Alameda County Safe Routes to Schools Mobile Mapping Tool

The SR2S mobile mapping tool pilot project provides the opportunity to take a new approach in Safe Routes to Schools programming. The mobile tool will allow users to track their walking and biking routes to school, mark deficiencies encountered on the route, and provide georeferenced pictures of those deficiencies. This provides an immense opportunity to collect route and deficiency data throughout Alameda County while engaging families in a new, mobile tool.

SR2S Mobile Mapping Program Objectives

- The goal is to reduce drive-alone trips to school in Alameda County through SR2S engagement
- Provide a user-friendly and engaging way to facilitate crowdsourced walking and biking routes and deficiency data via a mobile-friendly website
- Integrate the mobile mapping tool with the SR2S program's social media presence and expand the program's online presence
- Evaluate the mobile tool and its process of integration with the SR2S program in order to develop a scalable methodology, make adjustments based on lessons learned, and potentially expand to include walking school bus and bike train data

Task 1: Project Initiation and Wireframe Development
The consultant team will develop a wireframe for the mobile mapping tool and circulate it for review before development of the database and webpage begin. This will include a disclaimer regarding data collection in anticipation of the tool being used by both students and parents.

Deliverables: Webpage wireframe and disclaimer

Task 2: Database and Mobile Mapping Tool Development
The goal of this task is to create a database and mobile mapping tool, including a beta testing phase, live launch to coincide with Bike to School Day, and ongoing monitoring and maintenance. The mobile mapping tool will not collect any identifying information from users, and all starting points will be an intersection rather than an address.

2.1 Database and Mobile Mapping Tool Development
The consultant team will develop an interactive mobile mapping tool that crowdsources user walking and biking routes to school and provides the opportunity to mark and photograph deficiencies experienced on the route. The mobile tool will interact with the SR2S program's social media presence for promotion and additional data collection. Firebase will be used as the database to store geoJSON data and Mapbox will be used as the interactive mapping platform to collect users' routes.

Deliverables: Mobile mapping tool and database development

2.2 Beta Testing
The mobile mapping tool will be promoted at one school for a beta testing phase before the mobile tool is officially launched. Updates will be made based on initial testing.

Deliverables: Beta testing at subset of schools

2.3 Mobile Mapping Tool Launch
The mobile mapping tool will go live, with a focus on four schools to coincide with Bike to School Day in mid-May. The launch phase includes outreach to parents and school engagement to promote use of the mobile mapping tool.

Deliverables: Mobile mapping tool, four focus pilot schools

2.4 Post-launch Data Extraction
After the mobile mapping tool is launched in May, the data will be extracted and analyzed for future use and website updates.

Deliverables: Data from focused pilot schools

2.5 Ongoing Monitoring and Maintenance
The consultant team will continue to monitor and maintain the website and database throughout the pilot program.

Deliverables: Website updates

Task 3: Outreach and Engagement
The consultant team will manage the development of content and design for outreach materials and an online training manual.

We will provide all materials in draft .PDF form, and edit up to one time per Alameda CTC direction. Once each item is finalized and approved, we will manage printing for each target area through DBE vendors, in quantities as estimated in the approach document.

3.1 Outreach Material Content Development
The consultant team will develop content for outreach materials in order to promote the mobile mapping tool to parents and encourage its use. Outreach materials will include integration with social media.

Deliverables: Outreach material content

3.2 Outreach Material Design
We anticipate up to one round of edits to the outreach materials. Once they are finalized and approved, we will manage printing through DBE vendors, in quantities as estimated in the approach document.

Deliverables: Outreach materials

3.3 Online Training Manual
The consultant team will develop an online training manual that takes a step-by-step approach to train users on how to use the route tracking and deficiency reporting tools. The manual will be posted on the website in web and print-friendly versions.

Deliverables: Online training manual

Task 4. Evaluation
The goal of this task is to evaluate the pilot launch for scalability, impact on increasing engagement with the SR2S program, and potential expansion to include walking school buses and bike trains. The consultant team will develop an evaluation document that analyzes the pilot launch and user feedback, and provides next steps for expansion.

Deliverables: Evaluation document