

## **Cal Transportation Team Grant Proposal**

### **July 23, 2021**

The grant proposal serves as documentation regarding the organizational and financial structure of your organization. The grant proposal will be used to assess delivery of commitments from year to year, and will be used by the grant review board to determine grounds for approval of your request.

The grant proposal must contain the following sections and answer all questions outlined below.

#### **1. Executive Summary**

- Explain the mission and vision of your organization and highlight key goals you intend to accomplish in the 2021 – 2022 academic year.

Cal Transportation Team aims to serve as an avenue for transportation enthusiasts across all majors to gain practical, hands-on experience in the design and planning of transportation solutions for today's changing urban landscape. Cal Transportation shall aim to primarily, but not exclusively, compete in and win the regional ASCE Mid-Pacific Transportation paper competition as part of the CEE department's annual Mid-Pac competition efforts.

Alongside procuring student opportunities as highlighted in the preceding section, Cal Transportation's key goals for the 2021-2022 academic year involve:

- 1) Improve placing from the inaugural 2021 Midpac Transportation Paper, with the end goal of winning the 2022 cycle.
- 2) Collaboration with JFC and ASCE into developing a stronger, more cohesive CEE community, better prepared to serve the varying interests of its members.

#### **2. Statement of Agreement to Terms & Conditions**

- Indicate in writing your organization's agreement to all terms and conditions as outlined in this document.

Cal Transportation Team agrees to the stipulated conditions and pledges to fulfil its responsibilities.

#### **3. Organization Description and Management**

- Describe the purpose of your organization and its role in the CEE community.

As described in the preceding section (Section 1), Cal Transportation Team's primary focus is in providing its members with valuable hands-on experience and training to develop and hone marketable skills for the transportation industry. While the Mid-Pacific conference serves as an avenue to motivate and showcase the members' efforts and collective solution in a competitive setting, Cal Transportation shall primarily aim to provide members with structured training and opportunities for career advancement through, but not limited to:

- 1) CAD, VISSIM, SYNCHRO Workshops
- 2) Traffic modelling workshops
- 3) Urban design and planning workshops
- 4) Transportation seminars
- 5) Transportation technical workshops in collaboration with Cal ITE and outside companies

- 6) Advising and technical discussions with transportation faculty during office hours.
- 7) Forming connections with advisors from transportation companies, practicing engineers/planners.
- 8) Obtaining support and guidance from current transportation graduate students and TRANSOC
- 9) Recruiting potential students to join CEE and the team and support them with class advice, and other decisions necessary at Berkeley

The developmental programs and workshops being planned are expected to also prepare members for a strong Mid-Pac showing.

Cal Transportation Team also hopes to play a bigger role in developing the greater CEE community outside the transportation niche. Beyond demonstrating to transportation enthusiasts that there is a place for them in the CEE community, Cal Transportation expects to, among others:

- 1) Help with fundraisers and events.
- 2) Help with departmental recruiting of potential first years
- 3) Serve as promotional material to the CEE department by demonstrating breadth and depth of departmental offerings and opportunities.

· Explain the key positions/roles in your organization and create an organizational chart outlining general tasks and relationships between key positions.

Position	Description	Person	Contact Info
Co-Project Manager	Provides general administrative oversight, and serves as liaison between project and external parties.	Valerie Haines	valerieh99@berkeley.edu
Co-Project Manager	Provides general administrative oversight, and serves as liaison between project and external parties.	Michael Leong	michaelleong@berkeley.edu
Junior Project Manager	Manages internal affair and provides internal administration of everything Midpac Transportation Paper related	Garett Davis	garett558@berkeley.edu
Co-Planning Lead	Reports to Co-Project Managers. Leads planning and technical analysis of proposed solution to the Midpac prompt.	Aboli Datey	aboli.datey@berkeley.edu
Co-Planning Lead	Reports to Co-Project Managers. Leads planning and technical analysis of proposed solution to the Midpac prompt	Matthew Lin	m1in1024@berkeley.edu

Co-Design Lead	Reports to Co-Project Managers. Manages design work and ensures that solution is compliant with state codes. Oversees preparation of relevant design documents.	Brian Kim	brian.hk@berkeley.edu
Co-Design Lead	Reports to Co-Project Managers. Manages design work and ensures that solution is compliant with state codes. Oversees preparation of relevant design documents.	Marissa Wade	marissawade@berkeley.edu
Co-Design Lead	Reports to Co-Project Managers. Manages design work and ensures that solution is compliant with state codes. Oversees preparation of relevant design documents.	Jordan Collins	jcollins36855@berkeley.edu
Co-Operations Lead	Reports to Co-Project Managers. Manages traffic analytics and models to ensure that solution is technically feasible by Level of Service.	Kady Hsu	kadyhsu@berkeley.edu
Co-Operations Lead	Reports to Co-Project Managers. Manages traffic analytics and models to ensure that solution is technically feasible by Level of Service.	Lee Keslerwest	leekeslerwest@berkeley.edu
Treasurer	Manages Finances, reports directly to PM	Raymond Huang	raymondhuang@berkeley.edu

- Identify specific risk management processes.

We recognize that for some activities which may occur in the field or at a competition, as well as during purchasing and running of large events, risks may occur. If such an activity is deemed to require a risk management process, the co-project managers as well as the junior project manager will spearhead a team to conduct a risk management process. These are the steps:

1. Identify possible risks and impacts.
2. Evaluate risk likelihood and analyze the severity of consequences
3. Develop risk management plans for identified risks by identifying possible aversion alternatives and evaluating the costs of such approaches.
4. Follow up the risks according to established standard operating protocols.

These will also be documented internally within the club. They will also be available for future reference.

**4. Goals**

· Describe your organization’s SMART (Specific, Measurable, Assignable, Realistic, and Time-Related) goals for the 2021-2022 academic year.

- Project Managers: Secure Industry Partnerships
  - Reach out to transportation consultants through contacts in Cal ITE and past members’ intern supervisors to gain professional opinions on our prompt as well as how we prepare our members to compete for Midpac.
  - Invite industry professionals to teach our members and critique our work.
- Project Managers and Team Leads: Develop a competitive solution which addresses the Midpac prompt specifications, and win the 2022 Midpac Transportation Paper.
  - Conduct extensive research about trends in the industry and the most advanced practices which may be useful for our competition.
  - Develop the skills of team members (in the planning process, CAD for design, traffic analysis in Synchro, budgeting and cost estimating, etc) so that work can be efficiently delegated after the prompt is released and throughout the design process.
  - Continually monitor teams for progress during training.
  - Conduct a field visit to the site in order to gain a better understanding of the project and have an edge over other teams.
- Project Managers and Student Instructors: Run workshops to train and educate members as well as expose them to practical experience. Hold 5 workshops will be held throughout the academic year.
  - Coordinate the knowledge base of students and find the best and most experienced students to teach different subject matter.
  - Run workshops for different skill levels and interests to ensure the team is diversified (e.g. different levels of AutoCAD experience, different visualization softwares, modeling, etc).
  - Create exercise files for workshops to allow participants to have hands-on experience without the technicalities of setting up their workstations.
  - Provide valuable training assignments for students to practice and perfect the skills outside of team meetings.
  - Target 80% attendance at professional workshops with our sister organization, Cal ITE.
- Entire Excomm: Recruit at least 30 new members for the upcoming academic year
  - Participate in all recruitment fairs.
  - Develop a recruitment/elevator pitch and practice it in August.
  - Outside of COE, reach out to CED and announce in Data Science classes

· Present your organization’s general deadlines, deliverables, and general schedule to accomplish these goals.

Activity	Deadline
Register as RSO	Before semester

Secure funding	Start of semester
Secure advisors	Ongoing
Plan submittal rough draft	End of fall
Extra deadlines for project (prompt not out yet)	To be added when appropriate
Finish submittal	March
Submittal due	April
Finish Presentation	April 15
Give Presentation	End of April

## 5. Affiliations

- Name each person, organization, and company with which your organization is affiliated with.

Party	Representative	Relationship	Expectations and Obligations
CEE Department	Julia Konopasek	Sponsoring department	Provide promotional materials and assist in recruiting efforts, help new students
ASCE-JFC	Kai Leong	Parent Organization	As outlined in attached contract
Cal ITE	Kady Hsu	Current sister organization (independent)	None
Professor Alexander Skabardonis	-	Faculty Advisor: Provides consultation on proposed solutions for Transportation Paper	Develop project proposal
Sponsors - TBA			

## 6. Contributions

- Aside from the minimum required contributions to ASCE-JFC, what will your organization commit to doing or providing for ASCE-JFC or the CEE department?
- How will your organization lead new student and prospective student outreach and support the CEE community?

Cal Transportation Team is further committed to reaching out to new students through multiple avenues, namely social media. We believe our efforts will bolster the department's existing endeavors to encourage more students to apply and declare Civil Engineering as their respective majors. Cal Transportation Team's workshops and events are also expected to serve as publicity for the department, bolstering CEE's image as a well rounded department, suited to cater to the growing needs and interests of CEE students. We also believe that Cal Transportation Team's public workshops will greatly benefit the greater CEE community in acquiring crucial design skills and familiarity with industry wide software that would enhance their marketability. Finally, we hope to secure extra funding for the department by generating interest in transportation companies to hold info sessions and referring them to ASCE. We would also love to be part of new student mentoring events and help students plan their curriculum here at Berkeley.

## **7. Performance Evaluation**

- Evaluate your organization's performance on goals and commitments in the 2021-2022 academic year.

Cal Transportation Team was started as an initiative by Cal ITE for aspiring transportation enthusiasts to participate in the 2022 Midpac Transportation Paper competition. Given the team's relative inexperience and short deadline (5 weeks), the team had a good showing, placing 4th among other domestic and international competitors. After its management reshuffle, the team has also fulfilled all obligations towards parent organizations and funding parties, including, but not limited to:

- 1) Attending all JFC meetings.
- 2) Sending representatives to vote on the ASCE 2021-2022 board
- 3) Attending info sessions
- 4) Providing adequate technical training for all interested members
- 5) Supported other teams at Mid-Pac

Overall, most goals were met, and commitments were honored, with members being able to present a completed solution under an accelerated time frame. We were also able to learn from other teams and prepare a solid foundation and understanding of the requirements for the 2022 Mid-Pacific Conference. Certain competition deliverables however were not completed or performed satisfactorily due to lack of time and training, in particular:

- 1) Sight Triangles due to lack of understanding on code requirements
- 2) LOS analytical predictions due to lack of time
- 3) Code compliant site plan due to inexperience

Many of the issues with time were due to issues in starting the team, leading to reorganization 5 weeks before competition deadline. The issue has since been resolved.

- Explain lessons learned from either fulfillment and non-fulfillment of your goals and explain how the organization plans to use those lessons to improve for the 2021-2022 academic year.

We are now a fully integrated member ASCE and financially separate from Cal ITE. We shall avoid the shortfalls of last year by honoring all stipulated conditions and aiding in the department's vision for the CEE community. Using our experience from last year, we are also confident in tweaking our approach to better address what is required in the competition in order to win it.

## 8. Contingency Plan

- In the event that your organization is unable to fulfill its role in the CEE community entirely or if your organization is unable to fulfill your goals, how will your organization proceed?

Cal Transportation Team is committed to following through on its commitments and roles. We believe that with adequate risk management, extreme events are mitigatable. However in the event whereby we are unable to fulfil our role or goals in the CEE community entirely we are committed to managing the resulting effects in a structured manner, namely:

- 1) Identifying root cause of failure
- 2) Identifying extent of treatability of the problem
- 3) Tabulating remedial options
- 4) Negotiating and communicating with all relevant stakeholders
- 5) Acting on all possible avenues of mitigation and alleviation
- 6) Seeking support and guidance of all parent organizations on how best to proceed
- 7) Work with relevant stakeholders to prevent repeat of such issues, accepting possible sanctions along the way

- Describe your organization's rubric for self-assessment and determine standards for which your organization would consider itself in need of rehabilitation, suspension or dismissal.

Our metrics for self assessment involve:

- 1) Our ability to meet or exceed stipulated agreements.
- 2) Financial standing and ability to maintain liquidity
- 3) Competition placement
- 4) Feedback from students and whether our events and workshops were deemed to be beneficial for their personal and professional goals.
- 5) Opinion of advisors and sponsors

Standards for dismissal include, but are not limited to:

- 1) Breaking of contracts or inability to deliver on core promises
- 2) Missed payments and/or financial fraud/scandal
- 3) Placing outside an acceptable deviance from target goal
- 4) Bad feedback and/or complaints

Should the organization be found to be lacking in any of these areas, rehabilitative steps should be taken, with suspension or dismissal being a possible consideration in addressing the problem.

- Describe the general steps you would take as an organization to either rehabilitate, suspend, or dismiss the organization.

- 1) Notification of all stakeholders
- 2) Consideration of rehabilitation depending on severity of issue
- 3) Identification of root cause
- 4) Setting up an investigative committee with third party members and authorities vetting the process.
- 5) Development of action plan and alternatives
- 6) Evaluation of all proposed alternatives

7) Execution of agreed plan

If suspension or dismissal is deemed a necessary action, department administrators will be contacted in order to mediate and oversee the process. Sponsors and team members will be notified, and all stakeholders will meet to discuss dissolution/suspension procedures.