

SCOPE OF WORK

Revised 11-10-16

Fehr & Peers shall perform the following scope of Design Professional Services exercising the same degree of care, skill, and diligence as is ordinarily possessed and exercised by professionals providing similar services, currently practicing, under similar circumstances. In performing this work, we are not assessing any design characteristics for any purpose beyond those described in Task 3, which are to (1) evaluate compliance with the California Vehicle Code Section 22504 (data collection items #2 - #6), or (2) are proposed to provide useful information to the Agency only for purposes of ongoing bus stop maintenance and modification.

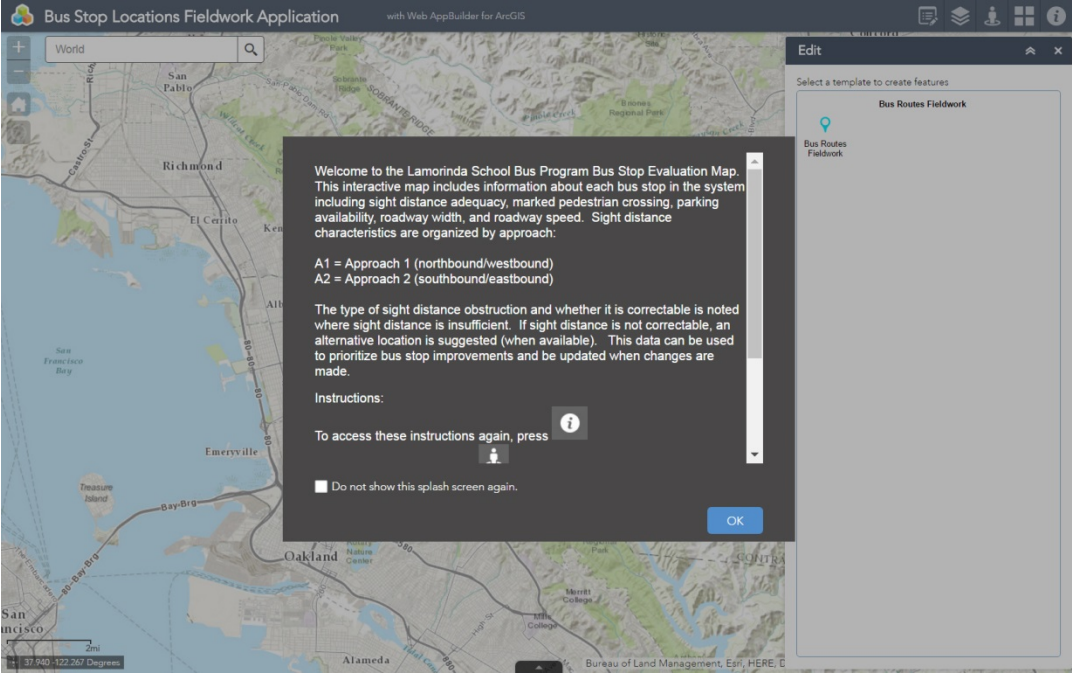
Task 1 – GIS Map Preparation

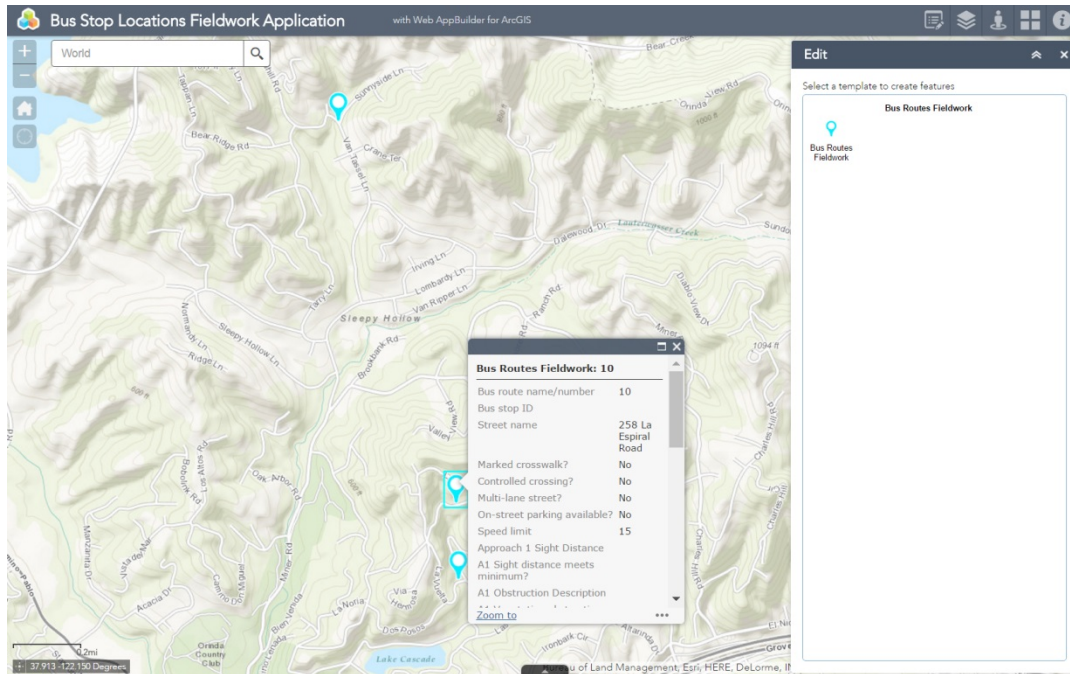
Fehr & Peers will prepare a map of all the school bus routes and stop locations in GIS format. We will code in the specific stop locations on all the Orinda routes (estimated by the Agency at 219 stops) using Agency-provided 'Zonar' data, which provides the GPS coordinates of each bus at the "doors open" stage (to be identified by Agency staff). Fehr & Peers will review the resulting bus stop map and request clarification, if needed, from Agency staff on specific stop locations.

Task 2 – Project Kick-Off

Fehr & Peers will attend a kick-off meeting with LSBTA staff, the CHP, and representatives of the police departments of Lafayette, Moraga, and Orinda, to discuss the overall approach to the project and finalize the key design elements and criteria, and sight distance measurement methods that will be applied to each bus stop evaluation.

Demo application: <http://gis.fehrandpeers.com/BusStopLocationsApp/>





Task 3 – Bus Stop Evaluation

Fehr & Peers will conduct the evaluation of the bus stops identified in Task 1 in two-person teams. The teams will be trained by senior Fehr & Peers engineering staff, and each team will include a Fehr & Peers employee accompanied by interns to be hired from the UC Berkeley civil engineering and/or urban planning programs. We will use the evaluation sheet shown in Figure 1, and will enter the data in GIS format upon the completion of the surveys. The evaluation will include the following:

1. A photo of the stop with a traffic cone identifying the location of the front of the bus
2. Posted speed limit for evaluation of compliance with California Vehicle Code Section 22504
3. Width of roadway and number of vehicle lanes for evaluation of compliance with California Vehicle Code Section 22504
4. Measurement of sight distance along the roadway in each direction from the stop for compliance with California Vehicle Code Section 22504
5. Identification of obstructions such as vegetation or fences which limit sight distance to less than the California Vehicle Code Section 22504 requirement
6. Existing roadway crossing treatments adjacent to the stop for evaluation of compliance with California Vehicle Code Section 22504
7. Presence of sidewalks for passenger loading
8. Availability of waiting space for students off of the roadway if sidewalks are not present
9. The availability of on-street parking near the stop

This scope does not include evaluation/assessment of characteristics not listed above.

Where possible we will identify potential solutions for stops with limited sight distance; follow-up visits will be scheduled where necessary (for budgeting purposes, we have allocated one person-day for follow-up visits.) Solutions may include obstacle removal or relocation, vegetation trimming, changes

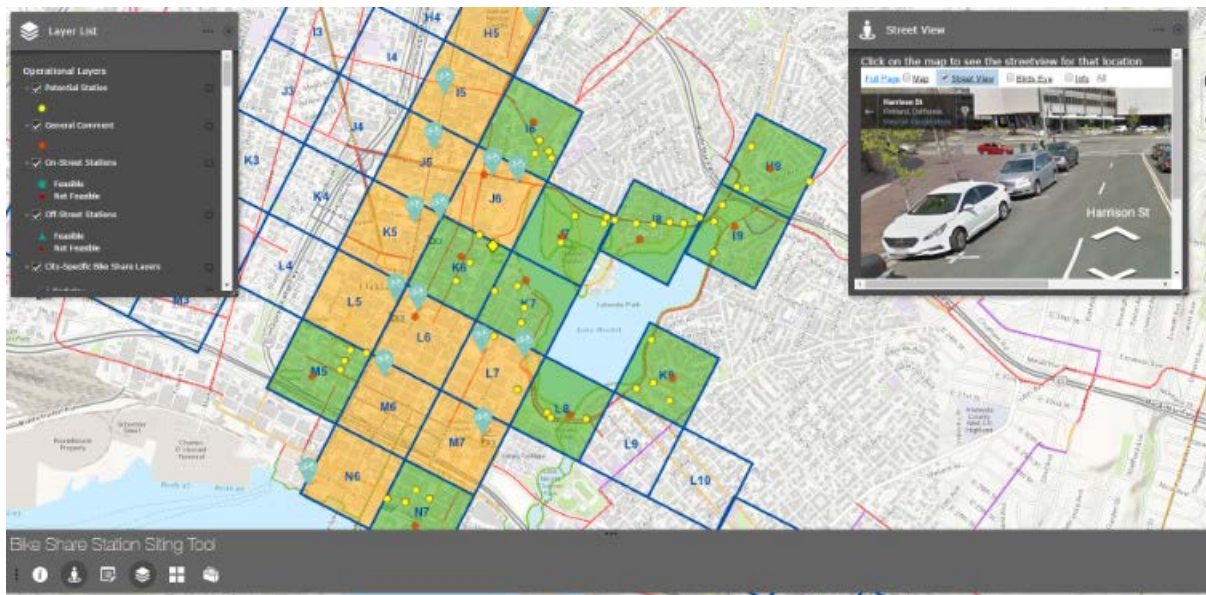
to on-street parking regulation or enforcement, stop relocation, stop consolidation, or stop closure. Bus stop relocation will require CHP approval.

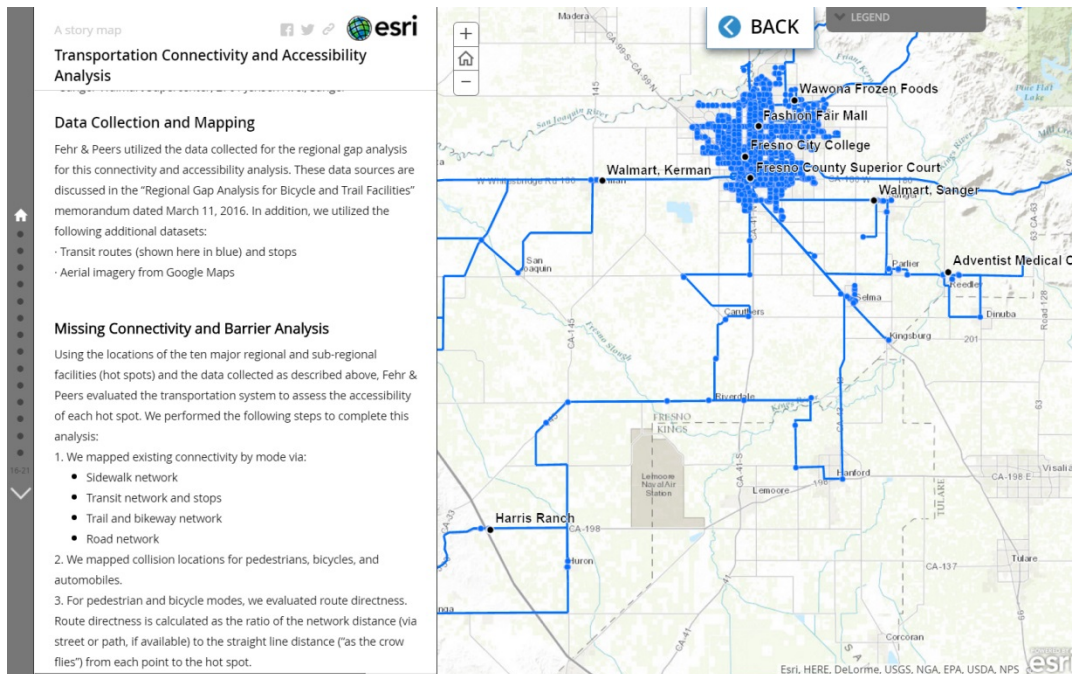
The results of the evaluation will be documented in a technical memorandum which describes the evaluation methodology, data (evaluation sheets and photos), and recommendations for deficient stops. The recommendations will be described graphically in a format similar to the existing stop data, with additional information using an aerial map as the base, where needed. We will deliver the report to the Agency for review and will respond to one round of consolidated comments from all reviewers to produce the draft-final report.

Task 3A (Optional) – Web Map Deliverable

Fehr & Peers can also present the evaluation data and recommendations in a web map, utilizing the data gathered above. The deliverable will be a simple to navigate map for Agency staff to use in reviewing stop conditions, considering stop relocation/consolidation, or other purposes. We have successfully deployed these web maps to dozens of projects, in different locales, as illustrated in the graphics below. In very dense regions such as Los Angeles, California, web maps have allowed our clients to sort through extremely complex data, from the city-wide level down to individual streets. For our clients, our web maps and story maps have been well received as engines of communication and to simplify complex data into understandable information.

The review and response cycle for the web map deliverable would be the same as described in Task 3.





Task 4 – Meetings

As outlined in the RFP, the following meetings are proposed:

Meeting 1: Kick-off

Meeting 2: Subcommittee meeting to review Administrative Draft Report

Meeting 3: Subcommittee meeting to review Draft Report

Meeting 4: LSBTA Board Meeting public hearing/workshop to present Draft Report

Meeting 5: LSBTA Board Meeting public hearing/workshop to present Final Report