CITY COUNCIL RAIL COMMITTEE FINAL TRANSCRIPT MINUTES

Special Meeting
November 29, 2017

Chairperson DuBois called the meeting to order at 8:11 A.M. in the Community Meeting Room, 250 Hamilton Avenue, Palo Alto, California.

Present: DuBois (Chair), Filseth, Fine, Scharff

Absent:

Oral Communications

Chair DuBois: Great, thank you. This is the November 29th Rail Committee meeting. The first item is Oral Communications, we have two speakers, Stephen Rosenblum and then followed by Richard Brand.

Stephen Rosenblum: Good morning. (Inaudible) Does this work? Oh ok. So, the one at Mitchell Park, I had a very large attendance and the table that I sat at, most of the people were not very knowledgeable about the rail situation. They came here to be educated and it was quite nosy, I could hardly hear the conversation from the other end of the table. The one yesterday at City Hall, on the other hand, I sat at a table with very knowledgeable people. The attendance was moderate but I could hear everything quite well and I felt that it was quite effective. The two comments that I'd like to make about the discussions were, first of all, the questions that were posted by Staff yesterday particularly on – about closing Churchill. The question was posed would you support closing Churchill without providing any suggested alternative, which was a fairly open-ended question. So, then, of course, people got into a big discussion about closing it, where would the traffic go, where – how would – would there still be bike and pedestrian access? So, it goes to be very involved and long and into a design issue which I felt wasn't really appropriate for a discussion of citizens. A question also that arose both forums were the cost and I think that was the one that I took away as the most important. How much would each option cost and then the question was posed about a tax increase? Would you support a tax increase and a question was how much and what would it pay for? I think in the absences of that kind of knowledge, that question is pretty badly posed. The last thing that I would like to say is on the bingo

cards there was no separation made between a bore tunnel and a cut and cover trench. I think those are, to me, two quite different options entailing quite a different construction and different costs. I think in the future those two types of constructions should be separated on the bingo cards. Thank you.

Chair DuBois: Richard Brand.

Richard Brand: Yeah, good morning everybody. Richard Brand, resident – Palo Alto resident at 281 Addison. My subject here is the Dumbarton Rail which this group has discussed and there is a recent letter that was drafted by San Mateo County Supervisor Warren Slocum to the MTC regarding – requesting that the MTC support the project. Several of the sister Cities – our sister Cities have signed onto this; Supervisor Simitian has signed to this and even the Silicon Valley Leadership Group has signed onto this. So, what I'm asking the Rail Committee here is to authorize or take action or whatever is needed to have our Mayor sign onto this letter as well. I have forwarded a copy of the letter to some of you last – late last night. Sorry, it was pretty late and so I didn't copy everybody but I know that Josh, you're the I guess stakeholder as you said last meeting. So, I think a brief letter to put it on the consent calendar or whatever is necessary so that Greg can sign onto this as well. It's an important issue and as we know people in Crescent Park are suffering dearly. My kids live over in that area and the afternoon traffic getting into the – over to the East Bay is horrible; backing all the way up into Crescent Park so this is an important project. I urge you to take whatever action is needed to authorize Greg to do that. Thank you.

Chair DuBois: Ok, thank you. We have one more speaker, Elizabeth Alexis.

Elizabeth Alexis: (Inaudible -mic not on) and what it entails. I don't have enough information. I don't know –you know you've thrown this on there. I don't know what the term movements are, I don't know what the implications would be for any other kinds of traffic, and I don't know what it would do our creeks. Don't ask me to make decisions without enough information because I'll give you an answer but you can either misuse that or misinterpret it or you're asking me to commit to something which may be later on I'm not going to want to do but I felt like I voted for it at the beginning. So, you can ask the general preference like how strongly do you feel about making the trains not be above the surface or whatever but don't ask me to get into specific alignments until I understand what they really look like and what the implications would be like. That information is not

useful to you so I mean I think we keep saying we're doing a CSS process and throwing our alternatives and having people vote on them before you've really done initial conditions like what is the creeks, what is this, what is that? That's – we already – if you wanted some kind of general sense, I think we have that but now asking people to rank order and three and some alternatives weren't even on there like I think a full aerial wasn't even on there. You know we really have to question is are we in that spirit of CSS? Thanks

Chair DuBois: Thank you.

Study Session

1. Receive Presentation by City of Burlingame on the Broadway Railroad Grade Separation Project.

Chair DuBois: I think some of us can stay till 11 but I think Staff has a cut off at 10 so we're going to try to see how much of the agenda we can get through by 10 o'clock. Our first item is a presentation by the City of Burlingame.

Josh Mello, Chief Transportation Official: Great, good morning Chair, Members of the Committee. I'm Josh Mello, the City's Chief Transportation Official. This morning we have invited Etty Mercurio from AECOM to give us a presentation on some grade separation planning efforts that they've recently undertaken in Burlingame. I also extend an invite to the Public Work Director of Burlingame but unfortunately today he had a conflict and was not able to attend but Etty has been involved throughout the process. She's willing to give us some – an overview of the process and talk about some of the lessons they learned. With that, I'll turn it over to her.

Etty Mercurio, AECOM: Thank you. So, hat I just want to show you here today is a compilation of the 18-months that we did for – sorry, yeah. That we undertook to do a project study report and at the end of this 18-months, the City Council then took action to recommend approval for an alternative that is now going forward into the environmental document and final design eventually. The project area in Burlingame and – oops, shoot, sorry, sensitive here – is – if you're not aware is the – let's see if I can get my mouse to work here. There we go. Is we're just looking at one grade separation which was the Broadway Avenue in Burlingame and we had a couple constraints in that we have the Millbrae station to the north, the

Burlingame station to the south, we have the bay to the east and to the west we had the developed area of Burlingame and so those were kind of the major constraints in the general location. The overview of what we did undertook over these 18-months is we really started with a development of a public outreach plan and strategy. Which entailed three public outreach meetings, two City Council meetings, meetings with property owners – major property owners and the Downtown Business Association. I'm just going to kind of give you a brief overview of what those are and if you want to stop and ask the question, please do so. The first public outreach meeting that we took down was basically we did not do any initial engineering or analysis. We just kind of started off with an overview of the site and what is the history? There's been this grade separation that's been studied since the 1950's in Broadway and we just defined the need, the existing conditions, and looked at examples of grade separations. Then we allowed the community – we did break out section – sessions where we had about I think six tables where the community had the ability to talk about their concerns and their issues about the grade separation and what are some of the opportunities that we could use if this project where to move forward to do some improvements. This is just a sample that the community too down these notes. At the end of the public outreach meeting we put out a summary and this is all posted on the City's website to try and show – you know to be transparent and show the process and making sure that if people weren't at the meeting, that they were informed of what happened at that meeting. One of the big items that came out of this one was really to ensure that this was not a High Speed Rail project, this was a City project to improve safety and enhance safety for the public. The second public outreach meeting was where we had done some engineering and we had identified six alternatives. All six alternatives where prepared exhibits for those – the six alternatives where a fully a full trench of the railroad, a fully elevated railroad – excuse me, a full depressed roadway, a fully elevated roadway and then two hybrids where the railroad was partially depressed, the railroad was elevated and then the – flip that for the alternatives. This – in this one we had already done some traffic analysis. This is really going to the need showing in today's world a traffic analysis and we're showing delays of – excuse me, in the project 2040 time. You know you'd be on the delays of the order of 12-13 minutes if you continued to have the at grade and then if you did a grade separation, you'd be on delays of less than a minute for those. We also did a qualified benefit of what those delays meant in dollars and these are travel time savings and these were equated to savings for greenhouse emissions, as well as people savings and etc. Then in this presentation we also went through all six alternatives at this public outreach meeting. We had a time prior to that where all the exhibits where

in the room where the community could come in and sit and look at the – you know have an up-close look at all the alternatives and ask Staff about those. Then we did in the presentation, we went through all six alternatives and I'm just going to quickly go through these. Everything that I show here has been – was posted on the City's website and is available for view. So, Alternative S was the – what we call the full elevated railroad. Not – and we went through the major – on the left-hand side were the constraints and cons. On the right-hand side of the list is what were the other major constraints and we kind of walked the – in the presentation walked through that. Alternative E was we walked through those alternatives for which this is a fully depressed or trench version – alternative. Alternative D, where it is the roadway is fully elevated, the railroad is left as is. Alternative C was the opposite where you fully depress and Alternative A was the hybrid and Alternative – excuse me, B was the hybrid and Alternative A was the other hybrid where we've partially depressed the roadway which is the most common one you see here along the Caltrain corridor with the roadway partially depressed and the railroad partially elevated. From that second public outreach meeting we then went to the City Council and the City Council basically was a presentation of what we had done at the public outreach meeting but one of the outcomes of the second public outreach meeting was that as engineers, we developed these 2-D drawings. Nobody could really visualize that so there was a request from that one that we do a 3-D animation. We prepared a 3-D animation and by the time we went to the City Council, I made a mistake here, is we have one 3-D animation for Alternative A which this is the 3-D animation that we prepared for Alternative A. We – it's a little slow, we had a little – I didn't edit this down a little bit. Basically, this is the alternative where we've purposely depressed the roadway and partially elevate the roadway – I mean the rail and this was presented at Council to show them what this would look like. That's Mike Harvey's Auto Dealership there on the left-hand side, that larger building and then we show a view looking westbound. Now there's – Mike Harvey's is there on the right-hand side and (crosstalk) we were – just as a sample we took the look of San Carlos to kind of show as an example for that. Then this is – the City made a commitment because we're showing a lot of landscaping that if this alternative where to be going forward, they would be doing landscaping. Then there is station there at Broadway that's not active except on weekends right now but this is just an example of an elevated platform station. Here we're showing outboard platforms but that's just an example, it could be inboard platforms depending, again as they move forward through the environmental document – final engineering. Those are some of the discussions that are made and this is Carolina that also has a complete streets project on it as well, for now. After Council we had a third public

outreach meeting where we basically – by the second public outreach meeting and the Council meeting, we had eliminated four alternatives and we were only down to two alternatives. That was – between the second and third, we went back to the businesses, we went – and we were presenting these to the property owners, the community who were not at the community meetings. After the City Council – second City Council meeting, it was basically agreed that we'd only take two more – two of the alternatives, which was the hybrid alternatives, and the four – the trench, the fully elevated and the roadway fully depressed elevated were eliminated. There were fatal flaws that we had walked through in the second public outreach meeting for those alternatives and basically, we were only taking two alternatives forward. At that point, after the second City Council meeting since we had only done one 3-D animation, the Council requested that for the two alternatives that we were taking forward we do 3- D animation for those as well. So, then we produced the 3-D animation for the Alternative B which is depressing the railroad slightly and elevating the track. There was some significant right of way issues that where kind of brought forward as a result of this alternative and so those big X's are full take properties because of the grade differentials on this particular property. Also because of the future electrification, we also have to do some higher fencing in order to not allow the electrified wires to be – they have to be contained and safe so that's what shown in this alternative here. This was presented at the third public outreach meeting and the third public outreach meeting really focused on Alternatives A and B which where the two lefts on the table. One of the items that came out from that particular one was from the 3-D animations, the comments that we got back is that the 3-D animation is looking from a bird's eye view and there was a comment well what does it look like when I stand in the project and look at the project. So, we did – this is an existing photo and we did photo simulations and this is what – so, I'll go back. This is looking, excuse me, this is looking east at the grade separation – excuse me, west, sorry, thank you. Oops, go back. This is the – looking slightly depressed looking at that same view for Alternative A, this is Alternative B. This is on Caroline looking east, this is Alternative A, Alternative B. This is looking towards – this is now looking west – I mean east, excuse me, at the Mike Harvey's. This is Alternative A, Alternative B and this standing on the south – excuse me, the north side of the project looking south. This is Alternative A, Alternative B. The other thing that we also did for these things, we also had 3-D virtual reality goggles, which I don't have here with me today but those were also available at the third public outreach meeting where people could actually put those on and actually be in the project and be able to see the project from various views. Yes?

Chair DuBois: Is there a reason you didn't show landscaping in Alternative B?

Ms. Mercurio: Yes, because there are tiebacks here and so there is a – so when you do – when we're digging down this deep, we're actually going to have – in order to –based on the width there, we're going to have to have tie back rods that are going to extend 20 to 30-feet back. So, if you put landscaping in there, those could interfere with your tie backs so you really can only put a grass landscaping in this particular alternative.

Chair DuBois: Not even bushes or anything?

Ms. Mercurio: You could probably put some bushes in there but…

James Keene, City Manager: Tumbleweeds.

Ms. Mercurio: Yeah but there's – you know you can't inhibit that – you can't disturb the structural integrity of those tie backs. Then we went kind of through the pros and cons. The City was the – again presented between Alternatives A the pros and cons, Alternative – I'm not going to go through all of the details of the pros and cons. Then kind of on a high level, recap the pros and cons and really what came to the surface was that Alternative A was the preferred alternative due to impacts. Alternative A was the – is the most common one that you see along the Caltrain corridor which is a partially depressed roadway with partially elevated rail. We – at the third public outreach meeting we took a survey of who supports which alternative. The survey results were the majority supported Alternative A. Also, the – at the third public outreach the businesses came in – the Downtown Business Association had actually at their own, not without us prompting, had actually gone and got signatures of all the 26 – 36 of the business community members supporting Alternative A. That was brought forward to Council at the second Council meeting where we did an overview of the public outreach. We showed the 3-D animations for Alternative A and B and City Council took action on a preferred alternative. So, kind of to – now the process is the City went to the JPB and got funds for the next step which is the public – excuse me, the environmental document project – Environmental Document Preliminary Engineering Phase which is undergoing right now and they're actively seeking funds for full funding for the construction right now. The kind of taking back the lessons really learned was – is we had a very, very good public outreach person who was able to moderate the public outreach meetings and kind of keep them focused. She

was also very instrumental in kind of looking at the engineering drawings and was really kind of going back and making those graphics so that they were easily understood by the community as a layperson and not an engineer. Taking a critical eye and then the other piece was really going back and finding that medium which was the 3-D animation, the virtual reality goggles and the renderings to basically try and convey what the project would look like in that regard. Going back to the four projects – the four alternatives that were eliminated, part of that was really walking through what the constraints where. There was – in every project along the corridor is a little different but I'll go back to that first slide, this one here. At the north end where we have Millbrae station, we also have the rail tracks for Bart and as we started to look at doing anything with the rail, we came to a point where this Caltrain operational constraint was a fatal flaw in anything that had the tracks longer which was what we had in alternatives – the trench or the aerial version. Then you had also the Burlingame Station to the south which was also a constraint but mainly we had a Caltrain operational constraint to the north here that really limited what alternatives could be moved forward in this particular area. With that, I'll answer questions. Oh, then the other item is – again, as I mentioned, everything was posted within a couple weeks to the City website and it's still up there now. Then we also had frequently asked a question so that – we actually prepared a fact sheet that was also part of the project that was posted to the website as well.

Chair DuBois: Thank you very much. Do we have any questions or comments?

Council Member Filseth: So, first of all, thank you very much for joining us and doing this for us this morning, this was great. For Alternative A, where there any land acquisition issues that you have to gravel with?

Ms. Mercurio: There will be land acquisitions but they'll be – Alternative A and – oh, this isn't – I didn't bring that exhibit here. We – part of our – in our public outreach meeting number two was we identified potential acquisitions whether they were full takes. So, this exhibit here red in these exhibits indicated full takes and yellows were partial takes. In Alternative A we identified several partial takes but no full take acquisitions and again, in the final engineering, part of that will be sharpening the pencils to minimize those acquisitions. The – also in this particular area the properties to immediately to the east and to the west of the track where – there are some Caltrain and public owned properties. The one that was privately owned was

Mike Harvey's Auto Dealership which is now storage. He was not adverse to the acquisition.

Council Member Filseth: So, there weren't people's houses involved or anything?

Ms. Mercurio: No, there's really no residential in this particular area. The biggest issue is…

Council Member Filseth: (Inaudible)

Ms. Mercurio: Yeah, to the – on the east side further to the south is where we get into some of the residential and by – when we shorten up Alternates A and B where the track – the relocation or the impact to the track is shorter, you're staying out of the areas of those. We did take simulation views where on Caroline you start getting into the apartments so that we kind of showed them a view of where – how high would the track elevation would be at those particular locations where you get into residential.

Chair DuBois: Adrian.

Council Member Fine: Thank you very much for coming. This was really helpful. Two – I guess one question, in Alternative A, are California and Caroline do you still have turning movements onto Broadway?

Ms. Mercurio: Yes.

Council Member Fine: Ok and so those…

Ms. Mercurio: We actually – yes, we actually added – so there was – as you probably (inaudible) there's a big construction of the reconstruction of Broadway. That had already taken into account the widening of Broadway up to – so this project will blend into that but there are turning movements onto those. I don't have a blow up here of those.

Council Member Fine: Yeah, it's just hard to read here. The second thing, can you go to the slide that qualified benefits.

Ms. Mercurio: Yes.

Council Member Fine: I just found that pretty helpful actually when you were looking at hey, the delays if we do nothing are going to be 13-minutes and if we do this grade separation, it's going to be a 30-second thing and the benefits in terms of gas savings, time savings, etc. are estimated to be such. That's something that we haven't quite done yet but I hope that we get to a point where we can have a graph that's similar to these two. I think this is actually…

Ms. Mercurio: We had our traffic analysis do an analysis of present-day condition and taking present-day condition and looking at it in a 2040 time frame and then look at – that was also – this analysis also included the additional trains that Caltrain is already planning to implement under their electrification project and look at those for future if you did nothing. Then we ran the analysis looking at the improved which also included turning movements, making sure that we had turning pockets. Then those delays or those were quantified into dollars based on time savings, based on a certain – assuming – I think our economist assumed somebody was only making $20 an hour which we know is probably not true in this but fuel savings. Then basically qualified those into dollars and this is kind of the pie that came about for – these are annual savings.

Council Member Fine: Yep so I just thought this was really helpful. Thank you.

Chair DuBois: Just a couple quick comments. I liked how you guys had the exhibits at the meetings and it might be something that we think about. Some of the feedback that I've gotten from the communities. We have people attending all the meetings who get a lot of the background from the early stuff but some people show up and in some of our recent meetings, there really wasn't any information – background information so that might be something. If we make those exhibits we can just keep reusing them, keep putting them up so people get the background. I also really liked these two slides, they really stood out to me and I think it's just really simple to understand 13-minute delay going to a 30-second delay. So, I think it's a good way to boil down a lot of the traffic information into something that people can understand. I was curious so you talked about that Caltrain impact. How early was Caltrain involved in your process?

Ms. Mercurio: From the beginning. I mean the study was funded through the JPB so the City made an application for the grant which was what funded it so they have been involved every step of the way. They also showed up to

all of the public outreach meetings and the City Council, a representative from Caltrain except for the first one, excuse me. I don't think they were at the first one but they were – they had at least a representative at every meeting which was really helpful. The other thing that was also very helpful that I'd forgot to mention was that the public – excuse me the Police Chief and the Fire Chief came to our second public outreach meeting and the third public outreach meeting. Basically, they were there in favor of the grade separations because of the delays that the current at-grade has for their ability to have a quick response.

Chair DuBois: So, that's interesting and then on one of those scenarios – the hybrid scenarios, were people asking about noise? Was there any way you kind of the showed the impacts of noise?

Ms. Mercurio: So, the very – oh and I don't have that slide, I should have brought all my presentation. The – we did – the very – we did a noise – we did a very crude noise measurement. A 24-hour measurement before we did our first public outreach meeting which was basically to just kind of look at the 24-hour noise measure. We did not have enough money in this particular study to do a noise study – I mean a noise evaluation but that would be – with a commitment was that would be done in the next phase of preliminary engineering. Again, because of it's—once you – noise modeling is a very complex process so we talked on more of noise on kind of the higher level. In this particular case when you grade separate, the trains would no longer have to blow their horns. That – however Caltrain's come back is that because there's a station there, you probably would still have the blowing of the horns but UP freight would not have to blow their horns and UP. That was one of the big noise complaints is that UP runs a local that goes at like 1 or 2 o'clock in the morning and that was the biggest noise issue that people had was that 2 o'clock in the morning.

Chair DuBois: I'm just curious so with Caltrain kind of participating along the way, were they stating preferences for alternatives like in your early meetings? They were just there to…

Ms. Mercurio: No, they did not take a stance on any preference of alternatives. They did have comments on their operational needs. You know we have to take into account that – oh and in the third public outreach meeting we went through a detailed construction sequencing of those two alternatives. The biggest issue when you're doing construction with sequencing is you have to keep Caltrain operational for all commuter

services so you have very narrow windows. So, it effects your – how you construct and it affects how long your construction goes as well.

Chair DuBois: Yep and I'm just curious could you give us just a quick background on the AECOM like what do you guys do and what's your expertise?

Ms. Mercurio: AECOM is a full-service engineering firm and we do a lot of things. We're about 100,000 people worldwide, here locally we are – I work in the transit group. We were hired by the City of Burlingame back in 2014 to do this study. We have a long history of doing transit highway and engineering here in the local Bay Area.

Chair DuBois: That's good. Ok, thank you very much. Alright if no more questions, just thank you again for coming today.

Agenda Items

2. Review and Comment on Draft Rail Corridor Circulation Study White Paper.

Chair DuBois: Yep, we'll move onto the draft Rail Circulation Study white paper.

Josh Mello, Chief Transportation Official: Great, thank you Chair and Members of the Committee. This is a presentation on the first one of our white papers that are going to be apart of this alternative analysis phase. Our intent with these papers is to release them as working drafts. Part of our effort to be transparent in this alternative analysis process is to release our studies as soon as they are available for public review. That being said, there will undoubtedly need to be some corrections made before the report is finalized but we did want to have Chris Metzger from Mott MacDonald come and present the working draft of the report on the first run – the first set of models runs that we did under the Circulation Study. The intent of this is just to help inform us a little bit as we move forward with the alternative analysis. It's not intended to be the be-all and end-all of the traffic analysis that's conducted as part of this project. It's just really the first set of models runs so with that, I'll turn it over to Chris who's going to give you an overview of this study and then answer the question that you may have.

Chris Metzger, Principal Project Manager, Hatch Mott MacDonald: Thanks, Josh. Good morning. Excuse me so we'll walk through an introduction background, talk about the impacts under no build and then look at some of the sample scenarios just for vehicles. Then also for bicycles and pedestrians, we separated those out for a simpler discussion. Something to note especially on the heels of the presentation we just saw is really what we're aiming for with this work at this point is to give information for how to make a decision between the various locations and the various options at the various locations. So, we're looking impacts between different locations and different options as opposed to just looking at one location. Again, the study is essentially what if scenarios related to the four at grade crossings. You have a list there of different options that we've talked about before that you can do at any of the four and you can mix and match. So, that's what we tried to do with this study is look at if you were to do different mix and match options or scenarios, what overall would you expect to happen with traffic in the City of Palo Alto? We started with traffic counts in 2017 at the rail crossings to make sure we have today's behavior understood. We blended that with the City's model which is the third step down if you will from the regional MTC model and the VTA model and then you have the City's CUBE model. These all kind of flow down from each other and using those regional, county and City projection. Then we distribute growth to the different roadways based on best practices that are standard for the industry to that's identified here. In general, we have two models that we work within this study. We look at the City's model which again that's a subset if you will of the regional and county models. Then we also have a traffic operational model so the City model really looks major flow patterns on the major corridors. It does not look at every single street, it does not look at every little bit of it but it does give you a good understanding of general flow patterns in the AM and in the PM. Operationally, when you get into an intersection level analysis, then we look at a different model. We take the data out of the one model and put it into a smaller model, Synchro. That looks at more localized impacts such as delays and queuing and level of service. Again, as mentioned, there are several roadway modifications to consider. Some basic notes, as you know trains and even cars don't run the same every day. They vary day today and we have to for modeling purposes just make summations on averages so we do that. The peak hours are based on typical times a year when the schools are active. I will note and I will probably say it three or four times, the peaks of vehicles do not align with the peaks of trains. So, when you're talking about a peak hour, we tend to look at peak periods so we're looking at a 4-hour window and we look at averages of the peaks of vehicles and the averages of the peaks of trains. It's not adding the peak on the peak because they don't actually happen at

the same time generally so I think that's very important when you're looking at the modeling tools that we have. Actual travel delay is generally larger impact than – when you increase the gate closures so the time it takes to stop and the time it takes to activate and the queue and so on. The more times a gate – the more gate closures you have, the impact is more than two plus two gets you five in that situation, not four as you go forward. Again, I think we've talked about this multiple time at the gate presumption requirements for Caltrain preclude the ability to synchronize lights on Alma to any effectiveness and that's the state that we're in at this point. We looked at impacts under no-build scenarios and again, we've talked about this before, you've seen this chart I think. Just looking at today and again looking at the four-hour window, we know there are ten trains per hour but in terms of the model, it looks at six trains and we've gone out to the field to observe that when we were putting the modeling together. That matches when we try to match up the model with the traffic counts so in looking at 45-seconds every 10-minutes. Again, we normalize that for the model. When we look at what's going to happen, we're looking at twenty trains per hour so doubling plus the amount of closure time. You can see there from the little graphic that leaves very little green time and I think that we all know that's coming and as the numbered showed in Burlingame, it won't leave much time for the traffic to move. This just shows some of the progression as you go from today to when electrification begins to occur and then when it's fully engaged and you're running up the twenty trains per hour in 2025. Some of the effects of Caltrain and High Speed Rail modifications. You have a twenty percent reduction of the capacity of roadways versus 2017 as a result of the train increase and frequency increase. Delays would increase as you see there by sixty percent or one hundred percent delay for AM or PM and as you would expect, you would start to see more and more traffic divert to those roadways that are grade separated currently in or near the City. When we look at actual delays we can look at each location and project out the time delays at each location for the years 2017, 2020, 2030 at AM and PM. Specifically when you get into the – at the crossings and we start to look at the queuing, you can see that this is a sample of what would happen at virtually every location is the ques do know – no longer would clear once you're running twenty trains per hour. So, you would have continual back up during that peak hour or peak hours that were studied. You have trains running so frequently that there's not enough open gate time for them to clear and we found that consistently. If you look at the level of service that most are used to seeing and hearing, virtually everything goes to a level of service F by 2030 with the exception being Meadow in the mornings is E. So, I don't think that there's any surprises there that by 2025 its going to be really bad so we all kind of know

that. We have some numbers to prove that with the analysis. We looked at what options there are and as I said, there's the five options at four crossings so there's a large range of scenarios that can be considered and have been discussed over the years. What we did was identify six potential mix and match options just to get a flavor for what happens to the traffic and what you'd expect it to do. What this table shows is existing condition on the far-left column. It shows the crossings and which are grade separated and which are not which are at grade. Then we look into the six scenarios and starting at the first scenario column, you can see wherever it's green it's changed from the existing. So, as we walk down just sample scenario number one, we would – this scenario looks at closing Palo Alto, Churchill and Meadow and widening Embarcadero to a four-lane – a full four-lane roadway and grade separating Charleston. Then if you go all the way to – that's kind of the – that would be the most severe change in terms of reducing access across. Then the most significant would be scenario six where you look at grade separations at Palo Alto, Meadow, Charleston, and widening of Embarcadero. So, you can see we tried to put a range and then the four in between are different measures are that. Again, this analysis is really intended to allow some comparison opportunities to occur. We look at scenario one where it's the most constrained and again, no real surprise you'd see a significant increase – what the arrows show is the bigger they are, the more increase of vehicles on those corridors. So, you'd see traffic being diverted to Embarcadero, Oregon and south. Charleston would pick up a lot with a grade separation at either one. If you looked at the option or the scenario where we grade separate most of the roadways, you then see a significant increase more evenly distributed across the City for all the different roadways. Again, as you see but this starts to give numbers – put numbers into where the vehicles would go. On a more visual sense in terms of impacts to roadways, this chart is a fairly common traffic analytical chart that where it's red, that shows the increase in traffic. Where it's green it shows a reduction in traffic so you can see how the traffic patterns change both at the railroad and in adjacent streets and corridors in the model. Again, when you open Charleston up in Scenario One and you close most everything, then it not only effects Charleston but the roads to and from. Then similarly for Scenario Six you can see there's quite a bit of diversion in parallel roads to the rail to find the new locations. So, you start to see greater traffic impacts in the City and in quite a few reductions of traffic on many of the roadways when you open up those. Traffic patterns would definitely be adjusted throughout the City if that where to occur. This table is really the summary of what happens at each roadway so we have the four at-grade crossings in the left column, excuse me, and what happens to the traffic if – depending on the change. Whether it remains at grade, whether

it's closed or it's grade separated and without reading through all of that the summary is if you leave them as is, it's going to be as we showed at the beginning. If you open it up you will pull traffic into it and then if you grade separate that's the most change you'll see. So, I don't know if you want to have any questions on that at this point but that is the summary.

Council Member Filseth: Can I ask a question just on the last couple slides? If you to the previous one, previous to that one and the previous – so that one and the previous one. So, if you – no, no, that's good. Scenarios One and Six so if you add those numbers up, you get an increase of 2,800 cars on the other streets. If you go to the next one you get an increase of 2,550 cars on the other streets. I mean how come they are not the same?

Mr. Metzger: These are the changes on these streets. It's not the total to the whole system.

Council Member Filseth: It's not the total diversion.

Mr. Metzger: Right. These are just looking at the changes on these particular corridors.

Chair DuBois: We have one member of the public that wants to speak.

Mayor Scharff: Yeah, I just want to follow up, I had Eric's same question that Eric had. Is it just because you're not – you're calculating – the traffic is going somewhere else and you're not showing where that traffic is going.

Mr. Metzger: Right, there are other minor diversions elsewhere too but we're showing the major corridors and what happens on the corridors that were studied.

Council Member Filseth: So, a little goes on San Antonio, a little on Oregon or something like that.

Chair DuBois: So, this is if we do all the separations?

Mr. Metzger: This is the –yes, this is along with doing the (inaudible) so it's called a maximum accessibility.

Mr. Mello: There's a couple points I want to make but there is another section to the presentation about bicycles and pedestrian mobility.

Mr. Metzger: On a bicycle, yeah, if we…

Mr. Mello: So, do we want to take the question on this now and then do the bike/ped?

Mayor Scharff: (Inaudible) on Churchill. What I took out of this was there's a large effect on Churchill if we close – (inaudible), there's little effect if we remain at grade and there's little effect if we grade separate it. So, it didn't seem worth grade separating it from traffic. (Inaudible) close it quite frankly.

Mr. Mello: One of the point I wanted to make is that we did not test grade separating Churchill. None of the 6 Scenarios includes grade separating Churchill and that's something that I think we need to do moving forward is do additional tests. That was where we developed the scenarios, it was very – you know there are many different options so we ended up not testing an option that had Churchill grade separated. We've also noted that recently we've discovered that some of the data that was collected to supplement existing data was collected on a day that was a Staff develop day for PAUSD. So, we're going to update those traffic counts and then rerun the model as appropriate so those are two things that we're going to incorporate moving forward into this white paper. That it will continually evolve over the next several months.

Chair DuBois: Yeah, let's keep it kind of technical and we'll come back but yeah.

Council Member Filseth: This will be that way. I mean when we think about this stuff we sort of worry about traffic diversion onto Embarcadero and Arastradero and so forth but the other access that we worry about is what's going to happen is essentially the capacity of Alma Street when you get all these closures? What's going to happen to the capacity of Alma Street when we get all these closures and not closures? Did you guys model that all in this – on these slides? Is that modeled at all or is that…

Mr. Metzger: It reflects on these in terms of how Alma is changed and we definitely have that in the model. We can look at that in any particular scenario.

Council Member Filseth: No, I was just going – if you close off Meadow for example so that means you're not going to be interrupting Alma twenty times an hour…

Mr. Metzger: Right.

Council Member Filseth: …at that intersection so you would assume sort of the capacity would change.

Mr. Metzger: Correct and we have that in the model. Again, there are so many different scenarios and places to look at. We can look at any of them and these are samples of what's in the report. So, any of these graphs are in there for all six scenarios and there are broader summary and broader data.

Mr. Mello: An interesting takeaway from this graphic is that as the crossings at the rail corridor become more fluid, it looks like more people gravitate to El Camino versus Alma.

Council Member Filseth: (Inaudible)

Chair DuBois: Should we do to the public or is this a burning question?

Council Member Fine: It's not burning but it's kind of related to Eric's.

Chair DuBois: Go ahead.

Council Member Fine: Sure, so I just think the diversion impacts are really important under any of these scenarios. It would be nice to see just some tabling of that because I think there's – I don't know how to say it but we're certainly going to see those impacts on Embarcadero, Oregon, etc., El Camino under any to those scenarios. It would be nice to see those tabled out and I had some other questions later on.

Mr. Mello: So, as we move through the alternative analysis process, we'll be able to remodel because now that we have the model built and we'll update the data that we collected. We'll be able to run any scenario that we want foreseeably.

Chair DuBois: Great, let's go to the public and we have two speakers; Elizabeth Alexis and then Nadia Naik.

Elizabeth Alexis: Ok so we have extensive comments and they are in your packet I believe on – if you turn – I'm not sure what page it is exactly. Maybe before we get started to go to those (inaudible). We have serious – I mean I think on one level, we have some serious problems with this study that we need to think about but it has helped us, I would actually say, understand more about how traffic actually flows in Palo Alto. Sometimes when a model fails you can actually learn something because why is the model failing so let's go to why. Why – Adrian asked for a tabling of this data…

Mr. Mello: If I could just interject, that's Packet Page 206. The CAARD comments begin on Packet Page 206.

Ms. Alexis: Thanks. Yes, if we could get to that. Everybody – is it possible to pull that up or no?

Chair DuBois: We have it, I would just go (inaudible).

Ms. Alexis: Ok, just for the people in the audience. As Mott MacDonald mentioned they – to do the traffic diversion they used the City of Palo Alto Traffic Model which is really the VTA Model and while this model is useful for one main purpose which is to understand the number of cars that are traveling to and from Palo Alto. In Mott MacDonald's own tests, it failed validation to actually understand the distribution of that onto local streets. We actually, if you look back, this model was originally developed by HEXAGON for the Comprehensive Plan and they also did a validation test of the model for the distribution of that traffic. So, they sort of know – the model kind of has a pretty good idea of like 10,000 people want to travel north but they really have no idea whether they are going to take El Camino, Alma or whether they are going to take Middlefield. They have no idea which street people are going to take and when I say no idea I'm exaggerating a little bit but we can see it clearly that it doesn't just fail like everything is a little higher a little low. It really does not understand why anybody would take a road like Churchill and so if you actually look at the page, this comes straight from the report Mott MacDonald actually did. This is one reason why it shows that Churchill doesn't do anything or matter. You can – if you look at that page it predicts that literally, only forty or fifty people would take Churchill. That's today, it believes that only forty or fifty people would take that so the only reason somebody would be on Churchill would probably be because they live on the road. Then we ask the question, ok the model has failed, it's not working so the question is then why did we decide – if it

doesn't understand why people are taking streets right now, how on earth can we expect it to think about what would happen if people got diverted from that? It doesn't know why it's taking them in the first place, why is it going someplace else? On Churchill, we asked the question so assuming there's wisdom in crowds that there is actually quite a lot of traffic coming on and off of Churchill so why do people take Churchill? They are not totally dumb, they are not just lost European tourist, which we do see biking on Alma. Then you start to ask the question and then you start to see how transportation – the network in Palo Alto works. The problem is this, is that at University Avenue and Embarcadero, both of those grade separations were done with the idea of getting people just straight across town. That was the idea, is to get people from not even 101, just get them all the way across to Stanford. They were not – they threw in turn movements as kind of an added bonus. What they did is they made it – if you're on the Stanford side of Alma and you want to go south on Alma, they turn which normally would be – if you're headed south on Alma and you want to go this way, normally a right turn in the safest possible turn you can do but what happens is that at both University Avenue and at Embarcadero, it turns a right turn into an unprotected left turn across multiple lanes of traffic. There are numerous – is it possible – it took a little while to get going with this stuff. Just it took – we see lots of accident data at the University Avenue crossing. We see less at Embarcadero but that's because people find it so unsafe they don't even use it. That is why people are using Churchill, they are not using Churchill to go across town. You can see that in years of data that there are very few people on the one side of Churchill, lots of people on this side of Churchill. They are using it for turn movement so if we're thinking about how to even replace Churchill – to close it, adding – it's not about adding a lane to Embarcadero. It's about finding a safe way for people to make turns on and off of Alma. I mean I think we've – in some level this is highlighted for us like kind of a failure in our process; going back to the rail study, going back even – I'm not going to say the Comp. Plan. We're not understanding how traffic flows or how it moves. I mean we were wondering why there is so much traffic on – it's asymmetrical traffic on the Alma/Palo Alto. It doesn't just reverse, you know in the morning it's not just the opposite of what happens in the afternoon. We could not figure it out until we saw the Stanford data which showed us that basically, it is such – it is so bad here in the afternoons that people are using that road to take El Camino to points much, much further north. Which is a very different pattern than what was suggested by this model which thinks that everybody is just using it to kind of shortcut on Palo Alto Avenue or something to go down and go back. I mean I have no idea what it's doing but this model doesn't work. We're understanding why people take road and we shouldn't use it to think

about how people who use to roads if one of these roads were closed. We do need to understand this and this is the question. This model is not – we can't just go back and fix it. It is concerning that data was taken on a school holiday. The calendar is online, I'm not sure why we're paying for that, I'm just throwing that one out there. We do have data from Stanford and we have other kinds of stuff. We need to understand how people move and why they move and where the safety issues are? We need to think about Alma and the issues with left turns. I mean we're just at the beginning of this.

Council Member Filseth: You talked about the asymmetry on an intersection in the morning and afternoon at eastbound and westbound. I noticed that too so why is that?

Ms. Alexis: This our –

Council Member Filseth: If it's short, I don't want to (inaudible).

Ms. Alexis: No, no, I mean I think we figure out. It really is that because of what's going on a Willow – I mean literally out on the Dumbarton bridge that in the morning when people are coming in, it's the people on the East Bay that have just this whole mess of people trying to get onto 880 just to go to normal places and get on Dumbarton. I think I'm going to guess they have terrible traffic in the morning that's worse than their afternoon traffic, you know people returning. So, we have the same kind of thing here and it's not just – its Willow Road, it's clear there are some issues in Crescent Park going on. There are some other kinds of stuff going on and that is really bad. I mean you're getting through – the Stanford data shows you're getting through a hundred cars an hour on University Avenue in the afternoon, a hundred. Whereas in the morning you're getting through like eight hundred so it is so bad that people just in the afternoon – so first it's a right turn so they can get out here. So, people who work in downtown Palo Alto are taking El Camino to go home if they live north and they going far. They are going – the might turn eventually at Whipple. I mean they are going far up El Camino and they are coming, in the morning, they are coming 101 and then up University so they are returning – they are doing the four sides of the triangle but that's not what this model is showing.

Council Member Filseth: You think it's people going one way on Alma and the other direction on El Camino.

Ms. Alexis: Yes, that's right.

Mayor Scharff: I have a quick question for (inaudible). First, I want to say I really appreciate the work you guys did on this. If this model doesn't work, I mean I don't think there are better models. I mean so what are you…

Ms. Alexis: There is better data.

Mayor Scharff: It's one thing to come here and say it doesn't work.

Ms. Alexis: There's better data. There's better data.

Mayor Scharff: So, we put better data in, then is the model going to work? That's what I heard from you (inaudible).

Ms. Alexis: You're not going to use this model for that. I mean it's never going to work for this.

Mayor Scharff: So, what's the solution?

Ms. Alexis: So, the solution is this, there's actual data that shows us how people travel. There are ways data and there's data that MTC has that comes from the Garmin. First, we need to see how people are actually moving and then you're going to do a reasonable – from that, I think we can get an understanding – first this – I hadn't ever thought about this. I've never seen it in a City presentation that there are no safe turns onto Alma for instance. I mean that's like huge, I mean I don't know I think it's…

Mayor Scharff: Now look, you're right. I drive to Churchill and make my left turn from no matter where I am in north Palo Alto or I take Oregon. Even Oregon (inaudible)(crosstalk).

Ms. Alexis: That's right. Well, I do think – I mean we have – we're starting to get enough data that if you start to see that also. To actually see how people are traveling, what are these loops that they are doing, you'll figure out how they're – what happens if that closes. I mean you can put it into – we could work with Google or we could work with somebody. You can close off a street and see what happens and Google will tell you how people – how it will recommend you travel. We can figure this out so I mean I think you can get a sense of it but I also think that just understanding that this is very important to fixing some of the issues and Crescent Park really does need – something has to happen there. It's very weird what's going on there but I mean you also start to see this impact with what's going on with Stanford and what's going on with everything else. I mean we are very connected, I

mean we're creating problems for – what's going on in Crescent Park is creating problems for Menlo Park and other places. I mean it's very connected but I think first just getting a sense of how things are actually flowing. I think it will be fairly obvious what's going to go on. Now there's the second issue which we didn't even get to which is the issue – I believe that for the intersection even we used a data source – we used a model which -- we know because Caltrain did this. At first, they used that software to try to do the grade preemptions and it doesn't do grade preemptions in the software so there's a different software you have to use. I also think going back to this, it's going to be really bad but one of the things where I actually see the need is people don't understand what hap – because they – normally in the rest of the world the big problem with trains coming through and this also drives what people think of as improving train safety. It's different here, we have different issues with the trains. In the rest of the world, they have a few incredibly long freight trains that take 8-minutes or 9-minutes to get through so it's like having a really, really long red light. People do dumb things at these intersections. We have less people doing dumb things to jump the light. I mean that's – we have people who don't understand, they get confused, they get stuck but we have a ton of trains coming through. We have a ton of busy kinds of things so it's this interruption to light signals, it's this effect of not being about to synchronize Alma. Some kind of work that actually simulates and shows what happens in an hour with train preemption and the randomness and how that limits capacity, how that limits people coming through. I mean Josh can probably talk about how much – what's the difference on Alma between being able to synchronize lights and not being about to synchronize lights. I think those kinds of things so that people in town start to understand what is the impact of train preemption. Is it going to be more valuable than – we can throw out some numbers that are scary enough? I mean it's bad, it will be very bad but we need to use the right software and I think just more helping people understand the issue is a big deal.

Chair DuBois: So, we have Nadia and then we also have Richard Brand.

Nadia Naik: Hi so I have a couple of suggestions since you are looking for actual suggestions. What Elizabeth is explaining is that the model basically takes the City, draws it into four quadrants and sort of assigns it to the fastest route in each of the four quadrants. At a simple level, that's kind of what it does so as she explains it, it's not really going to work for what we have. My understanding from talking to Josh is that MTC has what's called INRIX Data which is basically the information that we get from Garmin and ways and stuff. So, you could actually spend some money hopefully and

have us literally visualize exactly what is happening current day to get to what Elizabeth is saying. The other thing is my understanding is that Google also has data obviously from their Android users. They can figure out who's driving, who's walking but they couldn't figure out who's biking. They actually approached the City of Palo Alto to work with us to ask for a bicycle data so they could validate their own travel models. My understanding is we got this INRIX Data for example and we didn't know what to do with it because we don't do data analytics as a City. This seems to me like a great opportunity to maybe involve [RSTTO] or use other people in the City or maybe our own citizens who may work at I don't know, a large data analytics company that we might have in our borders. I mean I think we can find residents and I will just say that we put out a call On Next Door asking for a data visualization guru, which I'm sure you're probably wondering I'm not even sure what that is. We got thirteen responses, we knew one of them and twelve were complete people that we've never met before who turns out who work for actual professional traffic data modeling things who are like you know what, I usually do my work with LA and DC and whatever but I live here and I would love to volunteer my time. How can I help? That's the kind of stuff that I think in a real true CSS process, we should be pulling from our citizens and figuring out where people can help us because to what you are asking, we have real data. I think the planning world is just used to using models. That's just kind of how it's always been done and technology has moved faster. We can actually see now – if you were watching Ways live, you could see what happened when that light at Oregon failed on Halloween. You could watch it happening and I think we can use that. I just want to get – see if we can have the consultants confirm directly that number one, Synchro does not – Synchro is the software that they used, can't actually calculate train preemption which is part of the problem with that model. Two, that it doesn't actually highlight Churchill as an actual important part of the network which we already know has fifteen cars a day at peak hours so obviously, we all know as people who live here that's important so if they want to answer that.

Chair DuBois: (Inaudible)

Ms. Naik: The model said there are fifty cars but at peak my understanding there was 1,500 cars at peak hour so clearly – or ok, I'm – but yeah. It's more than fifty, how's that?

Chair DuBois: Thank you. Richard.

Richard Brand: Richard Brand again, I would briefly just want to point out – it's not showing on the screen. The Churchill Avenue, if it's closed, this says Embarcadero Road and I agree that the – yeah, we're on. Ok, that the traffic would be possibly diverted, however, it's not going to operate satisfactorily. The problem with Embarcadero is not the three lanes, it's the succession of the lights for Town and Country and the high school. The backup either both eastbound and westbound is not constricted by the three lanes, it's really that succession of stop lights. I see it every day and it backs up under Embarcadero east – for the westbound and vice versa onto El Camino so I just wanted to point that out.

Chair DuBois: I know we have the bike and ped. Information as well but maybe we should stop and discuss this first.

Mayor Scharff: Yeah, let's do it.

Chair DuBois: So, are there any questions, comments? I mean I have quite a few but I was (inaudible).

Council Member Fine: I'll lead off. I guess just playing on this thread of kind of more gradual, call it real-time or person level data. Where do we stand on that and what would it take for the City to kind of integrate or build some model based on some of that data?

Mr. Mello: I mean there is a model – a meso model that's kind of in between Synchro and the Travel Demand Model that we use. You know it would cost money to develop something like that and time. I mean there are a lot of very insightful comments coming from the public regarding the modeling and you know that's one of the flaws of this type of regional Travel Demand Model. So, what we've done is we've done the intersection level modeling and then the regional kind of level modeling. There is a way to model that at a more local street level. It would require a lot more data collection, building an additional model and that's something we could look at doing if we start to go down the road where that's something that would inform our decision making.

Council Member Fine: Sure, so I guess just a question for my colleagues is – go ahead.

Mr. Metzger: I just – just to – a couple things on that. One, it was mentioned INRIX, all the other – that data is readily available and is

routinely used as part of – parcel to what we do now in modeling. We take that into account but I would go back to what the purpose of this study was and is. It's to help make a decision on what project it is you want to then analyze in more depth. We would expect to use different analytical tools to streamline and maximize a design, not Synchro but for assessing variations between options. Synchro is an appropriate tool because it tells you the same level of information at all the different locations. So, you can get a feel for more or less greater (inaudible). If you want to know the detail yes, there are more refined models you can go too, to do that detail for all of these scenarios at every location. What happens at Churchill if you do one thing at Charleston and another thing at Meadow and then if you do different things at each of those. To do that, that would be an extremely involved process but of course, we could do that but I'm not – what we're trying to do is help you make a decision but that's – those two things we do – that data is readily available and readily used in all of our modeling.

Council Member Fine: I think something we need to get a handle on here folk is a model isn't meant to just represent reality and show everything that happens. A model is made for some kind of problem, some kind of solution, and I'm not sure we quite have that nailed down in the circulation study. To some of the speaker's points, I think you may have it right about people using Alma and El Camino differently and going up north and things like that. I think that's one set of concerns though, there may be some other patterns that we're not yet identifying. Then third, if we are interested in kind of a more gradual realistic model in some ways. The way I see us going about it is we could get Staff to go do it and pay somebody to do that. We could maybe ask out the public to work on something. Third, we could be looking at a Google sidewalk (inaudible) or something and seeing what they have and if they do want to help us out. So those are just some thoughts but I think should keep – let's not just try to model reality. Let's figure out what's the problem we're trying to solve with our model. I think that's something we should keep an eye on.

Mayor Scharff: My concern is that I think we need to clearly put forth the questions we're asking and then we need to – so we know what questions we want to ask. Then the question is does the model meet those questions and that's where the confusion in my mind is. When I look at Churchill for example, you know we've talked about closing it and not closing it. We've talked about separating it, we haven't don't that modeling yet of separating it. I mean I think it's what question are we trying to propose and I do think that we have not focused on the turning issues onto Alma when we look at that. I think we really need to because the more I think about it, I mean I

always use Churchill to turn onto Alma, every time. If I want to go across, I often use Churchill as well frankly because it's closer than – and getting onto Embarcadero there's – I think Richard Brand is correct. I mean we have not solved the Embarcadero issues out there and I don't know. We voted to make some improvements there and put a bike lane there and I voted against it. I still think we're going to have huge problems on Embarcadero so I guess the question is how do we ask the right questions and what are the goals that we want to achieve with this? I don't think we've really narrowed in on that. It's obviously disturbing when you say here's the model and the model this is what happens at Churchill and it's obviously not what happens at Churchill and we continue to use the model. I think it's ok if you say these are the flaws in the model up front, we should not use the model to make this decision. I don't want have charts up here. I mean I'd be really unhappy with is if we had charts and data and it said – because what I read from this frankly is hey, we should definitely leave Churchill open and not close because what's the downside to closing it. I mean what's the upside in closing it. All it does is divert traffic and make life more difficult and then we basically wouldn't be able to turn there. I just want to make sure that anything we have, I don't make a bad decision because I look at the data – I look at the charts, I look at what you give us and we – I mean that's my only concern.

Chair DuBois: Eric.

Council Member Filseth: My reaction was kind of similar so I was going to say whether you can use the model – it's a first (inaudible) obviously and whether you can use the model sort of depends on what you're asking. It seems to me the question – Churchill, is pretty simple which is if we close Churchill, are we going to have a catastrophe on Embarcadero and maybe the model is good enough to answer that, maybe it's not. If it's not, do we have to throw it out or is it possible we could supplement it with some other data because we're only talking about four intersections. I bet we don't have a hundred of these questions we have to answer. I bet it's a relatively small number and then the other piece is sort of to Council Member Scharff's question – Mayor Scharff's question is what's the downside of leaving it open? Well, I think the downside of leaving it open is on Alma Street which is the rails are going to go up and down and the stop light is going to go off twenty times an hour or something like that so I think you have to consider that too but that seems like a fairly simple question.

Mr. Mello: Just a couple related to that. These are really inciteful comments and we've had a lot of discussion about this on the project team as well. This

model is the model that's used to predict demand for major roadway projects, transit projects. It's the de facto model for the region so it's not – but that being said, our project is a little bit different than a lot of the projects that are modeled using this software. I think we're going to have to continue to make tweaks and add data points but I don't think we can throw this one out and look for something better at this point. I think we can continue to enhance this and we just need to think about what role this analysis is going play in our decision making. I don't think it needs to be the be-all and end-all of how we make a decision but it is a valuable data point.

Council Member Filseth: So, if we close Churchill are we going to have a traffic catastrophe on Embarcadero?

Mr. Mello: The next step would be to take – to continue to refine this and then import the data from the model into the intersections – the signalized intersections on Embarcadero and use Synchro to model the delay at those intersections. You know we – this is – like I said at the beginning, this is just the first step. We built the model, we tested a couple scenarios, we're going to have to continue to refine it, add data and then derive micro-simulations from this model as we start to look at things like what the impacts to Embarcadero would be.

Mayor Scharff: So, Josh, you hit it right on the head with my concern. My concern is basically and I'm not saying you're doing this but my concern is that your use to using models, you use the model and you don't run it through oh wait, does this make sense? Are we asking the right questions? I mean I think a model is just a tool. I worry that – I think I just need some comfort level that you're not model bound and you're not looking at the models and stuck in the models as opposed to hey, these are the questions. This model is useful for something, it's not useful for other things and that's really the comfort level I think that the group needs.

Mr. Mello: That's exactly what we're saying, is this is one – yeah, one information point that we're going to have in this process and it doesn't take into account things like people uncomforted turning left off of a ramp from Embarcadero. A model is not going to predict those kinds of things so I think we're going to have to use our own judgment collectively as a community as we move through this and have a gut check on what this is telling us.

Council Member Filseth: I never make that left turn having done it a few times.

Mr. Metzger: I mean if I could just on that particular issue and relative to modeling, what you do when you use the model is you – and we haven't gotten down to that level of detail but these are – if we ask that specific question, we would model and we would take counts of how many people make that turn and we build that into the model and see what happens. So, you would take that into account but secondly, the question that I think is what we'd like to know is what question do you need to answer and then we can answer those. We can that, your question if we know what all the other parameters are that you're going to go into that assumption relative to all the other because the answer is different depending on what you do at the extremities.

Chair DuBois: I guess what I'm not hearing is – we do have counts on Churchill and you show how the model doesn't model Churchill at all and I don't hear you guys saying we're not going to use this model for Churchill. So, I think that's the disconnect for me is that I mean there's a lot of disclaimers in here about how that data was not appropriate and this is one of the full intersections we're looking at.

Mr. Mello: I think the issue with Churchill and I'll verify this is the Travel Demand Model has what is called Traffic Analysis Zones. Those are the quadrants that Nadia related too. There's actually quite a few TAZs in the City of Palo Alto. Those include the number of jobs, the number of housing units and then there's a network that's overlaid over the TAZs and there are nodes and links and the links are roads in the network. Those are things like Embarcadero and Alma, those are roads that are loaded with traffic from the TAZs. There are also things called (inaudible) connectors which are just points from the TAZ connecting to a road. I think Churchill is coded – is not coded as a link because it's a regional model, Churchill is not considered a significant regional roadway. So, one of the things that we can do moving forward is looking at whether we can modify that to make Churchill a link and load it properly like the other arterials are so that's something we can address moving forward.

Chair DuBois: Using these conclusions without doing that it seems very misleading and I'd like to see Churchill removed from the presenting results.

Mr. Mello: This is a working draft, it's not a final. We brought it to you as soon as it was available so we can certainly make modifications either to the model and redo the table or modify the table until we're able to do that.

Chair DuBois: I actually had some methodology questions using this methodology that I'd like to get to if that's ok. There was a bunch of Stanford transportation data for the GUP, did we leverage that at all?

Mr. Mello: This was prepared before the GUP was released, we can do that.

Chair DuBois: In this discussion about Embarcadero was impacts of widening Embarcadero or changing those turns and that wasn't considered at all in the circulation study and in future scenarios.

Mr. Metzger: Not to the detail. The turns, we did look at adding capacity on Embarcadero to make it a four-lane road (inaudible).

Mr. Mello: I think one of the important things to understand is a lot of delay in urban areas come from signalized intersections. So, even if you add another land to Embarcadero and you don't increase the capacity at the signals, you're not really going to gain much.

Chair DuBois: But you modeled increase capacity however that…

Mr. Mello: We modeled another lane through the tunnel.

Council Member Filseth: (Inaudible)

Chair DuBois: On Page 36 you talk about the twenty trains per hour and I just want to understand it. It looked like – you're saying that if they are evenly spaced, then we get a train every 6-minutes and if I understand that right, that like the optimal condition where the trains are passing perfectly at time. Shouldn't – isn't – shouldn't we look at the worst-case scenario of a train every 3-minutes instead of every 6-minutes?

Mr. Metzger: We typically do not model the worst-case scenario. You know somebody mentioned a break down in a signal, we typically don't model those. Those are events that you can look at independently if you'd like to do – have some backup plans but…

Chair DuBois: It's not the even worse case, it's likely (inaudible)(crosstalk). There's no way they're going to cross at all four intersections synchronized.

Mr. Metzger: We have the twenty in there, we don't assume they all cross at the same time.

Chair DuBois: So how do you get 6-minute intervals at all four intersections with twenty trains an hour?

Mr. Mello: I think the ultimate build-out is a train at every 3-minutes.

Chair DuBois: That's what I'm asking. Look at Packet Page 36, it says twenty trains per hour spaced at 6-minute intervals.

Mr. Mello: So, in 2025, assuming High Speed Rail is operational in 2025 which is a little bit of a stretch now given where they are, we would have a train every three minutes. That's the bottom bar on this slide.

Chair DuBois: Ok so again, if you guys could just look at this text, that's not but it says. Then there's a question of intersections to analyze. I mean I understand cost but it seemed like we left out I think some key intersections and I see backups all the time so like El Camino Way, El Camino and Arastradero, El Camino and Churchill, University – was University include in this model? I guess it was but I only – we're looking at these crossings with the rail but within a block of either direction. You know when you talk about these infinite ques, I guess we just said it was an infinite queue but we really didn't say what was going to happen on El Camino or again, something like El Camino Way where it would fill all the way up from the train to El Camino. I guess how should we think about that in these circulation studies?

Mr. Mello: I think there are two ways we could handle that. We could add those in and rerun the models – the runs that we've already done or moving forward as we hone in on options for Meadow, for example, we could look at what the impacts would be to adjacent intersections in a more gradual fashion.

Chair DuBois: I mean (inaudible) it's basically just going to tell us that doing nothing is not an option.

Mr. Mello: Yeah, I mean the questions about the frequency of the trains and whether they are staggered and regardless of where we end up on that, it's going to be bad in 2025. So, if we don't do anything – I don't know that we

need to spend to much time analyzing whether it's a train every 2-minutes, a train every 1-minutes or…

Chair DuBois: It's just – but if we do put in the separations like do we create a bottleneck on El Camino or something? That's something we're going to have to look at.

Mr. Mello: Yes, and you know the additional traffic that's drawn to a new grade separation, does that then impact adjacent intersections because there's more demand.

Chair DuBois: If you could look at Page 86, limitations of the model. I think this was a lot of our discussion and maybe I'm looking at an older – yeah, I'm sorry, I'm looking at the one from November 8th but it's Section 3.1 of the Travel Demand Models and the Demand Model Validation Report. Let's see if I can – so I'm looking at this document, yeah.

Mayor Scharff: (Inaudible)

Mr. Mello: Packet Page 159.

Mayor Scharff: (Inaudible)(crosstalk)

Chair DuBois: No so it's this document and then 3.1 and 2.2.

Mr. Mello: Ok so it's Packet Page 151.

Chair DuBois: Yeah so, this 3.1 and 2.3 limitations of the model, it's not an intersection based model, it's not attended to address this level of detail. This is the whole issue that we're talking about with Churchill. That basically you're saying the model doesn't cover Churchill.

Mr. Mello: The model tries to predict the movement between TAZs using the network so if a street is not in the network, it's not going to load that street.

Chair DuBois: Then 3.3 talks about using GIS. It's not built on GIS data and the last sentence; the model forecast needs to be examined for how that can be used for operational analysis. Again, I think this was kind of buried and is coming up now but it's – again, what questions can we answer with this model and I think you guys recognized the limitation but it was kind of

buried is probably the message. Then, sorry I'm off on the pages, it's a little further back. I guess 3.6, you know this table of the counts so again when you look at Churchill and it says we count 432 but the model shows 46. To me, it just said we should ignore the results for Churchill.

Mr. Mello: It actually – what I would read into that is that we need to collect additional data and look at how Churchill is programmed in the Travel Demand Model and then try to get those to be more aligned.

Chair DuBois: Yeah but when you say additional data, we have these counts that are already much higher than what the model shows so do we already have the data, it's just changing the model or using a different model?

Mr. Mello: Modifying the model so that the model better reflects actual conditions.

Chair DuBois: I was – over Thanksgiving, I was clearing up a bunch of Council paperwork and I came (crosstalk) – no but I came across the scope of services for the circulation study and I just wanted to call out some things and see if they are going to be included in the final report. We talked about liaising with High Speed Rail and using any data they had. I don't know if they have more detailed data, do they?

Mr. Metzger: We have, when we started we worked with their data but we'll double back with them to see if they have updated.

Chair DuBois: Did – we called out for a gap analysis of data flaws and it seems like that would be really useful. I think that's what we're spending a lot of time talking about.

Mr. Metzger: We did that at the beginning but obviously this one specific location needs to be reconsidered.

Chair DuBois: Bike and ped. counts which you've added. Accumulative development proposal impacts as well as results of our Comp. Plan which we just finished. Is that being considered?

Mr. Mello: Yeah, that's in the horizon year for the model.

Chair DuBois: (Inaudible) of those numbers?

Mr. Mello: Yeah.

Chair DuBois: We said there were going to be field observations and is that going to happen?

Mr. Metzger: Yes, that's been part of the process too.

Chair DuBois: Ok and then towards the end there was qualifying the total benefits in terms of, I guess the different options, right?

Mr. Metzger: Right, we're -- again, where we are right now it trying to develop data to help make decisions when – reflect back to the first presentation today. One of the first things that happen, if you recall, the went from six to two alternatives and they could analyze those two alternatives much more precisely. I think that's kind of – we're kind of at that – we still have a long way to six but many more than six on the table so it's kind of – we can certainly do that but – to put that into context is more challenging.

Chair DuBois: I guess a part of (inaudible) conversation about when we do that.

Mr. Mello: If we were to do a benefit analysis now we could calculate the benefits of grade separating all four or two or three.

Chair DuBois: Yeah. Well, I am concerned that at the community meetings there's this talk about well if we separate we're going to attract more cars but without any of this benefits analysis. Again, -- and some of those are if we grade separate one place and none of the others which is probably an unlikely scenario. I do think maybe the all four-grade separated or maybe some just even high-level estimate on benefits would help too because right now it's kind of all impacts and no benefits in these discussions. Then again, supplying some of these charts with kind of intersection and travel times. I didn't and maybe I missed it, there's a lot of stuff here but did -- we talk about in the original scoping looking at travel times for different trips. Is that something that we do later on?

Mr. Metzger: We can pull that out for these six scenarios.

Chair DuBois: Ok so again, I would like to echo the comments about looking at Garmin or Urban Engines or some of these other kinds of GIS type data. It would be good to know because I think more of these data sources coming available how expensive are they really and are there opportunities to work with? Some of these companies early on and kind of pilot mode where we might get data at lower cost.

Mr. Mello: So, MTC has already bought all of the INRIX Data and INRIC is a consolidator of Garmin data and other GPS and that's available to us. The issue would be finding somebody who could analysis that for us and presents it in a way that's usable and legible. Nadia, I think had a great idea about using some of our local resources to make that happen.

Chair DuBois: Ok, great.

James Keene, City Manager: Could I make a comment? I don't know I hope you guys are feeling good. You know I'm sort of feeling I'm going to be stuck in a traffic engineering colloquium for the next 2-years, which is like my worst nightmare so I mean that's my disclosure from my starting point. I do know something about how to help drive public process is to make the best decision as possible and that is as much about being able to translate and communicate between different realms. I feel like we're kind of off track in that regard. I mean I think all of the comments about the questions are really good except we can't even do a typical Palo Alto question process where we have twenty different questions from all over the place and we just put them together and say go answer these twenty questions. Some of them may be contradictory questions or some of them may be off point. I just think we need to think about some way where we can also focus some of the Committee's work which the Staff and consultants have to support that is a little bit slower and more focused about one, clarifying the problem definition explicatively so we're all sort of clear. Even so when we get comments from other folks, we can also say are you redefining the problem or are you on board with the same thing? Secondly, how do we identify the core questions that really do need to be answered? In some way that before we go off and do some of the work, the Committee I think in one sense understand here's a problem, here's the kind of questions we clearly want and then ultimately for the community to be able to sort of identify the parameters of what are the acceptability or the values for the kinds of choices in improvements we're going to make? I mean I'm just left with the impression that between now and the Council break that we're going – we need to focus on how we can bring all this back because I mean even though I think you guys have even asked some very specific technical questions,

unless I'm miss reading things, I don't think we're on a track to get by in about knowing where we're going. I feel like we're moving point to point right now and we'll get the next bit of information and we're going to – and there isn't a sense of where we're going. I think that's what the whole question is about getting clearer. The last thing I just would say is we have this – it was interesting one of the first speakers who spoke talked about the sessions we have that have people who go who don't know much of anything and people who are much more informed and experts. Yet I think the whole challenge we have in this whole process is that we both need expertise but then we need the average citizen beginner's minds sort of folks who are going to have to live with and/or except politically the choices that you're going to make. I think we have to give some more thought to how we bridge that piece of it too, which I think in some ways means that the expertise realm needs to be translated into something that's more understandable by the Committee first of all but certainly than the public. Then even when the comments or criticism we get needs to get more focused in that way. I think your question was right like what's the specific alternative to help us out? Otherwise, I'm quite concerned that we'll be asked to go and Josh will keep modifying one approach and one study. Then we'll get criticism and we'll kind of go ok, we got the criticism and we'll try to fix that but we're never getting to the real directive and that's what I sort of heard from the Committee. I just want to put it into my own words because I'm feeling that we need to go back and figure out and I think that may mean some schedule adjustments too, to be honest with you.

Chair DuBois: I mean I think I didn't really hear it that way. I thought Eric made some good points, you know we're looking at four separations, we've got this circulation study, it seems like one of the four was not really analyzed yet and so…

Mr. Keene: I think that would be really good if the Committee could get also clear that's – if these are the parameters that we really want to focus on, let's be clear about that verses – my impression was we're still jumping around a whole bunch, maybe I'm wrong.

Chair DuBois: I think we're – I think the good thing I'm hearing is we're starting to think about well what happens to Embarcadero? I think the point about turn lanes on Alma is really good. It's something that only been evolving in my thinking but again, we have four grade seps. We need – we're starting to talk about scenarios and trying to get there but if we don't really have data on Churchill, I think we're uncomfortable about making conclusions. I guess the question about where do we go from here, I mean

the Staff was asking are there additional scenarios? I also appreciate you saying you're bringing stuff to us in rough form early so I think part of today is really kind of feedback on how do we want to refine this? I don't think it's – I mean I think your points are well taken. I think people have said well what's the problem we're trying to solve but I do think there were some real issues with some of the methodologies here that we should address. When we do get into the community, we have a smart community and they are going to bring up these issues as well so I don't think we can just skip over it.

Mr. Keene: I'm not disagreeing with that, I'm just telling you I'm not hearing that degree of clarity myself. I mean I understand it but I mean I think we need to be thinking about how we're thinking about how we package this to speak to – let's say even if you had to speak to the whole City Council right now. I don't think it's going to be enough for – well, anyway. I think we need to put more emphasis on how we really get clear and start almost every meeting, every presentation, let's restate here's the problem we're trying to solve, here's the approach we take very explicatively so that all four of you are at least at the same place. We know if you ask to follow up questions, we know how to do it. I mean right now – this is no criticism of the Committee or any of us, I'm just acknowledging – I'm just saying right now we got a bunch of stuff. It still feels like it's going in the black box which is Josh and our transportations folks. We want to go back and do some stuff and we'll come back and we're going to report to you without ever building any sense of the context itself of really what we're trying to achieve and how far we are. I'm being a little philosophical right now, I apologize for that but I think that there's some sort of really kind of focus on policy and clarity that we need to do a better job of doing so that the technical issues clearly flow from what the policy directives are that we have. That's not on the Committee, I'm just saying it's work that I think we need to do on the Staff side too. Now Ed actually is a traffic engineer (inaudible)

Ed Shikada, Assistant City Manager/Utilities General Manager: According to the State of California.

Council Member Filseth: So, it's your fault.

Mr. Shikada: There you go. (Inaudible) utility player as we like to refer too. I feel like I ought to be sitting to the left of Jim so I can do the left brain to your right brain. So, maybe make a suggestion and see if this might work in terms of how to proceed and I definitely agree that the discussion of the

Committee and with the community input and the Staff perspectives has been really valuable. Maybe as a little bit of a baby step toward next step might be, as was discussed framing the question and I think one of the key questions that have come up is what is really the impact of closing Churchill if that were one of the scenarios? As Josh pointed out that would be one of the next steps in the modeling analysis. That could be a very useful exercise in the reality check going forward because clearly, that's one of the key questions that the Committee and Council and community as a whole has on the table with respect ultimately to making decisions on what to do with the rail rights of way – right of way and grade separations. If you could kind of bear with me for a second, if Staff were able over the holiday break and maybe go after the first of the year, take that step and come back with what is the modeling exercise. It's not exclusive to the model, right? Any modeling exercise has the -- what the computer spits out and then what the professionals say well, that's not right. We need to tweak that some so that it actually has some reality to it but let Staff do that with our consultants. Go through that step and then to come back into what I think will be – if I could break it into a few phases of what we have ahead of us. So, if – one of the key questions is what is the implications of closing Churchill to autos in particular? You know we haven't even gotten into the bikes and peds. but to get to that question. Ultimately, we're – the Committee and the community will need to get our heads around is one, what are the impacts of closing Churchill? Then two, what are – how would you mitigate that? Whether it be the whole left turn, right thing – turn thing, what happens at Embarcadero and elsewhere. Then what are the implications of that mitigation. All of which, if you take in sequence, may lead to other questions and other areas of concern or what have you. In each one of those steps, there will be the basic communication of what is analysis showing us and needing to reach some level of understanding of that both in this small group, Council, and community as a whole. There will be scrutiny to that and disagreement probably on whether there's agreement on what that analysis shows but that's also a part of the public process. Again, there needs to be a reconciliation on people ultimately saying yeah ok, I can understand what it's showing and either I think it's way off or it's close enough to be able to get to the next step; which is ultimately some decision making around what the analysis is showing and what implications it has on our interest and willingness to do things like widening Embarcadero or even consider the closure further. I do think that there needs to be a bit of a leap of faith or barring with the analytical process to then lead into this community process of again, we agree with it. We disagree with it and based upon that agreement or disagreement, what is the next step beyond that? I don't know that that's avoidable quite frankly and I do believe that if we are able to a

certain extent take stock and again not just full steam ahead, darn the torpedoes but to be able to continue to take some steps with the analytical tools that we have and also look at where we might be able to bring other tools to bear.

Council Member Filseth: Just up the level a little for me, I mean I actually thought this was really helpful. I've been thinking about this problem and I appreciate the comments from CARD on this. You know I think this is going to be a little bit of an interactive process so as far as – the sense that I get from the City Manager worried about us getting into this endless spiral of engineering models for ultimate precisions and so forth. You know I'm not terribly worried that one. I think we're capable of managing our way – managing our process so that we don't do that. So, I actually thought this was, all things considered, good stuff.

Mr. Keene: So, let me just two things actually. I didn't think you were only on the left side of the brain there actually but even the – I'm not thinking just about how the Committee and the Staff are working. I mean this ultimately has to lead to a decision that is not only the Council's accepts but the community in some form is ultimately going to except because some of the other -- at least in my group of problems and issues are we're going to have to get a bunch more money than we have right now in some way which is going to mean we're going to have to have some sort of real support and by in ultimately. I'm not saying that that's the answer but that ultimately means not only do we kind of get to a point but we have developed a process itself about how we made the decisions and why. That it will then we much easier to communicate those to people who are not embedded in this process right here and that's what's going to be key. That's what I'm feeling like we need to just build some more discipline and clarity there so that we get you all on and we can also communicate with the public. Even when we had the workshops, they can be even more effective or whatever vehicles we use so I wasn't complaining about today at all. I was just trying to talk about how we move forward. One thing that I might say with what Ed said is maybe we do just decide, we'll talk with our experts here too, do we just – do we take Churchill as just a little case study model for us to demonstrate how what's an existing condition? What are some of these alternatives? How does that play out without us having to do the (inaudible) of four – oh no, four plus three changes. Oh, not just that there's Willow Road. What – oh, Facebook is going to build stuff and we're gone to have more people coming up University.

Chair DuBois: So, I know Josh wants to catch a train.

Mr. Mello: (Inaudible)

Chair DuBois: I was watching the clock there. I was going to try to attempt a Motion and I don't think it's just about Churchill so I'm going to throw this out there. The part of the Staff request was whether we should look at some initial scenarios so I would move that we fix the analysis of closing Churchill and that we add a scenario that has four vehicular grade seps. including Churchill which was not analyzed. We haven't really talked about Palo Alto Avenue but I would suggest that we may be evaluating the modeling they're considering some of the new projects in Menlo Park and that we leverage the Stanford GUP transportation data which is new. If we can use that in the model or Staff can explore leveraging that data. Then the last one is that we move the discussion of the bike/ped effects to a future meeting.

Mayor Scharff: There's a lot in there, (inaudible)

Chair DuBois: Yeah, I'd like to have some discussion but – yeah?

MOTION: Chair DuBois moved, seconded by Council Member XX to recommend the City Council direct Staff to:

A. Fix the analysis of closing Churchill Avenue; and

B. Add a scenario including closures of the four at-grade crossings; and

C. Evaluate modeling a closure at Palo Alto Avenue; and

D. Utilize Stanford General Use Permit (GUP) data; and

E. Continue the bicycle and pedestrian discussion to a future meeting.

Council Member Fine: Can I just recap the main points I've heard from you. So, one is moving the bike/ped discussion, two is include a separation study at – including Churchill as one of the separations. What were you talking about…

Chair DuBois: Fix the analysis and closing Churchill based on (inaudible) (crosstalk)

Mayor Scharff: Well, I don't know what that means, fix the analysis.

Chair DuBois: Well, we've heard that the model didn't model it correctly.

Mayor Scharff: We have – we don't know what that means to fix it. We don't know if that means – so what I heard them – I heard something different of what they already said they were going to do. If you're – I want to hear from Josh what they planning on doing and whether or not that's ok with us as opposed to go fix it.

Mr. Mello: So, we will focus our attention on the Churchill – the link that's modeled for Churchill in the travel demand model and we'll do what we need to do to get it – to validate – to get it to reflect real-world conditions this year. Then we'll assume that going forward it will continue to reflect real-world conditions.

Mayor Scharff: I mean is that what you meant (inaudible). Then what did by—you know I love the City Manager's suggestion about coming back and using Churchill as a test case and doing that. Is that in there or is that not?

Chair DuBois: I'm not sure what it means to be a test case. I mean this is just an early version of this report so I think we should come back with a refined version of this report.

Mr. Keene: I'm not defending that suggestion but I did want to say what my thought of a test case isn't to drive it from beginning to the very end of whatever would happen. It would be a way for us to be able to see how it is that we actually really assess choices and trade-offs in a way that, at least from maybe my dumber perspective, gets easier than looking at matrixes that have unlimited possibilities of combinations on those.

Mayor Scharff: So, I like that.

Council Member Filseth: That's how I interrupted that and I think it makes sense.

Chair DuBois: But again, what do we – this is not – this is six scenarios in our circulation report. It's an early draft so how do we get to an improved draft that includes multiple scenarios?

Council Member Fine: I think it does include Churchill as full separation potentially but I'm not sure where the test case of Churchill goes.

Mayor Scharff: Maybe testing is the wrong word. Maybe like a refined – maybe understanding it (inaudible).

Council Member Fine: I just think, as Tom just mentioned, we are refining these scenarios and I think one of our comments is Churchill should be considered for that, as should Palo Alto Avenue. I'm just not sure what this one stream of – that you guys are getting on.

Council Member Filseth: Well, here's how I thought of it which is you know we had a bunch of discussions on Churchill. We know that our assumptions and predictions of Churchill are not dead nuts on accurate, that's very clear. The question is, are we that far away or are we that far away? I have not idea so I assume that what I read in the City Manager's comment is let's try it and let's get a feel for are we in the ballpark or not in the ballpark and so forth. That will give us better guidance on where we are on all the other ones too.

Mayor Scharff: That's what I was…

Mr. Keene: I think we start to replicate that and then deal with it when you've got multiple variables. I mean…

Council Member Filseth: Pipe cleans a little bit.

Mayor Scharff: I associate my Council (inaudible) articulate colleague.

Chair DuBois: So, I'm not even sure we're disagreeing. I think we're saying similar things but again, we hadn't really – we focused a lot on Churchill. I don't think it's the only issue and so kind of – I think there may be…

Mayor Scharff: Well, it's clearly not the only issue. That would be the overstatement.

Chair DuBois: So, I brought up Palo Alto Avenue and again, we have so much fresher data I guess from the Stanford GUP so (inaudible) (crosstalk)

Mayor Scharff: I think Palo Alto (inaudible) is the least one we should focus on. I actually don't think we should call that out (inaudible)(crosstalk)

Chair DuBois: But again, I think we may be missing a lot of the recent changes Menlo Park did and it may be like Churchill where we're not modeling it correctly.

Council Member Filseth: I'd pick one and try to exercise that.

Chair DuBois: So, we going to get a second draft…

Council Member Filseth: This isn't right anyway because Palo Alto is blocked there so there's not going to be a lot of traffic there.

Chair DuBois: When you guys say pick one, we're going to have an updated draft of this report that only updates Churchill, is that what you're suggesting?

Mr. Keene: I don't even know if there's an updated – I don't mean to mislead you. I'm trying to think ahead to data visualization in ways we start being able to communicate about what happens when we do something. I mean I can't imagine a bunch of, I'm not saying this is just for the general public, going and having this conversation with the general public and showing a chart like this and having it be meaningful at all. We have to, at some point, say for example here's Churchill. Here's the existing thing and we've gone out and looked at why people make decisions and they do stuff. Ok, here if we go ahead and we make this choice and that choice, here are the implications we see on how ques are going to change, here's how we're going to see displacement and that's just one correlation.

Council Member Filseth: He's talking about a pretty narrow exercise.

Chair DuBois: No, I know. I'm just trying to say that this action item is our circulation study. I think you're talking about our community engagement process. Why are we mixing these two together right now?

Mr. Keene: So, because I also heard criticism from our public who also has an expertise about the approaches that we're using ourselves and how do we start using some overlays or other perspectives. All of which is sort of valid but I know we're going to leave here and Josh can say we can incorporate them. There's a lot of work that's involved there.

Mayor Scharff: So, without a Motion, what is Staff planning on doing? That's really the issue so that's what I want to know.

MOTION FAILED DUE TO THE LACK OF A SECOND

Mr. Mello: So, what I would like to do based on what I heard today and this can differ from what the Committee would like us to do but I would like to add a 7th scenario that includes full grade separation of four grade crossing, including Churchill. Run that with updated data. First, we would update the date for using what we have from GUP – form the GUP and from – we'll do updated counts for Churchill on a day when school is in session. Then I would like to add an 8th scenario that is closing Churchill and that would be the only change from existing conditions and run that and see what the results are of that and that would let us look at what the impacts would be to Embarcadero with updated data from Churchill. Then as we move forward, we're going to continue to model different things as we explore different alternatives.

Chair DuBois: The thing about – so, I'm good with that, that was kind of my intent. The only reason I was suggesting moving bike and ped. was because of your time constraint so I don't know if we want to try to continue on that.

Mr. Mello: I don't know that you want to get too deep into that. It's just basically bicyclist are inconvenienced if you close a crossing in their travel time increases. There's nothing really groundbreaking in that section so it's up to you if you want to spend time on that.

Mayor Scharff: The other thing that I'd like to see in these studies which I thought Burlingame did good is what are the different times of impact of construction? You know B was 4-years and A was, I don't remember, it was 2-years but I think that's a huge issue as what does that look like and what does that do to our traffic? What does that mean if it's a 10-year process, 2-year process?

Chair DuBois: Yeah, I mean I had a bunch of questions about noise aesthetics. Again, this is a circulation study so how much do we bring in other – this seemed like another topic to me.

Council Member Fine: So, just stepping back to kind of focus on the City Manager's comments here. If we're thinking about this as a public process and where the community input is, this one piece of that, it's our circulation

study. I like Scenario 7 Josh because it's not precluding any options from our community. I think that's kind of the important part of this one piece of our input design, that we're not backing anything out yet. Then yeah, in scenario eight sure, go look at closing Churchill but we're also looking at undergrounding or tunneling or whatever we want to do at Churchill as well in seven. I think that's the important thing.

Mr. Keene: Yeah, if I can just say one thing? I think the Mayor's comments were really good. I was thinking about – that's a whole other future problem which is we're going to model all of these alternatives which are sort of the future completed end state. The reality of it, you guys are going to be living with the more near-term problem of the angry community during the construction process of whatever it is we're doing and how do we model and figure out ultimately in advance what the traffic shift and scenarios are going to be as a result of that. That's down the road but for – depending upon the option a year, 2-years, multiples of years, that's going to be the world as we know it in Palo Alto. So, something – I think it's – we need to be thinking about that because traffic circulation during construction is going to be an issue.

Mayor Scharff: That's what I was going to say, I think that really does impact circulation as we go through it. So, I mean if we close – if we were to close Alma for instance for 4-years, that's a huge issue.

Mr. Mello: So, we – you know we're going to bring forward a suite of alternatives to you early next year and one of the initial screening criteria that we'll have is construction impacts.

Chair DuBois: Ok so to finish this item off, do we need a Motion? Do we basically just ask Josh to follow up on what he says he's going to do?

Mayor Scharff: Yeah, I would support the Staff recommendation.

Chair DuBois: So, just all in favor? Ok, great.

MOTION: Mayor Scharff moved, seconded by Chair DuBois to recommend the City Council direct Staff to:

A. Develop a seventh scenario including:

i. Separation of the existing four at-grade crossings; and

ii. Updated data including Stanford GUP data; and

iii. Updated Churchill Avenue data; and

B. Develop an eighth scenario with the only change being closing Churchill Avenue.

MOTION PASSED: 4-0

3. Review and Provide Input on Draft Community Questionnaire #2.

Chair DuBois: Ok so let's see how far we can get through the rest of this agenda. The next item is a review of the community questionnaire.

Hillary Gitelman, Director of Planning and Community Environment: Good morning.

Chair DuBois: Morning.

Ms. Gitelman: I'm Hillary Gitelman the Planning Director and I think this is going to take us right back into a similar conversation about where we are in this process. We, I think decided early on that we weren't going to run a typical engineering project where the engineers sit in the back room, decide their three alternatives and we go forward and we're done with those – analyzing a limited number of alternatives. We decided that we were going to reach out to our community before narrowing the group of alternatives and we've been in the process of doing that through these roundtable discussions of bring people together to talk to each other about what all the possible options are without knowing a lot about impacts but just making sure we get all the ideas on the table. The idea of sending out a questionnaire at this point in the process is similar. We want folks to, first of all, give us any ideas they have on the questions we've posed and we'll learn something from their responses. Second of all, we want folks to also understand just how complicated this process is, how many moving parts there are and get them kind of engaged and excited about participating as we move forward and start to define and narrow the alternatives. We have made some changes to the draft questionnaire based on the comments we've heard at the last meeting but we would like to proceed to post this,

get it out and try and get responses to inform the Council's decision – the Committee's decision or recommendation and the Council's decision on a small group of alternatives to move forward with. We're teeing up that conversation with the Committee and the Council early in the new year.

Chair DuBois: We have one member of the public, Elizabeth Alexis.

Elizabeth Alexis: The questionnaire looks largely unchanged from last time so I would just – any comments that we had last time, I would add them. So, first, a grade crossing is a crossing where it's at the level. That is just a train crossing so we – in the introduction, I would –I think it's confusing people. What I really want to talk about is, I mean I think we said very strongly we thought there wasn't a lot of purpose to this kind of questionnaire at this point. What I think there would be a purpose for and I'm sorry that Jim just left because going off Jim's idea, is if we wanted to talk about Churchill for instance. What would be interesting is to say to people well, we did this traffic – a standard traffic model and it told us that nobody uses Churchill and clearly people are using Churchill. We want to understand a little bit more about why you use Churchill when you would use Churchill, and what would you do if Churchill was closed? How would you get from Stanford to wherever? The other part to talk about with – if we're talking about Churchill, you're talking about Alma and I saw vision zero language and if we have vision zero in Palo Alto, we are going to ban left turns onto Alma from Old Palo Alto unless there is a stop light or some kind of protected lane which there is not in Old Palo Alto. That is the other place that the Churchill – for instance if you close Churchill, you would – the light – a lot of people actually don't use the light at Churchill to make protected turns onto Alma. They just make a left turn out of where ever they feel like it but if you closed it and you ban turns, then you might actually see a lot more traffic on Churchill at the other part. Which by the way, we can talk about this later but the traffic model we are using is never going to show this so we need to talk to people. I mean this a place that we can actually get some data is talking about scenarios and how would you do that and you could target some of these, especially for people who are living in Old Palo Alto. I mean when you're talking about Churchill, you're talking about turns on and off of Alma and you know it's possible if we get the big – the data from MTC, we'll see that people are actually using Churchill even if they are going much further south on Alma. I mean they may be using Alma all the way to Mountain View or someplace else, in which case they might be able to make that turn on Charleston or something else. We don't know yet and I think if we're going to use a questionnaire, I think the current questionnaire has all the problems and faults and like what are you really getting out of it

but using it to really start to talk about Churchill and maybe even Alma/Palo Alto. I mean that seems to be useful.

Chair DuBois: Ok, any other Committee comments or questions?

Mayor Scharff: So, we're talking about the questionnaire, right?

Chair DuBois: Yeah.

Mayor Scharff: I'm sorry, yeah, I'm trying to gather my thoughts on the questionnaire. So, on question nine, I think it could be better drafted. I mean what are we trying to get at? It says if resident (inaudible) has to be taken for the construction of grade separation, that's pretty clear but then, we should consider the best (inaudible) whether or not they involve impacts. Impacts is different than taken and so I mean I'm just thinking we should just say. Then question number B, question number B bothers me or answer number B bothers me a little bit on that in that I'm not sure there are any options that don't involve taking some property unless you're doing – especially – unless you're going to trench under – not trench. Unless you're actually going to tunnel under the entire thing and so I guess the question is there – well, we have that. We don't know if that's feasible yet so it's sort of – I don't know how to deal with that issue frankly but I mean obviously you would rather take none. I think the implications of this question is even if other options were not feasible, should we not take private property. I mean because I think your other question gets to the issue of we should – if all – you know we should consider feasible options but prioritize those (inaudible). So, I don't know, I'm not sure what the answer is but I feel a little uncomfortable with the way that's drafted. Anyway, that was my concern. Again, we're doing this because we're getting a bunch of pushback every time we send out these questionnaires. That they are not helpful, I don't have enough information, I don't – do we think it out – do we still think that the benefits are outweighing any negatives we get on this?

Ms. Gitelman: You know we do. I mean we're getting people at these roundtable discussions who are very knowledgeable and/or live very close to the crossings. I think we're going to try with this questionnaire to reach out to people beyond that group and bring them along a little bit and I think their answers to these questions if they are willing to answer them, will be useful.

Mayor Scharff: Sounds good.

Chair DuBois: Eric? Adrian?

Council Member Fine: (Inaudible)

Chair DuBois: I mean to Elizabeth's comments, I think it's a little tricky because I think we're trying not to talk about particular scenarios yet but we have questions where we mention closing Churchill. So, I was trying to think how you would ask a multiple-choice question about why you're turning onto Churchill? I don't know if you guys can think of a question that would capture that idea of where are people going. It seems like a tricky question and nothing is coming to mind for me. The other one is question ten, still, we had a lot of discussions last time about asking people how old they are and having the little emoji smiley face. You guys felt like we should retain this question?

Ms. Gitelman: You know I think the main function of this question is that people taking the questionnaire will think that yeah, you're right. God, this is going to take a long time and we also can use this to understand if we're getting responses solely from one age group over another or if we're getting a diversity of responses.

Chair DuBois: Yeah, I thought maybe – yeah, I understand why we are asking. I think there's the other aspect of it too which is this is a long-term infrastructure change to Palo Alto and I think you're trying to get people to think of it that way. Again, I don't know if the rest of the Committee doesn't really a concern, I'm just concerned that the way that question is worded still isn't the best.

Council Member Fine: So, agree on question ten, I mean if we do want the age, we should just ask people how old you are rather than thinking about how old you are in 2030, we'll get the same data. Overall, I'm still – I think this is a bit of a miss of an opportunity in that we just had this big discussion of the circulation study and there are other studies and finance papers coming up. I think the survey is an opportunity to kind of include folks in that if we're going to be doing a survey like hey, have you read the City circulation study to look at traffic stuff? Hey, did you check out the tunneling paper that showed X, Y, and Z? This just, to me, feels a little lightweight. You know just saying like hey, there's going to be trains, are you worried about traffic congestion? What do you think we should do about it? I'm not sure I completely see the benefit and there are downsides to getting this kind of survey out there early on.

Ms. Gitelman: Well, I'd be interested to hear what you think the downsides are. I mean we're also going to be in this bind of when is the perfect time? Do we have enough information and do we have the right information to get people to weigh in? I think we can certainly and will certainly want to do questionnaires later in the proposes when we know more and we can drill down specifically into options and questions related to the studies about specific grade crossings. We're sort of not quite at that point yet but I guess I don't see the disadvantages to trying to include more people in this process by asking this level of questions at this point but I'd be interested to hear if you do.

Josh Mello, Chief Transportation Official: This is the second of several questionnaires that we'll be administering throughout this process. The first one we got over 700 responses.

Council Member Fine: I guess the downside is one, there is a bit of – there's a risk that you probe people when they are not fully informed of all the work we've done, the work we're going to do. So, they say like oh my god, the city wants my opinion about what we should do about the 100-year project and so there's a risk there. There's also a risk that we could be communicating what others perceive as preconceived notions. So, even like question six, which I don't think it terribly helpful, what about the considering the addition of a new grade-separated crossing for peds and bikes? Right, people might say like oh my god, the City is going to spend money a bike and ped thing, I don't think that's worth it so there's that risk too.

Chair DuBois: Yeah, I think -- what do you guys think about adding the question of have you attended any of the rail meetings? Yes/no? I think it would be good to separate people that not come to anything versus some that have come.

James Keene, City Manager: Just listening to the discussion, one of the things that make me think of is the work that James Fishkin does over at the center of Deliberative Democracy and where they basically deal with deliberative polling. They make the point very often that when we do a poll, we're often polling people opinions about where they are, what they know and they can be very often very uninformed. Then the using processes of engagement and context and information sharing where you can have huge swings of where people are -- twenty-five points even though that sort of a process moving from one position to the next. I think one of the things that

this does is that if people aren't really that informed -- I mean in one sense it gives us – in one sense it's the only thing that maybe gives us is where people are in a more uninformed state. We have to ask ourselves is that useful or not? I mean it may be, it may not be and we always do run the risk sometimes. Even when you poll or ask, do we lock people in in their own mindset into a perspective prematurely also. We need to think about that.

Chair DuBois: Let's – I mean to that end it may be good to have a consistent question of basically trying to measure how far along they are in the educational path.

Council Member Filseth: Yeah, I think you're going to spend – if you're sending it (inaudible), you're going to spend – some people will understand this stuff and have been to the meeting and understand. Other people are going to go what's a trench? So, some of this is a way too detailed for them and other things like taking the trench off the table if it costs more than we can afford with the available regional, state or federal money. I mean one of your risks is of people reading this stuff and go why are you asking me this?

Mr. Keene: I would say one other thing that we may have our own perspective but I mean you all are also the ultimate representatives of the public and this is a public poll. I think your perspective on doing this or not doing this does carry some special weight.

Chair DuBois: So, you guys want to send this off tomorrow right? Yeah.

Mayor Scharff: I'm ok with you sending it out. I mean, to be honest, I'm not excited about it but I mean you're the professionals. I defer to you guys on this and I mean I do think that Adrian puts on a good point. I mean the problem is we have super smart citizens, I get this thing and I think it's like stupid and (inaudible) but I know a lot about it. What you're really trying to do is to reach all the people that really are not paying attention and getting them to think and I think that's really allottable and worthwhile goals. So, if we get ten percent more of our citizens to start focusing on this, oh yeah, and just start thinking and being engaged, we've done something positive. That's why I support it.

Council Member Fine: I think that's a different purpose those. If we're trying to get folks engaged and increase that engagement factor…

Mayor Scharff: I thought that's why we are doing it. No, really, I actually thought (inaudible).

Council Member Fine: Then why don't we just send a letter and say hey, we're doing this and by the way, we're looking at these three different things…

Mayor Scharff: Because this interactive and no one reads letters. I get a letter and you know where the letters go, in the recycling bin.

Council Member Fine: I don't know, I think there are different purposes here.

Ms. Gitelman: What we're really trying to do in terms of getting people engaged is also people tend to think when they haven't gotten deep into it oh, this is just so simple. There are only three real options and I could reel them off right now but when they start digging into these questions, I think our hope is that they will understand there's (inaudible) there.

Council Member Fine: There could be that so I think Tom's point about adding a question have you engaged this process before is really helpful. Then it may be nice to preference this with saying the City is doing this big project. Just so you know we're doing our homework and we've got and just link off to the other studies that we're doing. Say hears the circulation study that's a draft, here's the finance study that's a draft, here's a construction study that's a draft.

Chair DuBois: The last thing at the end, are we giving them the option to put their email on the mailing list to get invited to future events? So, I'm kind of where Greg is, I think – and the idea of bringing people who haven't been paying attention is a good goal. Hey, you know, we're kind of lukewarm on the questions but I think we can differ to you guys on this one.

Mr. Keene: Can I just throw one other thing in here? I don't think we have unlimited opportunities with the community to ask the questions. I mean there is a point where it is, is this going somewhere? Is this evolving? Are you asking me again so I'm sort of rethinking on our side too. I mean is this…

Mayor Scharff: You know I'd be fine with you not citing them out. I mean if you guys have – look, I don't really like this – these questions. I mean I

don't think the information they provide us is useful and I wouldn't base any decisions on it because I don't think people have enough information. I think the questions are too simplistic. All of that so I think the information we get could be totally misused. I – If we're going to have to – if – I do hope at some point we do have more of a –once we have a sense and we've narrowed it down to some – where people could actually make decisions within a constrained environment. I'll give you an example, I'm looking at the (inaudible) cost estimates on the next one and saying why are we even talking about a cut and cover tunnel if we can do a twin deep-bore tunnel for a lot less money. I mean it's probably much more complicated than the reality is but the point is that I think if we only have a limited opportunity to do that, maybe we shouldn't it out. I differ to you guys on that, I mean whatever you guys think is right.

Ms. Gitelman: You've provided some good input. Why don't we huddle and we'll either we will or we won't do it this week and if we send it we will make the changes that you've recommended.

Mr. Keene: If we don't send it out, you're not going to be upset either.

Ms. Gitelman: I think we do – just sort of as a larger observation, I think we have set ourselves along a process where we're trying to bring you information that's not – you know studies that are in draft form, work as it's being done and this is kind of part of that effort. We could just stop doing all this extra work and bring you the studies when they are completed, only ask questions when we have all the data and I feel like this is a larger question that we maybe need to tackle in the new year. Maybe take another harder look at our…

Mayor Scharff: No, no I think you guys are doing a good job and you know – I mean you know there's a tension between that, right? You bring stuff that's not fully and we're going to give you a hard time about it but if you hold the data, we're going to give you a hard time about it too. No, I think – we think you're doing a good job and you know I think it's much better, this process. You get it out early and imagine if you went through the whole process and you held the data and you came back. Then we had CARD over here stand up and say we – look at the Churchill data. It's much better to get this out now. I mean no one is holding it against you, its just much better to do it now.

Chair DuBois: I think that's the conclusion of that one.

NO ACTION TAKEN

4. Review Draft Rail Financing White Paper.

Chair DuBois: So, we do have a hard stop at 11:00. Do we think we can get through this next item…

Mayor Scharff: I think we can get through it. We can always continue it but lets at least get the Staff presentation.

James Keene, City Manager: I mean this is more foundational background information starting point.

Mayor Scharff: I mean this fascinates me. I'm ready to make a decision on the (inaudible). I'm ready to go between (inaudible).

Council Member Fine: The whole way?

Mayor Scharff: The whole way. (Inaudible) tunnels.

Chair DuBois: I think we should do quad (inaudible) (crosstalk)

Mayor Scharff: (Inaudible)

Josh Mello, Chief Transportation Official: Are you ready Chair?

Chair DuBois: Yes.

Mr. Mello: Today we are joined by Jason Moody who is with Economic and Planning System incorporated. They are a sub to Mott Macdonald who is our prime contractor and Jason is going to give you an overview of the working draft of the finance paper that was released last week. The planning again, this is an early release, hot off the presses so we're planning to leave the comment period open for a month before we finalize the draft so this is a working draft. We're open to any kind of suggestions on additions, subtractions, reanalysis that you may have. With that, I'll turn it over to Jason to get started. Yeah, no there's also a trenching and tunneling paper that's in the works and we're nearing the release of that. We anticipate that will be released before the end of the year. That will have more information on how the cost estimates where derived that are included in the finance

paper. If you have any questions about the estimates though, Chris Metzger is here and he's working on the trenching and tunneling paper so he will be able to give you some information on how those estimates were developed.

Jason Moody, Economic and Planning Systems, Inc.: Hi, my name is Jason Moody, I'm Managing Principle at Economic and Planning Systems and we have prepared a working draft white paper on the various financing tools that you might utilize to help fund these various options. What I want to talk about a little bit is the context for this analysis in this white paper, quickly at the cost scenarios we looked at, and then the various financing and tools that we considered. The purpose of this is really to provide some initial understanding of what various costs are for various alternatives and how you might finance them with the understanding that at this point in time both of these are moving items. Costs are moving items and the financing is a very moving item as well. With regard to the financing side of the equation, we use readily available information and relatively standard assumptions with the notion that once you've kind of decided this is something that you'd like to look at further, we could drill down and get that better information on some of the assumptions that would drive the relative funding that you could get from one of these sources. We could provide a whole bunch of financing like tools and options with the goal of casting a very broad net. It's probably likely that some of them are mutually exclusive so you might not go out and do two things to the votes that basically do the same thing. Also, that some of them may be politically infeasible, I don't know, that's not for me to determine but we threw it out there anyway. Of course, finally, the funding landscape is always changing with legal environment and politics and business cycles and what not, people with an appetite for raising taxes can change and same with the state and federal stuff. Obviously, it changes depending upon a variety of factors. When we looked at these very preliminary cost estimates that were developed by Hatch Mott and looking at essentially one, two, three, four, five options as you see there and then individual grade separations kind of individually. So, we have a high and low and again, these are a very preliminary number but you can see that the very high end is $4 billion dollars and then you have the individual numbers at the bottom. You have the twin deep bore tunnel which is actually less than the cut and cover which is something someone mentioned but we wanted to show you everything. Any questions on these costs?

Council Member Fine: Why is Palo Alto not included (inaudible)? Palo Alto Avenue?

Ms. Gitelman: No, if I could, I was hoping that Jason could run through the money side of it like how we could generate funding and then we can come back to these. I mean this was a kind of an initial…

Chair DuBois: Just super quick, did you include any property taking in any of these estimates?

Mr. Moody: I'm not – I didn't do cost estimates so both of those questions are not for me.

Ms. Gitelman: I know – I'd like to get Jason through his presentation and then we'll ask Chris to come up and give you some background on those.

Mr. Moody: Again, these costs numbers are very preliminary so they are not – the idea is that it's really difficult to have a financing discussion without talking about what you're trying to finance so I just threw this in. Not my – these are my numbers but I think…

Mr. Keene: Could I just help you out on this though too? I think it would be a mistake at this stage, at any point, for us to get fixated on these numbers. This is orders of magnitude, this just basically says boy, there's a whole range of stuff and then we start to look at what the potential funding sources are. It pretty easily starts to put in perspective both what the yield is as it relates to a potential problem. Then you have to deal with the political and the public exception issues and those sorts of things. I think anything more than that is not the expectation of the Staff bringing a draft paper to you that is a prelude to more strategic work you're going to have to do. Good, thanks.

Mr. Moody: Thank you. So, first, we looked at – we divided the funding options into – as you say the white paper, two main Chapters. One is kind of state, regional, federal stuff that are really kind of outside of your control and then the others are City of Palo Alto things that you could do. With regard to the City of Palo Alto thing, the one – the biggest one is raising taxes which generally requires a vote. There are basically three different things you can do there. You can have a general tax which it doesn't allocate anything, in particular, fifty percent approval rate. Those can be hard to approve because people don't like just giving you a (inaudible) and do whatever you want with their money. There's a special tax which tells you what you will do with the money and that's a sixty-six percent, two-thirds supermajority of voter approval. Then there's this thing called the A/B

Strategy which is sometimes confusing but they do it in order to get around trying to get the threshold which is advisory measures associated with the general tax. Voter-approved the property tax bond is by far your biggest bang for your buck and we show the various assumptions that we would do on the right here. That would be followed by – there's a bunch of other ones and they are all based on assumptions. For example, it looks like utility user tax would be the next highest, although I would point out that you already have a pretty high utilities user tax so that might – the high end may be a little bit optimistic. Parcel tax is there and additional sales tax is not bad either. You can get on the high end which would be a quarter percent increase. You can get $60 million dollars from that. Any questions about these funding mechanisms and assumptions behind them or anything?

Chair DuBois: We'll let you finish and then we'll ask questions.

Mr. Moody: Ok. Value capture tools, this is the idea that this – these improvements are providing value to property owners, particularly – not only property owners, the residents. You want to try and capture the value that they get through a funding mechanism that would essentially – I think the classic example is an air rights situation where you provide land and then you basically sell the land and you take that money to help fund the improvements. There are many different ways of doing this, incentive zoning and other ways of doing -- and giving people right to build higher etc. These are the -- you generally justify these value capture mechanisms with the notion that there are some improvements and those improvements include things like improved access and circulation in nearby property owners, new development opportunities, and potential to do sound or visual impacts you might get. We – this is just a map of some of the calculations and we had to assume some sort of benefit and this is kind of what we looked at. We could go broader, smaller but this is just a visualization. We looked at nearby properties. We kind of looked at three different ways or actually, five different ways in which you could do it. I kind of lumped a bunch of stuff in here. The development agreement approach – and in each one of these, that one you had to assume some sort of new development would occur but would you be able to capture a portion of the value. So, we would say under a lost scenario that you get 500 units or – and plus 100,000-square feet of new square footage development versus the high end 2,000 units and 750,000-square feet in development. This is kind of – development that is somehow enabled by this, it could be air rights or it could be right near a property the City controls or something along those lines where the developer gets kind of above and beyond what they would normally get. If it's buy right and they can do that anyway, you're not going to be able to

capture those – any value from them. Then Enhance Infrastructure Financing District is a new tool that we basically use tax increment funding and that's – that is based on the increased and assessed value. So, one we had a three percent annual increase in the assessed value. Over time one was a five percent average increase in assessed value just as for lesser purposes. The Mello-Roos Community Facilities District, that requires a vote to approve. Property owners or residents within the defined area and we just had a couple rate methods, $200 a unit to $600 a unit – residential unit or 1,000-square feet. That was the rate that you would assume the tax. Development Impact Fees, you are already in the process of doing a Development Impact Fees. Number – already has some numbers in there associated with grade separations and improvement. So, we looked over a 15-year growth period or 20-year growth period to get the high/low there. Then I put this one in, although maybe it's not a value capture technique but it's one we quantified which is the Caltrain Fair Surcharge which is essentially, somehow, maybe you can get – you'd have to get Caltrain to agree to it that you could charge people leaving from – most likely leaving Palo Alto a charge to help pay for the improvements that they are getting when they get on Caltrain; at twenty-five cents to a dollar.

Mayor Scharff: So, which ones that?

Mr. Moody: That's the last one, Caltrain Fair Surcharge.

Mayor Scharff: We can do that?

Mr. Moody: Well, you'd have to get agreement from – it would have to be – it's a complicated process but…

Mayor Scharff: Can we put a toll (inaudible) Palo Alto you have to have $5 per car?

Mr. Moody: This – believe me, there's been a lot of ideas thrown around that weren't even included here so that was not by far the most farfetched but it is something that we threw in as something that you might consider. Now, again, this is this broad net concept that I'm doing right now so you guys can say don't go there.

Mr. Keene: I just want to protect you're here a little bit. I mean this is just to be able to identify what our – have been used, have been talked about, whatever. We're not advancing any recommendations, please.

Mr. Moody: Other sources that we talked about but didn't quantify local parking fees and we could quantify these if people really want us to go further. Transportation network company fees which would basically be an Uber lift. I don't think you get a lot of money from that. Roadway user fees, you just mentioned this one. This is electronic kind of charging to – and it could be done. It hasn't been done in California. It's like congestion pricing, it hasn't – none, no one has had the (inaudible) I guess to go forward with that one but it's not to say that it couldn't be done. Then utility right of way fees, again I don't think that's going to generate a lot of money. We just threw it in there as an idea. Then we looked at selected state, regional and federal sources, one of which is already out there, Measure B and we just took a range of what you might generate from that. This has already been – this information is pretty much out there so we know the Measure B will be generating money. They've allocated money for grade separations and this is the amount, between $350 to almost $400 million depending upon how you interpret it. The problem with this source, as you probably know, is it's accumulative. It comes every year and you're not really bonding against it so you don't get the money up front which is one of the problems. Section 190, this is another source of funding that's particularly for grade separation. We made some assumptions about how much you might get from there. Obviously, it's not a lot, it's between $2-$5 million. This last one is the most unknown of all, how much will High Speed Rail Authority help you out here? We know the High Speed Rail Authority is going to spend money, they obviously will make that connection to San Francisco. The real question is will their money be kind of a based case and what you're doing is above and beyond that and they are not going to pay any of that or can you create some sort of intersection where you're helping them and they are helping you and how much can you get? Then there's another – there are a variety of other state and federal sources that we didn't quantify because they are really hard to predict. They are competitive, they are pollical cycle type stuff but they are very real and we've seen a lot of examples. For example, TIFIA is one that's quite commonly used and it's a good one because it's a loan program that you can pay back with other general fund sources. So, if you are able to – Measure B for example, that money is coming out over time. Maybe you get a TIFIA, you get that money now and you pay back the TIFIA with Measure B so you are able to advance your funding a little bit. Obviously, there's some financing cost you need to consider but it is a way of getting money sooner, which is really critical in something like this so you don't wait for 25-years before you get the money to do what you want. That's it.

Mayor Scharff: Alright, great presentation.

Chair DuBois: Alright so we have two members of the public, maybe three. First speaker is Elizabeth Alexis, followed by Nadia Naik.

Elizabeth Alexis: Thank you very much. That was actually incredibly useful information and by the way, I may be teaching a class on transportation finance so call me. Yeah so, I mean I found this very helpful I think both in the context of sort of scale and scope and just a comprehensive look at the different kinds of ways to pay for things. I also found it very useful to see the comparison on where we're kind of high, where we've sort of tapped out our resources and where we have available money to go. Obviously, the two things that I would look at our property tax. That's obviously something that's an interesting possibility and combined with the fact that the School Board actually just restructured the way they are collecting taxes. They are actually decreasing they're – between now and 2022 or 2023, they are going to be decreasing from about 80 whatever .008 to .06. There's actually some room there I think to assess. If we want to pay for it, that's a pretty straightforward way to do things. The other place that I thought was very interesting was on the business license tax. I don't know – you just looked at 10-years and looking at San Francisco, they seem to have a lot – they are charging a lot of money per employee and they still seem to have a lot of companies that want to set up there. I mean that one seems to me that this number could be ten times more than what's even in this estimate and if you wanted to find a way that both business and people share the cost, that seems like a nice kind of combination between property taxes and businesses. The other thing that I would say is that I think looking at – I think it was very helpful to see just even in our City finances the difference between a few hotels provide as much tax because of TOT, we get all of it, versus sales tax where we only keep one percent of it. That really what we should be doing is we should be doing value capture next to both Cal. Ave station and the Palo Alto station and we should just build a ton of hotels, for real, I'm not kidding. Stanford will need these for all their conferences, you get the TOT and you get a little value capture. Anyway, those are things that looked very real and interesting. What?

Mayor Scharff: I say that all the time. Put that in the Comp. Plan.

Ms. Alexis: Like it should be in the –Ok, Eric, I'm totally with you. Why are we not building more hotels? I mean – and they are actually very expensive and terrible places to stay and my friends are always on my couch because they are like I can't find a place to stay in Palo Alto. So, we would actually reduce – yeah, they could stay close to Stanford without having to cross our grade cross or grade separations. No, for real, I thought this was very

helpful and useful. The only comments I would really have is why just looking at 10-years verse 30-years on both the sales tax and the business license tax and why not looking at kind of the whole range on a San Francisco level?

Chair DuBois: So, Nadia followed by Tony Carrasco.

Nadia Naik: Hi so I'm going to be the dark rain cloud this morning. I was not so happy to see the Daily Post run the article on Wednesday which you may or may not have seen if you were in town but unfortunately the Daily Post is now online as well. So, the headline was Rail Things Could Cost as Much As $4 Billion. Now I know that these are all draft numbers and don't mean anything and it's just a ballpark and it was just for the point of a presentation but that's not helpful. Your biggest concern is not having the community feel like we have prebaked the alternatives and we continue both in some of the things we sought, even in the community meetings that we've had. I don't know if anybody noticed because I know these alternatives by heart so I kind of didn't pay attention but my neighbors brought to my attention, we don't have any aerials in any of our analysis anywhere. Not on the baseball cards, not on the bingo cards so in the minds of those people who could be affected by emanate domain, trenching and tunneling looks crazy expensive. Moving the road means emanate domain and the City has not looked at the alternative of actually having any kind of aerial. I'm not saying that's what they might like….

Mayor Scharff: (Inaudible)

Ms. Naik: Aerial structure, we didn't look at an elevated of any kind. Not a berm, not an aerial, it's not in there. Now we changed our guiding principles to say we're open to all alternatives, we're actually not doing that analysis. I thought his comment at the beginning of his presentation was really interesting. He said this is really hard to do when we don't actually know what we're solving for and this is a theme. You heard the traffic study and you're like you know, I don't know how much more money we should throw at this traffic study if we don't know what questions we're trying to answer. Then in the survey, you know I don't really know if we should send out a survey if we don't really know what questions we're trying to answer. Guess what, that's what CSS was supposed to do. We were supposing to say hey, let's define what our problem is really clear. Let's really figure out when you do a traffic model, what are we trying to find out for? If we're going to do funding, what are we really going to try to fund so that we could get people

to give money into this? So, I'm just saying, if this is CSS, I don't think it's working the way it's supposed to and we might want to reanalyze whether we're actually doing CSS properly. Thanks.

Chair DuBois: Tony Carrasco and then Peter Taskovich.

Tony Carrasco: Hi, Tony Carrasco of 583 Glenbrook Drive in Palo Alto. I also wanted to compliment you on the report. It was a good first pass at understanding the problem. It's grossly generalized but I think we get a picture of where it is. I'm not going to just focus on the value capture side of it. I think it's underestimated by about five times and that's a big number. It should go – I think it should be instead of $235 million, it should go to a billion and here's why. The first issue is that of what you've captured is ten percent of the value of the building, which is the buildings in Palo Alto – A Class A building is conservatively $1,200 per square foot so you get $120. It should be higher closer to trains but let's say using your numbers – using general data it's $120. What land sells for here close to the train station is between $400-$500 per square foot. I think our view as Palo Alton's is we are creating that value, we creating that land, we are creating – we take the impacts from that land. So, I think we should be taking a fraction of $500 per square foot and I would say use eighty percent of $500 a square foot and I'll tell you why. If – as a developer, I purchased this land and I get the land twenty percent cheaper – less, I'm making five percent more on my profit, clear – that simple. So, I would use $400 -- $350-$400 number instead of $120 number. The second issue -- and that gives you four times what you have. The second issue is downtown lots – downtown – a block in Palo Alto is about 100,000-square feet, 400 by 250, approximately 100,000. At four-stories, 50-feet high, we get 400,000- square feet. What you've estimated here is approximately a million square feet in rough numbers. The are contains about five to six blocks, let's say five so that's about twice as much or one and a half time as much as you've estimated. Add fifty percent and so I say it's five times less than what you have so we should be at about a billion dollars in value capture on building on that side. So, that's it and if you can drill into that side of it, I'd appreciate it.

Chair DuBois: Alright, Peter.

Peter Taskovich: Just a quick note about the impracticality of the Caltrain fair surcharge. Most Caltrain commuters, unlike Bart, use monthly passes and they are zone to zone based pricing. Palo Alto is Zone 3 and that includes all the Cities from Atherton through Sunnyvale. So, there's really no

way – they only tag on once a month, at the beginning of the month for the monthly pass so it will be really hard to capture that. I mean for occasional users who don't use a month pass, that could work but the main commuters, they use monthly passes and they tag on once a month and might not necessarily be – they don't tag on in Palo Alto unless they are commuting from Palo Alto to someplace else. They will probably tag where ever they living and go to Palo Alto so that's very impractical.

Mr. Moody: (Inaudible) is based on departing from…

Mr. Taskovich: Yeah but they don't tag – they don't capture them. Monthly users only tag on once a month, the beginning of the month and then – with their Clipper Card and then they don't tag on and off at all for the rest of the month.

Chair DuBois: So, we need to stop the meeting at this point so I would move that we continue this item, unfortunately. I think it was a good start and I hope you can make it back for when we finish this item. Ok and conclude that meeting adjourned so thank you, guys.

MOTION: Chair DuBois moved, seconded by Council Member Fine to continue this item to the next Rail Committee meeting.

MOTION PASSED: 4-0

Agenda Review and Staff Update

~~5. Receive and Review Rail Program Briefing Paper from November 2017.~~

THIS ITEM CONTINUED TO A DATE UNCERTAIN

Interagency Communications

None.

Next Steps and Future Agendas

None.

ADJOURNMENT: Meeting adjourned at 10:59 A.M.