

**XCAP Questions – Final – Not Annotated**  
**Revisions as of Jan. 22 and 29, 2020**

**Overview:** The following list of questions is the adopted list of questions from the XCAP as of their January 22, 2020 meeting when they narrowed down the number of questions for staff to address. This copy is the annotated copy that shows which questions have been added or deleted. **The list of questions to review are below and organized by topic.**

**PROCESS:**

1. What is the latest thinking on how to integrate downtown area plans with ongoing rail plans? What happened to plans for Palo Alto Ave? We can't do all this work and ignore it and be left with no money at the end.
2. What is the official status of the Embarcadero Road overpass (historic? what type of historic protection?) (NEW Rewording: The Consultants have explained that Embarcadero grade separation is eligible for historic designation. What does that mean for changes made to it as proposed by the mitigations for the closure of Churchill? What does that mean if it was to be removed (Tony's idea) or if it needed to be rebuilt (for seismic reasons or any other reason)? Please describe the process, how long it takes, who decides, and what's possible under various scenarios (example: you can't touch it, unless it is a structural concern, and then you have broad latitude, etc.).) (Nadia)
3. Are there any legal requirements for Embarcadero grade separation to continue to include a Stanford stop (if changed in the future for any reason)? Who is responsible for Stanford Station? Does the City have an arrangement with Stanford that must be considered?
4. What is our contingency plan if we need passing lane(s) in Palo Alto? How do we get some more definitive information about four-tracking requirements from Caltrain?
5. Is there any public or private funding available given that we continue to have grade crossings with some of the highest accident rates in the country?
6. Is there reason to believe the City could or couldn't use the Caltrain right of way under a viaduct? Who will maintain the right of way under viaducts or over tunnels? Who will be accountable to control weeds and graffiti? Is there any possibility of the city reclaiming land from Caltrain under viaducts or over tunnels? Will any existing tracks be put in a state of train disuse such that they can be turned into bike paths? If not, what is the intended use of this space after the new tracks are built?

**Questions About Assumptions/Grade Separation Designs:**

**VIADUCT:**

1. Viaduct: Alignment on the current tracks versus the alignment where the trees are (regarding Churchill)?
2. Viaduct stats: how high; how close to homes and how many homes affected; noise comparison - viaduct (with noise abatement) vs today's structure for electric trains.
3. Can we get estimates of increase or decrease in train noise, operating on the viaduct instead of the current right of way?
4. Can we get detailed drawings at Churchill of the finished viaduct?
5. What viaduct types might we use? Which are best and why?

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6. In the viaduct option, can we add more bike/ped crossings at Seale?
7. Are Palo Alto Zoning codes applicable to any of the alternatives?
8. The diagrams show that the viaduct structure (including train and wires up to 30' and pillars up to 20') will be up to 50 ft overall. Will it exceed 50 ft at any point?
9. NEW: For the viaduct, I would like to see some 3D perspective renderings from ground level as if from a person's view at the viaduct: 1) from an adjacent backyard. 2) from across Alma on the other side. 3) further back into Old PA or Southgate to see how it affects the skyline from further away. (only related to Churchill Viaduct)

### **HYBRID:**

10. Hybrid: Were the hybrid assumptions for Meadow/Charleston developed using the road width assumptions of today's roadway (including stacking, turning lanes) or the future needs of the roadway? If future, what assumptions were made? If present day, what, if any, design changes might be made to ensure significant demand induction doesn't occur and how might that change the area impacted under the hybrid alternatives?

### **TRENCH:**

11. NEW: Is it feasible to engineer the trench without the tiebacks? If so, what's the impact on expense?

### **SOUTH PA TUNNEL:**

12. South Palo Alto tunnel: Given Caltrain is still developing standards for tunnels that have only electric trains (which will be used for going into TransBay), what assumptions were used? How were they derived?

### **GENERAL:**

13. What are the ongoing maintenance costs, including pumping, etc. associated with each option and who is responsible for the individual costs? ADDED FROM WATER-GROUNDWATER SECTION: For the trench and tunnel options, what are the expected operating costs of the water pumping system? Is this a cost that the city would need to pay?
14. NEW: What are the total time delays during construction. "Inconvenience Costs" (Tony)

### **PUBLIC SAFETY /POLICE / FIRE / MEANS RESTRICTION:**

1. NEW: Who will pay for safety initiatives? ~~such as: uniform standardized fencing on the westside of Alma, including 8 foot tall non-climbing fences and 18 inch winglets; lighting; barriers to restrict public access; warning woud system to help announce dangers of being on the tracks; signage for HELP telephone number and or text line for those at risk of intentional harm; intruder detection system or multiple cameras installed on Caltrain Right-of-Way; external company to monitor incidents related to injuries and fatalities, data collection, analysis, and reports)? (Pat)~~
2. MOVED FROM THE PROCESS SECTION: NEW: Will there be a public education campaign to inform citizens about the increased frequency and higher speeds of trains as we move forward with electrification?

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3. NEW: What are the standard safety measures being assumed [or will be needed] to be included? Particularly those in excess of the standard code.

#### **PAUSD:**

1. We should receive an update from PAUSD regarding the status of potentially relocating the school bus yard from 25 Churchill to a different location. And to know the impacts of the different alternatives on PAUSD.

#### **NOISE:**

1. Can we get estimates of increase or decrease in train noise, for each alternative? Especially factoring in diesel versus electric trains.
2. NEW: What types of noise mitigations are available in general?

#### **CALTRAIN:**

1. NEW: In the Caltrain Business Plan service vision approved by the Caltrain board, re there any options that anticipate and are consistent with maintaining a Stanford game day station? Have there been any stated intentions by Caltrain or Stanford to upgrade the station to new required standards? (Adina)
2. MOVED FROM GENERAL SECTION: How much money do we save for a 2% versus a 1% trench?

#### **MISCELLANEOUS:**

1. NEW: During construction: what would it look like if we closed Alma to one lane and other major streets for construction? How far do the delays go down any given street? (Keith)

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**New Traffic Questions: These traffic questions supersede the traffic questions previously listed in this document. These questions are the agreed upon ones from the Jan. 29, 2020 Meeting (INSERT LINK: \_\_\_). These were discussed and answered with traffic subconsultant at Feb. 12, 2020 meeting**

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)

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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 2027

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2. Traffic impacts of the new alternatives (Price and Alexis plans)
  - a. Price plan without Embarcadero mitigations
  - ~~b. Price plan with Embarcadero mitigations~~
  - c. How expensive is it to do both (a) & (b)?
3. Level of service (LOS) ~~(average delays)~~ for completed grade separation intersections including multimodal LOS (including bike and pedestrian delays) if possible [RESTATED AS: the difference between doing nothing and the alternatives in terms of LOS]?:
  - 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
  - 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
5. Traffic impacts of Churchill closure on residential streets after mitigation:
  - ~~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
  - b. The intersection of Embarcadero / El Camino
7. Animations of unclearable queues at Churchill (cost?)
8. Collision history data for Churchill and Embarcadero areas
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)