

XCAP Proposed Traffic Questions & Proposed Work

Questions (as of January 22, 2020)

1. Can we add a private lane for that small strip of Kingsley between Alma and Embarcadero? If we can add 4 lanes there as on/off ramp for Alma there, there seems to be room to add an additional lane to the benefit of the residents there. (Dave)
2. Is there space for two-way cycle tracks on both sides of Embarcadero east of the underpass? (Megan)
3. How and when will we know if the light at Kingsley results in queues that impact driveways on Embarcadero in a manner that results in the need to take those properties? (Megan)
4. Could a right-hand-turn lane be added on Embarcadero heading west at the El Camino light if we want to maintain bike/ped improvements? (Megan)
5. Can you confirm that the ramp southbound from Oregon Expressway to Alma misses the proposed light on Alma or is gated by the light? Concern is queuing backing up Oregon. (Megan)
6. The traffic simulations only modeled peak hours using Caltrain numbers. However, Caltrain intends to expand all day service. If trains now increase to peak hour-levels all day long, can we predict whether we may have multiple peak hour times throughout the day in the future? (Nadia)
7. Why did Hexagon disagree with the previous consultant that there would be impacts to Middlefield / Embarcadero? (Nadia)
8. What would a viaduct do to traffic in the Churchill area and how could any potential inducement be mitigated? Similar question for Mike Price's idea at Churchill – how would it impact traffic and how could any inducement be mitigated? Could some mitigations proposed from the closure be coupled with Mike Price idea to help with potential inducement? (Nadia)
9. Can trucks/buses turn on Kingsley? Turn seems very tight? (Nadia) Can we make Kingsley a "no truck" road? (Inyoung)
10. What is the LOS (seconds of delay in the AM and PM) of the new Kingsley / Embarcadero light in 2030? (Megan)
11. Do we have a way to measure pedestrian connectivity? Do any metrics exist? (Megan)
12. When you explain percent increases for intersections, it would be helpful to understand them relative to the current totals so we know how many more cars above today? (Nadia)

Questions About Work Feasibility

1. Can induced demand be modeled? (Keith)
2. Does data exist to simulate further out than 2030? Until 2050 as in Caltrain's business plan? (Megan)

3. Traffic mitigation on residential streets during the construction phase related to lane closures on Alma. If Palo Alto residents and other drivers from surrounding communities become frustrated with slow traffic, they will most likely use other streets, such as West Bayshore and Middlefield Road for their commute. Also, residential streets that run perpendicular to Alma and parallel to Oregon Expressway and Embarcadero, such as Channing Avenue will also see increased traffic. Therefore, is it feasible for the traffic study to include how some of these residential streets will be affected during the construction phase? (Pat)
4. Is it possible to show network delay estimates and what is the best way to represent how they would impact the system. (For example, even after closure and mitigations, El Camino/Page Mill and El Camino/Embarcadero will continue to fail – how will that make the system worse?) (Nadia)

Work Requests

How much would each cost?

1. Impact of eight (8) trains per direction per peak hour in 2027¹
2. Traffic impacts of the new alternatives (Price and Alexis plans)^{2,3,4}
 - a. Price plan without Embarcadero mitigations
 - b. Price plan with Embarcadero mitigations
 - c. How expensive is it to do both (a) & (b)?
3. LOS (average delays) for completed grade separation intersections^{5,6,7} including multimodal LOS (including bike and pedestrian delays) if possible⁸:
 - a. Churchill / Alma with viaduct
 - b. Churchill / Alma with closure
 - c. Meadow / Alma with trench, tunnel, hybrid, or viaduct
 - d. Charleston / Alma with trench, tunnel, hybrid, or viaduct

¹ Can we re-run the Churchill closure model but with 8 trains per direction by 2027 rather than 6 per Caltrains most recent plan? (The group at the last meeting)

² Can we study traffic with Elizabeth's designs? (Dave)

³ Now that we are starting to study on Mike Price's idea, can we study traffic effects? (Dave)

⁴ I am most concerned about traffic on Churchill between El Camino and Alma if access to Alma is open. It is my guess that given the existing congestion there, that little stretch of road will completely fill up with cars and that traffic lights will not be able to empty that road fast enough. The residents on that street already have experienced negative impacts due to what congestion exists today. (Dave)

⁵ What's the LOS and delays at the Churchill light with the Viaduct, closure, or Price plan complete? (Megan)

⁶ It would seem worthwhile to get more details on traffic patterns in South PA at Meadow and Charleston. Haven't heard much about traffic down there in a long time. (Dave)

⁷ Do we have LOS/delay data for Meadow / Charleston such that we can estimate 2030 No Build vs Alternative delay differences? Or does it not matter because it's the same for every alternative -- except perhaps Elizabeth's? (Megan)

⁸ We need multi-modal LOS numbers – not just cars. Same for system wide impacts from the proposed mitigations. (Nadia)

- e. Meadow / Alma with Alexis plan
 - f. Charleston / Alma with Alexis plan
 - g. Churchill / Alma with Price plan
4. Expected queue lengths and number of cars that can queue at the Kingsley light as part of the mitigated Churchill closure^{9,10,11}
 5. Traffic impacts of Churchill closure on residential streets after mitigation^{12,13}:
 - a. If Park Blvd were reopened at Peers Park
 - b. Local streets of Professorville
 6. Additional traffic counts
 - a. Bike and pedestrian routes and traffic counts at Churchill and Embarcadero^{14,15}
 - b. The intersection of Embarcadero / El Camino¹⁶
 7. Animations of unclearable queues at Churchill (cost?)¹⁷
 8. Collision history data for Churchill and Embarcadero areas¹⁸
 9. Please include in the footnotes what calibrations were done in VISSIM (Nadia)
 10. Please provide network delay diagrams for all impacted areas. (Nadia)

Answered Questions and Those Not for the Traffic Consultant

1. Are trucks currently allowed on Churchill? What restrictions, if any, are there on roads in the area impacted by any mitigations proposed for Churchill closure? (Nadia)
 - a. Inyoung says that they are allowed on Churchill with no restrictions
2. During public comments, folks made reference to cars dropping off kids on the Embarcadero slip road and walking to PALY. Do we know of any other areas used as unofficial drop off/ pick up sites that need to be addressed? Can PAUSD provide us information on that? (Nadia)
3. How can the Alma Road bridge on Embarcadero be widened? Do we have more information about whether there will be a replacement or seismic retrofit needed that might impact the proposed widening? (Nadia)

⁹ Can we find out more about queuing on Kingsley and if it would back up onto Alma? (Keith)

¹⁰ How many cars can queue along Kingsley? When showing turn lanes that allow for queuing, please indicate number of cars that fit in the turn pockets, etc. (Nadia)

¹¹ Can we get some more information about what queues might look like at the Kingsley/Alma light? And at T&C and El Camino if that light exists? Is there enough queueing space in the single lane in the underpass heading east? (Megan)

¹² Can we model traffic effects if Park Blvd were to be reopened at Peers Park? (Dave)

¹³ Can we model traffic effects in local streets of Professorville after mitigations at Embarcadero? (Dave)

¹⁴ Can we include a map (similar to traffic counts map) showing bike ped data for Churchill and similar data for the area around the Embarcadero road area targeted for bike improvements and traffic mitigations? (Nadia)

¹⁵ We need better diagrams showing ped/bike routes and the proposed mitigations – we need equal treatment of both bike and ped routes in terms of diagrams. (Nadia)

¹⁶ Please provide traffic data for the intersection of Embarcadero/El Camino (how many go North, South, East, West at that intersection, turning movements, etc.). (Nadia)

¹⁷ Gary Black mentioned being able to do animations to show delays. Animations showing the unclearable queues for Churchill would be particularly useful. (Nadia)

¹⁸ You mentioned crashes not included in the data - please provide a map showing collision points (all modes) within the areas around Churchill and those that are near the mitigations areas being proposed to ensure we understand where we have current “hot spots” for accidents. (Nadia)