

## XCAP Questions

Revisions as of Jan. 16, 2020

The list of questions to review are below and organized by topic.

Guide to this document:

- Questions deleted and agreed upon by the group on Jan. 8, 2020 are crossed out in red.
- Questions proposed for deletion as of Jan. 15, 2020 are crossed out in blue.
- Any new questions added as of Jan. 15, 2020 are added in green.

### PROCESS:

- ~~1. How do design decisions get finalized going forward to construction? (Caltrain design review, who else involved, etc. after preferred alternative chosen)?~~
2. 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.
- ~~3. What would it cost to fill back in current underpasses at University Ave, Embarcadero, and Oregon Expwy? This is assuming an option(s) could be found that would warrant this.~~
4. 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)
5. What other adjacent key infrastructure (example: water pump on Embarcadero grade separation) might be impacted if in the future (regardless of grade separation plans today) the overpass needed to be replaced?
6. 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?
7. What are the rules/guidelines behind updating infrastructure as old as the Embarcadero grade separation? Give examples (besides earthquakes) that would require re-building or repairing the existing grade separation.
- ~~8. Why are we not considering the full demolition of Embarcadero and the construction of an on-grade traffic circle (with Caltrain on a viaduct)?~~
- ~~9. Could we change our process slightly to accommodate more brainstorming and sketching versus presentation of polished ideas?~~
10. 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?
11. Are there state and local agencies that we can work with better so that we are all planning a regional solution rather than a town-by-town solution?
12. Is there state, federal, or railroad funding available given that we continue to have grade crossings with some of the highest accident rates in the country?

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13. 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? ~~Some residents have expressed dismay with Caltrain's current maintenance of the area near the tracks.~~ 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?
- ~~14. Congestion impacts, mitigation relation to closure—When will the decisions be made?~~
- ~~15. What are the economic costs of no build? What are the benefits of no build?~~
- ~~16. At the last City Council meeting, there was some Council discussion about tradeoffs, that might reduce project cost but require property takings. IF, the Council is putting eminent domain back on the table, should the XCAP examine the earlier Council decision to rule out a Churchill Avenue crossing. Such an analysis should consider the cost, number of properties impacts, etc., of the underpass proposal vs. the cost and other impacts of simply closing that crossing.——~~
17. Can City staff provide the XCAP with an updated list of Council criteria? How will the activities, schedule, etc., of the XCAP change in response to the Sept. 9 Council resolution creating the RBRC? At the Sept. 9 Council meeting, Council member Dubois was critical of the "waterfall" nature of this decision process. How can the process be made more "Agile?" Does Staff have a list of all the concerns and criteria raised by Council and speakers at the Sept. 9 RBRC agenda time discussion?
- ~~18. Will there be inspections after each earthquake to ensure the viaduct remains viable and reduce risk of derailments? Who will conduct such inspections?~~
- ~~19. Do the viaduct plans take the daylight plane into consideration? If a neighboring property's daylight plane is blocked by the raised structure such as the viaduct, does that constitute a "taking" for the affected neighbor?~~
- ~~20. Is there anything in our Code that regulates how long of a stretch between RR crossover points? (For example, there must be a RR crossing opportunity at least every X miles.)~~
- ~~21. Are there other alternatives that have been ruled out so far due to concerns about eminent domain, but which would be possible absent that concern? If so, please provide a summary description of such alternatives.~~
22. Do any of the alternatives require the taking of private properties? If so, which and how many properties?
23. 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?

### Technical (General)

- ~~1. Was Caltrain consulted on any future changes that may be anticipated but have not yet been made official—such as, for example, without freight, what would be Caltrain's maximum allowable grade?~~
- ~~2. What is the likelihood of any surprises through the design review process (re Caltrain, etc.)?~~
- ~~3. Can we get detailed drawings of the post-construction appearance of each alternative?~~

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- ~~4. Will Caltrain be ready to speak about Union Pacific Railroad exceptions related to freight?~~

### Questions About Assumptions/Grade Separation Designs:

#### VIADUCT:

- ~~1. Thin cross-section versus thick cross-section: how can the viaduct be designed in a way to minimize the height of the structure?~~ Viaduct: Alignment on the current tracks versus the alignment where the trees are?
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 of the finished viaduct, as seen from various points north and south of Churchill?
5. Do we have a set of graphics and estimates related to "Viaduct in the Vicinity?" This is a new option for me.
- ~~6. What effect does Caltrain's plan to run trains at 15-minute headways have on all that?~~
7. What viaduct types might we use? Which are best and why?
8. In the viaduct option, can we add more crossings than just Churchill? If so, which ones?
- ~~9. Are we really totally sure that we can build a viaduct close to the property lines without taking any property or requiring easements?~~
- ~~10. What is the maximum height for viaduct + train + electrical pole?~~
- ~~11. Will there will be eminent domain impact on Viaduct option?~~
12. Is viaduct height acceptable for minimum and maximum building height standards promote relationship of scale among structures in residential, neighborhoods, helping to create harmonious environments which enhance a sense of place?
- ~~13. Is viaduct structure compliant with Palo Alto building code such as primary daylight plane?~~
- ~~14. Is there another place in the US where a train viaduct has been built to cross a single street on otherwise flat terrain, in a residential neighborhood, that includes freight trains?~~
- ~~15. Do the viaduct plans take the daylight plane into consideration? If a neighboring property's daylight plane is blocked by the raised structure such as the viaduct, does that constitute a "taking" for the affected neighbor?~~
16. 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?
- ~~17. Are there any other 50' structures nearby the proposed viaduct sites?~~
- ~~18. If cars don't have to go under the viaduct, can it be lower? For example, in a Churchill automobile closure, could pillars be 10 ft instead of 20 ft?~~
- ~~19. Or in a Meadow automobile closure, with a viaduct ramping to full height for cars to pass under at Charleston, could Meadow still be open to bike/ped? Would this reduce the length of the viaduct at either Churchill or Meadow/Charleston?~~

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~~20. Have we considered if we put the viaduct over Alma Street instead of between Alma and the existing RR tracks? Would such an overlap allow easier creation of the four-across bypass lanes? Would it reduce the visual or noise impacts on properties along Alma and Park?~~

~~21. Where should the viaduct be located (Alma versus tree side)?~~

22. NEW: For the viaduct, I would like to see some 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.

### **HYBRID:**

23. 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?

~~24. If needed: Hybrid: Horizontal alignment for the track, will it substantively matter (if you move the track over related to trees, etc.)?~~

~~25. Hybrid: What is the height difference (once centenaries are included) between the hybrid and the viaduct?~~

26. NEW: What are the visual impact difference between a hybrid and a viaduct? (Dave)

### **TRENCH:**

27. Trench: How could a trench be widened to accommodate 4 tracks (re Caltrain Business Plan)? And what is the impact to Alma during and after construction?

~~28. Is a city wide trench down the middle of Alma (per Councilmember DuBois suggestion way back) possible? If so, what would that look like? What would be the cost?~~

~~29. Are there options to avoid the trench tie backs?~~

### **SOUTH PA TUNNEL:**

30. 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?

~~31. Would the South tunnel result in a permanent narrowing of Alma?~~

~~32. Does the South tunnel clear the creeks?~~

### **GENERAL:**

~~33. Can Meadow be closed?~~

34. Agree that we need rough cost estimates for each approach.

~~35. Which alternatives have the longest construction time? ... the shortest?~~

36. Can we get detailed drawings of the post-construction appearance of each alternative?

37. Can we get estimates of increase or decrease in train noise, for each alternative?

38. What's the cost range to blowing out existing grade separations (especially Embarcadero)?

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- ~~39. What's the cost range for reconstructing a station?~~
- 40. What are the ongoing maintenance costs associated with each option?
- 41. What happens if we plan a single-lane car underpass for Churchill, either restricted to one way traffic, or with a mechanism to change direction during different parts of the day (like we see on some bridges, for instance). Could this provide some road connectivity without property takings?
- ~~42. Can we overlay any possible future four track passing sections against the current maps of alternatives?~~
- ~~43. What about "92 Churchill", the house structure is built very close to the property line/train line?~~
- 44. How much money do we save for a 2% versus a 1% trench?
- ~~45. Can you swing the Caltrain Right of Way in general into Alma vs. tree side?~~
- 46. NEW: What are the total time delays during construction. "Inconvenience Costs" (Tony)
- 47. NEW: How would Private residences/Property remain Private and Secure. Cross sections (at 1"=20' for areas where the Options get close to Private property specially residences. (Tony)

### Traffic:

- ~~1. Hybrid: How were the surrounding road networks (El Camino, 101 and other arterials) considered when determining future traffic patterns and possible inducement post grade separations?~~
- ~~2. Trench: same question as above—what traffic assumptions were used and did design options consider that extensive stacking and turning lanes would further induce demand and that instead, some traffic restrictions should be considered—and how might that impact design/cost?~~
- ~~3. Overall: How would future grade separation projects (like Mt. View's plan to lower Rengstorff which is estimated to mean traffic disruptions on Central Expressway for up to 7 years) impact the construction impacts of Meadow/Charleston grade separations?~~
- ~~4. How would cost and cumulative impacts be estimated given the extensive and uncertain timeline?~~
- 5. What analysis can be done to study the possibility of re-opening Park Blvd to automobiles in the Southgate/Evergreen park neighborhood?
- ~~6. Has Evergreen Park neighborhood been officially engaged in this process?~~
- ~~7. Are there any future traffic predictions that should be considered for the long term design alternatives to be measured against?~~
- ~~8. For example, the traffic study thus far goes out to 2030—given that Stanford General Use Permit process is not complete, how would that impact roadway use the future (since Stanford does NOT have to say WHERE on the academic campus they intend to build)?~~
- ~~9. How would future grade separation projects (like Mt. View's plan to lower Rengstorff which is estimated to mean traffic disruptions on Central Expressway for up to 7 years) impact the Churchill part of the road network?—~~

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- ~~10. Ideas: Remove current turn lane from El Camino S. bound into T&C (by Kara's cupcakes) since stacking from those turns conflict with stacking for turns onto westbound Embarcadero. —(Nadia)~~
- ~~11. Evaluate a potential new traffic signal at Encina and El Camino allowing Southbound El Camino to turn onto Encina Westbound (thus allowing vehicles from southbound El Camino to enter into T&C off of Encina). This would be in addition to the idea of removing the turn into T&C near Kara's cupcakes (see previous suggestion). —(Nadia)~~
12. Consider the benefit of "reclaiming" El Camino highway from State control and putting it back under local control. The benefits would include significantly improved signal coordination (since those lights are currently controlled by Caltrans). This would also allow PA to control "flow" along the city, through better light coordination- and potentially limit pass through traffic along Alma (allowing more cars to go on El Camino). The rationale for this is with LESS cars along Alma, there may be more design alternatives for a roundabout at a place like Embarcadero/Churchill. There is a full report on the benefits to the State regarding the relinquishment of El Camino to local jurisdictions: <https://www.hightail.com/download/bXBZZHlzcckk1UjRPd3NUQw>
13. The webpage discussing this concept is here: <https://grandboulevard.net/204-to-relinquish-or-not-to-relinquish-learn-about-relinquishment-of-el-camino-real-from-vta-s-state-route-82-relinquishment-exploration-study-provides-information-to-aid-informed-decisions>
- ~~14. Trench: How could a trench be widened to accommodate 4 tracks (re Caltrain Business Plan)? And what is the impact to Alma during and after construction?~~
- ~~15. Congestion impacts, mitigation relation to closure — When will the decisions be made?~~
- ~~16. Comprehensive traffic flow analysis for all alternatives, including for all 3 existing entrance/exits from Palo Alto High School (Embarcadero, Churchill, and El Camino north).~~
- ~~17. What are the increased delays on Meadow and Charleston during construction (of each alternative)? For how long?~~
18. What are the increased delays for traffic on Alma Street during construction? For how long?
- ~~19. Any other traffic impacts?~~
- ~~20. How will traffic crossing Churchill be affected by viaduct construction?~~
- ~~21. What other possible ped/bike options are possible at Churchill, if Churchill were closed?~~
- ~~22. What other mitigations are possible at Embarcadero?~~
- ~~23. What mitigations are possible at Oregon Expwy's underpass to improve traffic flow there?~~
24. What are the results of modeling PAUSD's bus routes as well as other transport needs like shuttling meals around from central kitchens to the school sites?
- ~~25. What about bike/ped only crossings under the viaduct?~~
- ~~26. Do the different options for Embarcadero and Churchill in the closure scenario meaningfully impact vehicle/bike/pedestrian traffic flow? —~~
- ~~27. Are mitigations needed at Oregon Expressway?~~
- ~~28. What would the Embarcadero mitigations cost?~~

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29. Can we see a version of the Embarcadero mitigations that includes the approved bike/ped improvements from Kingsley to El Camino?
30. What other options do we have to improve the pedestrian crossing if we take out the existing light near Town and Country?
- ~~31. What's the traffic impact of no build?~~
- ~~32. What happens if we plan a single lane car underpass for Churchill, either restricted to one-way traffic, or with a mechanism to change direction during different parts of the day (like we see on some bridges, for instance). Could this provide some road connectivity without property takings? —~~
- ~~33. What are the obstacles preventing us from creating additional pedestrian or bicycle crossings under viaducts or over tunnels (or even new roads)?~~
- ~~34. During the period that one of the Meadow/Charleston crossings is either closed or restricted due to construction, has there been an evaluation of the traffic impacts on Alma Street? on the nearby El Camino Real and El Camino Way intersections?~~
- ~~35. During the period of construction of a Churchill undercrossing, will there be an evaluation of the traffic impacts on Alma Street? on the nearby El Camino Real and El Camino Way intersections? —~~
36. Have we surveyed/quantified the bike and pedestrian traffic at the Meadow-Alma and Charleston-Alma intersections? How do they compare to Churchill-Alma?
- ~~37. In a Meadow closure, is it necessary to create a tunnel for bike/pedestrian track crossing? Or could we have an arm/gate/bell + signal controlled crossing for bikes and pedestrians only at Meadow?~~
- ~~38. Have we studied the impact of closing both Alma-Meadow and Alma-Charleston to vehicular traffic and diverting it to San Antonio?~~
- ~~39. Large charter buses currently use the Charleston-Arastradero corridor. Will they fit under the viaduct as currently planned (20' pillars)? What other large vehicles are currently allowed to use this route? Will the viaduct change any of these uses?~~
- ~~40. Would it be helpful to consider keeping Alma narrower and slower (e.g., 3 lanes and 25mph) from the Embarcadero overpass to south of Churchill to provide wider ROW at Churchill?~~
- ~~41. In a Churchill closure, is it necessary to create a tunnel for bike/pedestrian track crossing? Or could we have a arm/gate/bell + signal controlled crossing for bikes and pedestrians only at Churchill?~~
- ~~42. At Churchill, the train tracks are already elevated several feet higher than Alma. In a Churchill closure, does this elevation differential make it easier/quicker/cheaper to create a bike/ped underpass at the tracks?~~
- ~~43. Would a bike/ped underpass at Churchill begin on the tracks side of Alma, or would it travel under Alma from the non-tracks side, as at California Ave.? —~~
- ~~44. Have we investigated creating an interchange between Alma and Embarcadero that relies on ramps and merges (without signals), like we have on Alma and Oregon?~~
- ~~45. Can or should we divert the PALY-Embarcadero crossing pedestrian traffic to El Camino-Embarcadero, rather than pushing it closer to Alma? If not, why not?~~
46. Will you do a traffic analysis of what traffic will be like (the easier flow) once the grade separation takes place at Meadow and Charleston?

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~~47. Can we get the pulse networks for all of the drawings?~~

### Public Safety /Police / Fire / Means Restriction:

- ~~1. Do First responders and emergency vehicles have particular routes they take through the city?~~
- ~~2. Are those routes governed by any rules, or are they decided by the first responders based on their knowledge of Palo Alto's "typical" traffic patterns?~~
- ~~3. Have they been consulted throughout this process regarding the closure of Churchill officially?~~
- ~~4. Who is responsible for answering (the Police Chief? Fire Chief? EMS?)~~
- ~~5. Does Santa Clara County have any jurisdiction over countywide emergency vehicle patterns and have they been consulted?~~
- ~~6. Which option is safe for Paly Students and Stanford staff to commute?~~
7. NEW: Who will pay for safety initiatives such as: uniform standardized fencing on the westside of Alma, including 8 feet tall non-climbing fences and 18 inch winglets; lighting; barriers to restrict public access; warning sound 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)
8. NEW: Means restriction is a public health approach for preventing intentional and unintentional injuries and fatalities on the railroad right of way. Will track safety measures be included in the complete final design, e.g., standardized fencing along the houses on the westside, signage, lighting and warning systems? (Pat)

### PAUSD:

1. We should receive and update from PAUSD regarding the status of potentially relocating the school bus yard from 25 Churchill to a different location.
- ~~2. How much of the traffic that needs to be mitigated caused by trips to/from Paly High?~~
- ~~3. What are the results of modeling PAUSD's bus routes as well as other transport needs like shuttling meals around from central kitchens to the school sites? \_\_\_\_\_~~

### WATER – CREEKS:

- ~~1. Trench: How will we deal with the creeks?~~
2. Trench: What is the potential for flooding given climate change? How can we ensure that it doesn't flood parts of town?

### WATER – GROUNDWATER:

- ~~1. Trench: Can you show us the groundwater level in Palo Alto? How does that impact the trench? Is a cyphen (siphon?) feasible? If not, then why? What would the pump station look and sound like?~~
- ~~2. Trench: How much water is the County already pumping for Oregon Expressway?~~
3. 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?

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**NOISE:**

1. Can we get estimates of increase or decrease in train noise, for each alternative?
- ~~2. Can we get estimates of increase or decrease in train noise, operating on the viaduct instead of the current right of way?~~
- ~~3. Is there another place in the US where a train viaduct has been built to cross a single street on otherwise flat terrain, in a residential neighborhood, that includes freight trains? What is noise like in those places?~~
- ~~4. How loud are trains that pull freight up the "hill" and how far will the noise travel?~~
- ~~5. XCAP mtg #1 (6.19.19) handout showed a matrix of evaluation criteria. "Reduce rail noise and vibration" rates light blue for all 3 designs. Please provide design details for each and engineering analysis on DB reduction.~~
- ~~6. 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.~~
- ~~7. Is there a way to better quantify the noise impact of the various alternatives, both to people near the tracks and to people farther away? Perceptions of noise impact affect many residents' perception of the viaduct and trench options. —~~
- ~~8. Have we considered if we put the viaduct over Alma Street instead of between Alma and the existing RR tracks? Would such an overlap allow easier creation of the four-across bypass lanes? Would it reduce the visual or noise impacts on properties along Alma and Park?~~
- ~~9. What is the noise level increase from the raised viaduct near houses Alma and how sound travels thru out Palo Alto?~~

**Property Impacts / Eminent Domain**

- ~~1. Is there another place in the US where a train viaduct has been built to cross a single street on otherwise flat terrain, in a residential neighborhood, that includes freight trains? What were the impacts on property values nearby?~~
- ~~2. Was there a compensation plan for loss of value? — How far will the line of sight be from the train – how many streets away will passengers see homes and people in homes see passengers? —~~
- ~~3. Is there an option to build a visual barrier to avoid the privacy impacts of a train "in people's back/ front yards"~~
- ~~4. What data is there regarding neighborhood crime, safety, and graffiti of adding a viaduct?~~
- ~~5. Will there be inspections after each earthquake to ensure the viaduct remains viable and reduce risk of derailments? Who will conduct such inspections? —————~~
- ~~6. In a Churchill closure or viaduct, what is the project impact of the narrow ROW at Churchill?~~
- ~~7. Do the viaduct plans take the daylight plane into consideration? If a neighboring property's daylight plane is blocked by the raised structure such as the viaduct, does that constitute a "taking" for the affected neighbor?~~

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### New Sections:

#### Caltrain:

1. NEW: In the Caltrain Business Plan service vision approved by the Caltrain board, are 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. NEW: How will Caltrain participate in the overall design, implementation, maintenance, and evaluation of the safety measures? (Pat)

#### Miscellaneous:

1. NEW: What are the Typical Construction Details for various solution components. e.g. Trench; Viaduct etc.? So we can get to normal costs, (Tony)
2. NEW: Why are Public Sector costs so much higher than the Private market? Should we pursue this? (Tony)
3. NEW: During construction: what would it look like if we closed Alma and other major streets for construction? How far do the delays go down any given street? (Keith)

#### New Traffic Questions: (Have not been checked for duplicates)

1. NEW: 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)
2. NEW: 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)
3. NEW: Can we model traffic effects if Park Blvd were to be reopened at Peers Park? (Dave)
4. NEW: Can we model traffic effects in local streets of Professorville after mitigations at Embarcadero? (Dave)
5. NEW: Now that we are starting study on Mike Price's idea, can we study traffic effects (Dave):
  - a. Without Embarcadero mitigations
  - b. With Embarcadero mitigations
  - c. 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.

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6. NEW: 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. NEW: Can we study traffic with Elizabeth's designs? (Dave)
8. NEW: Does data exist to simulate further out than 2030? Until 2050 as in Caltrain's business plan? (Megan)
9. NEW: Is there space for two-way cycle tracks on both sides of Embarcadero east of the underpass? (Megan)
10. NEW: 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)
11. NEW: 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)
12. NEW: Do we know the volume to traffic per day and during peak hour at Palo Alto Ave? Can we simulate more trains (Caltrain business plan volumes) at Palo Alto Ave and Churchill using the TFDM model? (Megan)
13. NEW: Could a right-hand-turn lane be added at El Camino if we want to maintain bike/ped improvements? (Megan)
14. NEW: Does the ramp southbound from Oregon Expressway to Alma miss the light or be gated by the light? Can we look at improving that turning movement? (Megan)
15. NEW: Please include in the footnotes what calibrations were done in VISSIM (Nadia)
16. NEW: 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)
17. NEW: 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)
18. NEW: The traffic simulations only modeled peak hours using Caltrain numbers. However, Caltrain intends to expand all day service. If trains now increase to at peak hours, all day long, can we predict whether we may have multiple peak hour times throughout the day in the future? (Nadia)
19. NEW: Gary Black mentioned being able to do animations to show delays. Animations showing the unclearable queues for Churchill would be particularly useful. (Nadia)
20. NEW: 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)
21. NEW: 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)
22. NEW: Why did Hexagon disagree with the previous consultant that there would be impacts to Middlefield/Embarcadero? (Nadia)

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23. NEW: We need better diagrams showing ped/bike routes and the proposed mitigations – we need equal treatment of both in terms of diagrams. (Nadia)
24. NEW: Please provide traffic data showing intersection of Embarcadero/El Camino in diagrams. (Nadia)
25. NEW: 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)
26. NEW: 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)
27. NEW: 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)
28. NEW: Can trucks/buses turn on Kingsley? Turn seems very tight? (Nadia)
29. NEW: 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)
30. NEW: We need multi-modal LOS numbers – not just cars. Same for system wide impacts from the proposed mitigations. (Nadia)
31. NEW: 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)
32. NEW: Please define cycle track and show where it would be on diagrams (Nadia)
33. NEW: Please provide network delay diagrams for all impacted areas (Nadia)