

Recommend and Assist with Subject Matter Research Proposals

Ideas for research proposals may come from many sources. The idea may result from a proposed change to a regulation, requested use of a new product, or long term issues observed on completed projects. The idea may come from any division within Caltrans or from other stakeholders.

1. The SC Technical Team (TT) Sponsor or SC TT Chair responds to the initiator of the idea, provides an initial scope for the idea, and sends an email to document receipt of the idea to the initiator.
2. Research proposals should be placed on the SC TT Work Plan and used to:
 - a. Determine the level of importance.
 - b. Estimate the hours needed for review.
3. Assign the following tasks to the SC TT members:
 - a. Review completed or ongoing research projects at the [Division of Research, Innovation and System Information](#) (DRISI) website to determine whether similar research has been or is being performed.
 - b. If research is currently in progress, request to be part of the research or at a minimum, get copies of the research.
 - c. Determine if there is potential cross over to other Caltrans functional units (e.g., Division of Construction, Traffic Operations, Safety & Health, Quality Management Representative (QMR), etc.) and check to see if they have started research that may parallel the research proposal.
4. The SC TT members provide compiled information back to the SC TT Sponsor and the SC TT Chair to decide the next action:
 - a. If there is existing completed research:
 - i. Share the research results with the SC TT, reply to the initiator, and proceed to Step 10.
 - b. If the idea has already been proposed and is being researched:
 - i. Request the SC TT be included in the research and assign a SC TT member to aid or follow up on the progress of the research. See the section titled, *Overlapping Research Proposal Example*, in Attachment 9, *Recommend and Assist with Subject Matter Research Proposals*.
 - ii. Document, distribute to the SC TT, reply to the initiator, and proceed to Step 10.

- c. If the idea is new:
 - i. Make any necessary revisions to the SC TT Work Plan.
 - ii. Determine if the research may be done within Caltrans or if it requires an external contract.
 - iii. Assign a SC TT member to draft a research proposal. Consult the *DRISI* Research Manual (available under the [DRISI website](#), under “Transportation Research”), for details of how to assemble a research proposal.
 - iv. Send initiator an updated email with the status of the research proposal.
5. The SC TT Chair compiles the draft research proposal for the SC TT Sponsor.
6. The SC TT Sponsor presents the draft research proposal to SC Top Management.
 - a. SC Top Management determines if the draft research proposal requires further input from the SC TT or the initiator.
 - b. SC Top Management makes the decision whether to forward the draft research proposal for funding consideration.
7. If the decision of SC Top Management is to forward the draft research proposal:
 - a. Update the initiator.
 - b. The SC TT Sponsor submits the draft research proposal to the SC TT member that is a member of the appropriate Division of Engineering Services (DES) Technical Committee for consideration to be included in the next fiscal year’s research program. The Structure Policy Board will select the top research ideas. The [DRISI](#) Research Program webpage is also a great source of information on the Department’s research efforts.
8. If the draft research proposal goes forward as a formal research project:
 - a. Update the initiator.
 - b. Assist with the research as requested.
9. If the results of the formal research project have statewide interest or value, the SC TT Sponsor will determine the best method to share and or implement the results. This may start the SC TT on further development of processes.
10. Update the SC TT Work Plan and document results.
11. The SC TT maintains a database of ideas and proposals along with results to minimize repeating proposals and to facilitate new or similar proposals.

Overlapping Research Proposal Example

To follow is an example of an overlapping research proposal that should be reviewed by the appropriate SC TT for a future research proposal:

1. Potential research proposal: The proposal is to research a warning or alarm system for over height vehicles approaching falsework.
2. How does the research proposal overlap? The research proposal described below has been requested by North Region Construction Safety Coordinator, Ed Yarborough, to the Division of Traffic in District 3, Joe Horton. The research proposal pertains to SC work; thus, the SC TT A, *Temporary Structures*.

The information in the emails below is an example of how an idea can be presented to SC TT A, *Temporary Structures*, sponsor:

From: Horton, Joseph W@DOT
Sent: Friday, January 27, 2017 9:33 AM
To: Yarbrough, Ed E@DOT <ed.yarbrough@dot.ca.gov>
Cc: Altman, Steve D@DOT <steve.altman@dot.ca.gov>; Wilder, Dennis@DOT <dennis.wilder@dot.ca.gov>; Babcock, John F@DOT <john.babcock@dot.ca.gov>; Smith, Kim B@DOT <kim.smith@dot.ca.gov>; Alvarado, Andy@DOT <andy.alvarado@dot.ca.gov>; Solak, Ken L@DOT <ken.solak@dot.ca.gov>; Ead, Samir W@DOT <samir.ead@dot.ca.gov>
Subject: Re: Research Proposal - Overheight Vehicles and Falsework

Ed,
I like your idea. Maybe we can do review of what other states are doing.

Justin,
Cut and paste Ed's idea into a PI request. After I find out which PSC this should be in, we will see what we can do for Ed and his people.

Joe Horton
Office Chief, DRISI
(916) xxx-xxxx

From: Yarbrough, Ed E@DOT
Sent: Wednesday, January 25, 2017 3:17:34 PM
To: Horton, Joseph W@DOT
Cc: Altman, Steve D@DOT; Wilder, Dennis@DOT; Babcock, John F@DOT; Smith, Kim B@DOT; Alvarado, Andy@DOT; Solak, Ken L@DOT; Ead, Samir W@DOT
Subject: Research Proposal - Overheight Vehicles and Falsework

Joe:

I attended the Statewide Construction Partnering Steering Committee meeting today and was part of the discussion on current safety initiatives, like the Work Zone Intrusion Alarm study, plus my participation in the NCHRP Synthesis on one-way traffic control.

As part of that discussion an interesting point was brought up by Dennis (one of our Structures Managers), who was attending for Steve, as to potential research on some type of warning/alarm system for overheight vehicles approaching falsework. We continue to have problems with these vehicles striking our falsework, even though we are placing the appropriate sign packages and informing the Office of Truck Services of the reduction of height at the bridge locations so that they can cover that as part of their permitting process. The safety implications of vehicles striking falsework are readily apparent and this seems to be a topic that would be a good candidate for some research and testing.

I found this to be an interesting idea and would like to present it to you for consideration. I don't know what other States are doing, although I have seen a couple of interesting pictures on secondary roads of items like having a bar across the road at the same height as the bottom of the bridge a few hundred feet in front of the bridge with additional warning signs. Basically if you hit the bar, pull over, because you are going to hit the bridge.

I can't see the Department being able to do something like that, but my initial quick thoughts are that it seems that there should be some type of portable electronic height measuring device that could be placed on the shoulder, maybe on a pole, that we could connect into a PCMS through some software in advance of the falsework that could automatically flash a message on the PCMS for the overheight vehicle to see. I'm sure you know of the integrated software applications VerMac is doing with their JamLogic software and this should be much simpler.

Could this be something that we might be able to propose a study on and see what comes of it? Your thoughts would be appreciated.

Ed Yarbrough
Caltrans North Region Construction
Construction Safety Engineer