencies, TMAs, local active transportation programs and others – and make them available to transportation agencies whose projects are in need of mitigation. Currently, no such arrangement has emerged, so project development teams must either develop VMT-reduction measures, e.g. pedestrian facilities, or connect with mitigation providers themselves. Research is needed to understand the value and structure of how a VMT Mitigation Bank would function, and what value this incentive system could add. Have other state’s established mitigation banks that could be used as a model?

Research need submitted by California State Assembly Transportation Committee

8. **VMT Reduction Projects.** California is nearly a decade after passage of SB 743 (Steinberg) Chapter 386, Statutes of 2013, and the State is still working on how to incentivize and better prioritize projects that more closely align with climate, safety, and equity goals. While outcomes differ from project to project, investing in added roadway capacity, such as new or widened roadways or interchanges, often induces additional vehicle-miles traveled (VMT) and climate pollution. Many other states (i.e. Virginia, North Carolina, Ohio, Washington, etc.), have “transportation dashboards that list state projects, the components of the project, and project benefits. This dashboard does not exist in California. For the purposes of policymaking, research is needed to develop a comprehensive list of projects that reduce VMT in order to better inform policy around what is considered a capacity project, what the environmental ramifications of each project is, and what projects are being prioritized.

Research need submitted by California State Assembly Transportation Committee

9. **Trends in Commercial Vehicle Miles Traveled.** Freight planning is decentralized in California. State funding guidelines for freight projects prioritize throughput, velocity, and reliability, among other considerations. It would seem beneficial for shipping/freight entities to streamline efficiencies; however, it is not clear if our current system encourages reductions in vehicle miles traveled (VMT). With increasing e-commerce and a rise in last mile delivery in urban settings, research is needed to understand the trends of commercial VMT.

Research need submitted by California State Assembly Transportation Committee

SBI High-priority Research Needs

Proposals are also welcome that fall within one or more of the following high-priority research areas. No scoring bonus is provided for projects that fall within this general list of research areas.

- Congestion relief, including traffic management systems
- Trade corridor enhancements
- Improved transit and rail
- Pedestrian and cyclist safety
- Maintenance/rehabilitation of road and bridge infrastructure

◆ Proposal Contents

Using the provided template, applicants must respond to the following questions:

1. **Project Goal.**

Briefly state the overall goal of this project in 1-2 sentences.

2. **Project Background.**

Describe (approx. 500-750 words) the background problem/issue the proposed project will address and provide a brief review of the academic and/or professional literature that demonstrates your knowledge of past work in the field. Include references (citations can be listed at the end of the section or at the end of the entire proposal – they do not count towards the overall word count).

Applicants are expected to clearly indicate how their project expands upon existing knowledge in the field. All applicants should carefully review academic databases and research sites such as [TRID \(Transportation Research Integrated Database, trid.trb.org\)](http://trid.trb.org) to ensure that the proposed project does not duplicate existing research but rather contributes to existing knowledge in the field.

3. **Research Question/Project Objective.**

Concisely state your proposed research question or project objective (1-2 sentences).

4. **Project Methods.**

Describe (<1000 words) how the project objectives will be accomplished. Provide a detailed description of your proposed methods in a manner that can be understood by a wide range of transportation experts. Applicants should describe data collection procedures, including any likely challenges associated with gathering the necessary data, and clearly describe the methods that will be used to analyze the data.

5. **Project Tasks/Timeline.**

List specific project tasks and anticipated timeline for completion (e.g. Task 2: Develop survey and submit to campus Institutional Review Board – Months 2-3). Project duration is a maximum of 12 months and the timeline should account for quarterly meetings with an external advisor. **The task list should end with the submittal of a draft report prepared according to MTI formatting guidelines due 30 days prior to the end of the award period. All project reports will be peer reviewed and authors will be expected to respond accordingly to peer review comments when submitting a final report to MTI for publication.**

6. **Technology Transfer Plan.**

Describe (<250 words) how the results of this project will be disseminated. Journal articles and conference presentations are valued, but also describe what efforts will be made to ensure that the results are made widely available beyond the academic community. **All authors will be required to participate in ongoing technology transfer tracking after completion of the project.**

7. **Benefits to Californians/External Support for Project.**

Describe (approx. 250-350 words) how the results of this project will benefit Californians and how practitioners might apply the anticipated results. Please describe what existing interest there is from transportation professionals in California for the proposed research. **All proposals must include a letter of support from an external agency/organization/professional that indicates interest in the project and willingness to serve as an informal advisor. The external advisor should be an industry professional and not an academic. For proposals responding to a targeted research need listed in this RFP, the letter of support must come from the organization who submitted the research need (please contact Dr. Hilary Nixon, hilary.nixon@sjsu.edu, MTI Deputy Executive Director, for more information).** The advisor should be willing to informally review project progress once a quarter during the period of performance and offer advice to the research team as well as review the final draft report. Modest financial compensation for the informal advisor can be included in the project budget (<\$500).

8. **Research Team Qualification.**

Describe (approx. 250 words per team member) the research team's relevant skills and experiences that will help ensure success. Applicants should describe the role and responsibilities of each team member.

9. **Budget Justification.**

Provide a budget justification. No capital expenditures (>\$5,000) or international travel expenses are allowed. No computer equipment such as desktop computer, laptop, printer, tablets, etc. will be

allowed. General attendance at conferences is not an allowable expense. Student involvement is a requirement and should be explained.

10. Prior CSUTC-funded Project.

If the PI or co-PI has received prior CSUTC funding, please provide the title of the project(s) and briefly summarize how that project (or projects) has led to improvements in the transportation system for Californians, if that work has been leveraged to obtain any additional external funding to support ongoing research, and how the research team disseminated the results of the research.

◆ Items Required for Submission

The following items will be required for submission to InfoReady

1. Proposal, using the template available at Calstate InfoReady
2. Project Budget using template available at Calstate InfoReady
3. Letter of support from external advisor documenting interest in the project and willingness to serve as an informal external advisor. This advisor should not be an academic, but rather an industry professional/representative who can speak to the broader usefulness or applicability of the proposed research. The letter should indicate the advisor’s willingness to meet with the research team at least quarterly and to review the final draft report. For proposals responding to a targeted research need listed in this RFP, the letter of support must come from the organization who submitted the research need.
4. Subrecipient commitment form for all proposals submitted from non-SJSU campuses
5. Two-page CVs for research team members (not students).

◆ Evaluation Criteria

The criteria and process for evaluating proposals is as follows:

Criteria	Rating Scale	% of Final Score (Weighting)
1. Does the proposal address a specific targeted research need?	Yes/No	Proposals that meet a targeted research need will receive a 10% bonus on their total score.
2. Does the proposal present a clear and concise understanding of the problem and project objectives? Is the research question clearly stated?	0 to 10	25%
3. Are the research methods appropriate for the proposed research? Is the approach to data collection and data analysis clearly explained? Does the proposed methodology address the ability to collect and analyze the data according to sound methodological practices?	0 to 10	35%
4. Are the proposed tasks achievable in the proposed timeline and budget?	0 to 10	10%

5. Are the technology transfer activities likely to achieve broad and appropriate dissemination of the research results and are the benefits to Californians and transportation practitioners clearly described?	0 to 10	10%
6. Is the research meeting a specific need in the transportation industry that will benefit Californians? Does the proposal clearly articulate that need and is the project likely to be successful in meeting that need? Does the letter from the external advisor suggest a strong interest in this project?	0 to 10	10%
7. Are the experiences and qualifications of the research team sufficient to ensure project success? Have they successfully completed similar/relevant research projects?	0 to 10	10%

Review committee members will be asked to comment on the strengths and weaknesses of each proposal and rate each proposal using the criteria and process described above. **In addition, if the PI or co-PI received prior CSUTC funding, on-time performance with that project will be considered in the evaluation.**

◆ **MTI Contact**

For questions about this RFP, please contact:

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