

Middle-Mile Advisory Committee
November 17, 2021
Meeting Recap and Transcript

The Middle-Mile Advisory Committee met on Wednesday November 17, 2021 at 1:02 pm PST via virtual conference (per [California Executive Order N-25-20](#)).

Agenda Item 1: Welcome and Overview

Council Chair Amy Tong welcomed Council members and attendees, a quorum for the meeting was established, and Chair Tong provided an overview of the meeting agenda.

Member		Designee	Present	Absent
California Department of Technology	Amy Tong		X	
California Public Utilities Commission	Marybel Batjer	Martha Guzman-Aceves	X*	
Department of Finance	Gayle Miller		X	
Government Operations Agency	Yolanda Richardson		X	
Department of Transportation	Toks Omishakin	Janice Benton	X	
State Senate	Lena Gonzalez	(Ex-Officio Member)	X*	
State Senate	Mike McGuire	(Ex-Officio Member)	X**	
State Assembly	Sharon Quirk-Silva	(Ex-Officio Member)	X*	
State Assembly	Jim Wood	(Ex-Officio Member)	X	

*Arrived a few minutes after roll call.

**Left a few minutes early due to scheduling conflict.

Agenda Item 2: Executive Report Out

Mark Adams provided a project update. [SB 156 \(Chapter 112, Statutes of 2021\)](#) requires the California Public Utilities Commission (CPUC) to perform an assessment of where the network needs to be developed to address need. The process includes a public proceeding, which was completed in October. CPUC staff completed an initial assessment of 18 locations and are in the process of reviewing additional public comment and developing a broader map of the statewide need for the open-access Middle Mile network.

California Department of Technology (CDT) asked CPUC if there were areas identified where

network development could begin before the broader network map was complete. CPUC staff identified 18 locations that had been assessed and met SB 156 requirements for determining need. The 18 projects are moving forward and will provide CDT, the Third Party Administrator (TPA), and the California Department of Transportation (Caltrans) an opportunity to start work several months earlier and learn about building, design, leases, and connectivity to inform everyone about subsequent projects.

The 18 initial projects will provide experience in geographically diverse locations; benefit urban, rural, and tribal communities; support earlier connectivity for several communities by connecting the core to last mile locations; take advantage of Caltrans co-build opportunities and project readiness at Caltrans, and allow CT to work with the TPA to explore the mechanics of lease agreements such as IRUs

Mr. Monroe reviewed the initial location map with Committee members and noted the process moving forward is that:

- Caltrans will begin its pre-construction work, including design, surveying, permitting, and environmental.
- The TPA will begin reaching out to providers and operators to explore options for IRUs.
- Also exploring options to remediate supply-chain issues and get ahead of potential competing demands among states.

Chair Tong called on Committee members for questions and input. Secretary Richardson, Senator Gonzalez, Senator McGuire, Assembly Member Wood, and Assembly Member Quirk-Silva made comments and asked questions. Mark Monroe and Tony Naughtin responded to questions.

Agenda Item 3: Project Updates

The Third Party Administrator provided an update including definitions of Middle Mile, an explanation of the Middle Mile Development, how last and middle miles connect to the global internet, and how Middle Mile development work will happen.

Rob Osborn provided the CPUC overviews of the Open Access Middle Mile Page, preliminary Middle Mile locations, broadband deployment proceeding, and Middle Mile public comments.

Elizabeth Dooher provided a Caltrans updating explaining how work is authorized, and projects are developed and constructed.

Chair Tong called on Committee members for questions and input. Senator McGuire made comments.

Agenda Item 4: Public Comment

Public comments were provided by:

- Sean Taketa McLaughlin.
- Jorge Pacheco.
- Melissa Slawson.
- Cole Przybyla.
- Frank.
- Patrick Messac.

Closing Remarks

Chair Tong called for Committee Member closing comments. Assembly Member Wood, Ms. Guzman-Aceves, and Ms. Miller provided comments.

Ms. Tong thanked Committee members, staff, and attendees and noted the next meeting is on December 15, 2021.

The meetings finished at 2:20pm PST.

(meeting transcript attached)

Transcript

Good afternoon, everyone. Welcome to the Middle Mile Advisory Committee in November. We are very excited to have a lot of progress and but don't want to steal any thunder from staff for report. So I'm anxious to get this meeting going. I wanted to also welcome many of the public attendees for continue to participate in these public meetings is exactly this type of across public process we need to make sure that we hear feedback directly and gather input. I wanted to hand it off to Jules if you can go ahead and do a roll call to make sure we have enough member to get this meeting going.

Certainly Miss Tong. Yeah. Commissioner Guzman-Aceves. Miss Guzman-Aceves for President Batjer. She maybe a little late. Miss Miller. Here. Miss Benton designee for Director Omishakin. Here. Secretary Richardson. Here. Senator Gonzalez maybe running late because RSVP'd. Senator McGuire. Here, good afternoon. Assemblymember Quirk-Silva. Assembly Member Wood. Here. So we do have a quorum. A couple of friendly reminders for presenters if you could please queue the slide operator to board your slides. For attendees. We will post the videos and slides usually well within a week of the meeting. And for everybody if we could refrain from public comment until the public comment period at the end of the meeting. Madam Chair, it's all yours.

All right. Thank you, Jules. And for the advisory committee member just so you know that I believe that the team is trying to make sure that we are pinned upfront so that because if there's a lot of attendee and you know, a lot of windows as rooms get shuffled so that if you have your videos on you, you will know that it will be pinned at the beginning of the, or the top, so it's very visible. With that, let's go ahead and advance the agenda today and I'm going to hand it off to staff for an update. Mark, you're up.

Good afternoon, everyone. Mark Monroe here with CDT and I am I am excited to be able to announce an important next step towards development of the statewide Open Access middle mile project. It remains a high priority for CDT, the administration and our partners to identify where development of the middle mile to begin both because the federal timelines are very short and because we want to start verifying the mechanics of the project and learning how to move quicker in the future. Are we, are we on? Should double check make sure we are on the next slide, yeah great. For Caltrans, this means using the alternative contractor methodologies such as design build and job order contracting that were provided for an SB 156. On a much larger scale than they've previously done. For the third party administrator or the TPA, this means reaching out to industry partners and providers to identify and quantify the opportunities available in the state for lease alternatives such as indefeasible rights of use or IRUs to make us take use of existing infrastructure both for immediate connectivity and as the longer term solutions prior to building. Go ahead and go to the next slide. Right so as I think we're all aware SB 156 specifies roles relative to the middle mile project and specifically it provides for the Public Utilities Commission staff to hold a proceeding and take public comment and assess the data gathered to map the areas of the areas of need in the state. The public comment period concluded in October and PUC staff are currently in the process of assessing the data collected to develop the broader statewide map by the end of this year. And so this is going to be the tool that CDT will use to develop the broader system and go to the next slide. As noted the federal timelines associated with the middle mile funding requires us to have all of the funding under contract by the end of 2024. And to have this work completed by December 2026, to meet these timeframes CDT wanted to pursue a first round of projects to the extent that they could be identified for SB 156 to better understand what would be involved in developing the broader statewide program of projects. So to get some early project started CDT reached out to PUC staff to ask whether following the public comments initial analysis, staff had identified any areas where the state could begin developing the middle mile network early ahead of the broader mapping effort. PUC staff were able to identify 18 locations

that it had determined would be necessary and would warrant pursuing ahead of the broader completion of the broader mapping effort. These 18, these initial 18 projects will give CDT, TPA and Caltrans the opportunity to start working on these projects ahead of the scheduled statewide map and this will give us the opportunity to learn and verify our understanding of design, construction, lease and connectivity needs that we have for the state. For Caltrans this will help establish design permitting environmental and contracting processes that will be used for the broader project and for leases, this will help the TPA and CDT understand what is available and learn how best to develop a system that incorporates a combination of builds and initial IRUs. Go to the next slide. So, the initial 18 projects on this initial list will be valuable to the state and the larger overall project by giving us experience in building in diverse geographical locations throughout the state, creating the framework to serve tribal communities as well as urban and rural areas supporting earlier connectivity for several communities by connecting the internet core to last mile locations and then taking advantage of opportunities to build fiber infrastructure as part of existing transportation projects as well as Caltrans readiness overall and in some areas to just begin standalone projects that will end up being part of the broader system. And this will also allow CDT to work through the third party administrator to better understand the opportunities, mechanics, and costs associated with leasing existing infrastructure through vehicles such as IRUs prior to building out the broader system. So you can go to the next slide. So, this is the first step is noted that the 18 projects identified have been reviewed by staff to verify need pursuant to SB 156. This is just the first step many more projects will follow in the months to come following completion of a broader statewide map by PUC staff anticipated by December 31 of this year. So for those who are looking at the map and immediately try to identify whether a project is included in their respective areas. As we all naturally we want to be clear that these 18 initial projects are not meant to exclude anyone or to understate any community's need. They just reflect the areas where enough work had been done by PUC staff to move forward early and give us these learning opportunities. We have more than 8000 miles of the state owned Open Access middle mile network to develop and we want to get started as soon as possible due to the federal deadlines but more importantly because there are many California households that now need broadband for work, education, and health care like never before. So we're going to go ahead and pull up a map here. And Isaac on our team will go ahead and show the map. And then following that we'll have a moment for a little time for some questions.

Hey, Mark, I just as Isaac is bringing up the map. I just wanted to call out and acknowledge that a committee member, commissioner Martha Guzman Acevez has joined as well as Senator Gonzales and we also wanted to do a special recognition although not a committee member, but assembly Aguiar-Curry is also part of attendance. So welcome, alright.

So I think we have a map showing up here. All right. There we go. So we can see there. I believe it is a golden color. You can see the 18 projects numbered north to south. Obviously starting up, up in Siskiyou. And moving down the state, some did split between desert areas and mountain areas, urban, rural and some good proximities to some area, some tribal areas with needs and so wanted to kind of take a moment to walk through each of the projects and just to give people a little more detail. So if Isaac if you could move into number one there and we'll start talking through them. Here we have up in Siskiyou the build project where it's between 40 and 50 miles along Highway 3. Then down to project two, we have the Plumas area. In Plumas and Lassen, we have about 120 or so miles between or along highways 36 and 89. And then project three in Lake County there we have another fairly sizable project where we'll have over 80 miles along highways 20, 29 and 175. And I think those will make up to some potential. Also tribal projects that are there in the works in terms of last mile. And then project four and Colusa area will have little over 20 miles along highways 5 and highway 20. Then project five there in Alpine County. That's, that'll be about 20 miles along Highway 88. And project six in Amador County, running from Jackson Valley to Sutter Hill and Jackson, about eight miles along highway 88. And then we have a three mile

segment there in Calaveras County along Highway 4 between Copperopolis and London Park. Then in Project 8 there and Oakland flats we're looking at several different sections along international Highways 185, 580, 880 and 980 that total about 20 miles and this is where we'll have third party administrator be exploring some alternatives here to understand you know whether building makes the most sense or what kind of IRU options are available and they'll be presented a little later today to talk through kind of their process. And project nine in the Central Coast there it's about 80 miles along highways 35, 101, 25. And with looking at some options along 152 and 156 as alternative routes too based on some public comment, we'll be doing some more analysis there. And this is again where we'll have the third party administrator do a little assessment there to make sure we're making the best use of existing infrastructure and doing the right mix of build and IRUs. Then we can move to project 10. And that's there is West Fresno. This is another, looking at a little over 50 miles along highways 33 and 180 including South Dos Palos, Kerman, Mendota, Firebaugh, Tranquility and San Joaquin. And then moving down to project 11 Inyo County, so, little over 30 miles along Highway 190. And this again would be a Caltrans build. Then out in Kern County we have a little over 50 miles along highway 178 from Bakersfield to Lake Isabella and Weldon and moving to project 13 in Kern in San Luis Obispo counties we have about 30 miles along Highways 33 and 166. San Luis Obispo, Santa Barbara County, Taft, Cuyama area then moving to project 14 we have in San Bernardino County about thirty miles along Highway 740 or 247 rather. And project 15 in southern, South Los Angeles area. We have close to 60 miles of mostly Caltrans builds along highways 105, 110, 91 and 710. And then in project 16 we have down in Orange County and the Inland Empire we've got about a little between 30 and 40 miles between highways 22, 55 and 91. Out in Coachella Valley for projects 17, we have between 20 and 30 miles along highway 111 and then project 18 in San Diego and Riverside counties we have around 150 miles that we expect along the Caltrans build along Highways 371, 79, 76, 67 and 78. So, altogether we're looking at you know this this initial project phase being including between eight and 900 miles and so I think that's the broader map that we have to present. So I don't know if folks want to get a final view of it. Then we can move down to the slide number eight. I'm assuming that we'll want to pull up the map for later so keep it handy.

All right. Thank you, Mark. And, Mark, I don't know if this is your final slide. Before we open up to questions, I want to make sure before we move to the next speaker, I wanted to give the committee members an opportunity to ask questions.

Yeah, so this this here, so it should be the last one.

Okay.

All right. So go ahead and call and let's go ahead and unshare the screen so we can see everybody unless you need to keep this up for any reason Mark.

Nope.

Okay. Let's go ahead and begin. If any of the committee member wants to ask a question, please raise your hand and use the symbol or physically raise your hand. Let me see, start with Secretary Richardson.

Thank you very much, Madam Chair. Really appreciate that presentation. Congratulations really want to applaud the efforts on getting this initial list of locations ready to go and presented to us today. My question is what's the process and timeline for the next selection of locations?

Sure. So as I think we mentioned PUC is in the process of really doing this broader analysis taking into account all of the public comment. And so we're anticipating by December 31 of this year to

have a broader map. And that would be that would really inform the kind of the next, the next stage and given the timeframes. We expect a lot of projects to start rolling out in first quarter of 2022. We just don't have the time to not pursue that. So so as folks looks at look at this map and are concerned about what they don't see, you can be reassured that as soon as we have that broader map we will be moving forward with a lot more projects than this.

Thank you. Let's move to Senator Gonzalez.

Yes, thank you Chair Tong and thank you, Mark for this great presentation. My question was on a couple of the locations I believe. More specifically number eight and nine with Oakland and Central Coast, you'd mentioned that the third party administer administrator was going to provide alternative options. I know that may have been based on some of the public comment during the PUC committee hearings, but I'm wondering if there's any other criteria that would have triggered additional options and what that looks like?

Well as we approached you know, we look at the overall 18 projects, maybe about two thirds of them are just direct Caltrans building, right. And so and that's, that's part of the great nexus of this project is that we're going to be able to do that. And so, combination of existing projects and other places where Caltrans is ready to build, when you look at some of those projects that you mentioned, Oakland and the Central Coast or West Fresno. We didn't have there weren't places necessarily where Caltrans was ready to jump right in at the same time we thought there might be some opportunities to with existing infrastructure they want to explore as well. And so that seemed like that opportunities is not to say that we won't necessarily or we're not going to build there, we plan to build everywhere. But we want to also look at what kind of early wins we can get, what kind of connectivity is out there, how much it costs and kind of really what the mechanics of that are so we can make informed decisions in those areas.

All right. Thank you. I know two more hands raised but I do want to acknowledge that simply, Member Quirk-Silva has also joined we have a full committee. Senator McGuire.

Thank you so much, Madam Chair. Thank you, Mr. Monroe for the in-depth report. Grateful for the work. But I think bottom line on these initial projects would look at this as a critical first step. And there was a commitment there was a commitment made by the legislature a commitment made by the governor to move with speed. And these first projects are following through with that promise to be able to get high speed internet deployed to literally tens of thousands of unserved and underserved Californians and so I want to acknowledge the hard work to be able to get this moved as quickly as possible. Mr. Monroe, I'd like to be able to dig into these projects here a little deeper, and then also talk about next steps and timeline. So one, know that the Public Utilities Commission has their own process when it comes to last mile projects. These 18 projects are all middle mile. Will there be coordination, understanding that the PUC has their own process on decisions related to last mile projects? How do you see coordination with these middle mile projects, working with the PUC as we move forward so that if at all possible, those unserved communities that don't have the resources deploy last mile would be able to get the dollars? And once they're hooked up to the middle mile can move quickly? Mr. Monroe or miss Miller?

I don't know if any thoughts on that.

Yeah, sure. So I will point out that we have some members from the Public Utilities Commission that will be speaking a little later. So they can kind of speak a little more probably to their process. Yeah. But similar to the public process that the PUC held for this middle mile segment. They're in the process of doing something similar for the last mile projects. Yep. So I think, you know, certainly these early middle mile projects, you know, well, I can help inform that. But I think really,

we're waiting in terms of that connectivity. As you noted, that's really, it's largely a last mile effort. And we have kind of a separate funding process and package for that. So, but I also think it's also important to note that you know, as we, as we build this middle mile, there is an expectation that, that this is also going to create, you know, a market really to kind of change the market to make it more affordable for providers. So, you know, there's obviously the \$2 billion in the package which is going to go to fund a number of these last mile projects, which is really important. But there will also be other projects, and I know that the PUC can speak more to kind of the market mechanisms here. But, but clearly, if, if the state covers the cost of making middle mile of building middle mile and is able to make it accessible and affordable for providers and making open access, then that also is expected to create more of a motivation for providers to get involved in last mile markets and to go ahead and build out there knowing that they can connect to the state middle mile without having to bear the cost of building room.

Yeah, yeah. 100% I was just gonna say Madam Chair really quickly is I agree with you on that. And there's not gonna be a one size fits all, especially for some of these more rural communities and I don't ever want to speak for Assemblymember Wood or Assemblymember Aguiar-Curry, Quirk-Silva or Senator Gonzalez, but I think if we take Lake County, for example, which by the way incredibly grateful for, we take a look at how many unserved households they have how critical this project will be. And many of these communities have challenges with their economy. And that's why I think as we move forward, how there could be respecting the public utilities commission process, I want to continue to say that how there can be coordination on some of these last mile projects. If there's a community that has a social economic disadvantage that we can work with them if we're not going to see a last mile provider coming in. My last question, madam chair is on the issue of timeline of going out to bid. Mr. Monroe you want to do a little bit of a deeper dive on the bidding process. And when do you think these bids will go out for the build out of these middle mile projects? I know you may be talking ballpark today, but if you can give us some timeline potential.

Yeah, absolutely. So you know, in terms of, again, we have Caltrans going out and really going out to bid for these contracts. And that's key because this is something they have a defined and robust process and, you know, good relationships with contractors. Their process is more shaped around building highways than this and so SB 156 provides for some streamlining, for some for environmental work and for contracting for you know, using methods like Job Order contracting and design build and some others and so, those given that in the past and Caltrans has usually anticipates 36 to 48 months between the time we decide to go forward to go through all of the pre-construction work, their design, the environmental and whatnot. The anticipation is with the authority provided in SB 156. We're hoping they can cut that in half and so you know, really looking for you know, I don't want to I don't want to put numbers in Caltrans' mouth but we can understand that we're hoping to get most of this started in under two years. But I mean, that's very intentional and please

Mr. Monroe, this will be my last comment under 156, of essentially waiving that sequel within the right of way meant that we're going to be able to expedite projects sooner rather than later. So I know that this is going to be a project, a pilot project, make sure that this is all working, which I'm grateful for, and do appreciate the work of bringing these recommendations. Forward.

Thank you. Thank you, Senator McGuire. I didn't mean to interrupt you earlier. I just wanted to make sure a commissioner has a chance to chime in to your first question regarding the PUC process, if you choose to do so.

Thank you so much madam chair. Yes, thank you. Thank you, Senator McGuire for the question because it is really this. It's a very exciting opportunity for those very reasons. And you all in the

legislative package gave us a tremendous amount of tools. Everything from the very beginning of the technical assistance grants to local governments to really identify needs, start doing feasibility to those local governments who are and tribal nations and others who are ready to kind of go the service route and do low loss reserve opportunities to capitalize on that. So I think, in addition, you're funding us for a new approach, which is the case management approach. And we're particularly excited about using that more directed action for the federal funding, the last mile, funding CASF is also a great example because we are in fact, with these pilots capitalized, optimizing those CASF last mile builds. So there's going to be a tremendous opportunity to really target those chronically unserved areas, like those ones around Lake County that you talked about, bring in that local capacity, and now even fund them to have some resources to develop those further routes themselves, distribution in the community, and partner with new or existing providers to bring forward those projects. So it's absolutely what we're looking forward to, particularly on our side of the equation is how to now really take advantage of this opportunity.

Madam Chair, could I follow up 30 seconds, Madam commissioner on that specific issue. So know that you have some process that you're working through in regards to future cast of grants, which are grants that would go towards build out of last mile in communities. So you see, and I understand I want to respect your process and understand it's a separate process and what's happening with the middle mile. But you, you would agree of trying to, especially in those underserved and unserved communities, molding these two processes together as if at all possible to ensure that means it may not afford a low cost or no cost loan, at least get the dollars to better deploy.

Absolutely. And we're doing some of that with some of these pilots themselves, and saving those projects and leases on those projects' funding because we're going to actually now use Caltrans to help build that piece of the puzzle. So yeah, absolutely. That's, that's part of the goal.

Thank you so much.

Thank you really good dialogue. We're gonna move to the next committee member Assemblymember Wood, but before that, I just want to remind the public this is a committee member opening comment period and question period, there will be public comment period at the end of this meeting. So if you could refrain from your comments until that time. Thank you. Assemblymember Wood thank you for your patience.

Thank you. And thank you for the presentation. I just want to understand a little bit more about the 18 projects are was were these chosen because these are Caltrans projects that are going to be moving that are already are already in process and the fact that there is going to be need in those areas is was that the criteria here?

Yeah, I mean, it's a combination of criteria that we you know, we can we want to make sure you know, for us you want to do six, we don't get ahead of the PUC's process. So I think that's the first key criteria is where did we have enough analysis done and, and public input into to be able to use to make sure that we were not getting ahead of that process? And then we looked at opportunities for some early connectivity, I would say that of the 12 that are I think we're certain Caltrans would be building. I'm not certain, maybe three or four of them at least have some existing projects in them, but they're much longer than that too, right. So, we looked at areas where you have a project that Caltrans is doing, but they're able to, you know, tack on 10 or 20 miles in either direction, that that has some utility to it. So I think we looked at that we looked at some at some initial places where there might potentially be connectivity. So kind of a combination of things you know, identifying you know what PUC, identified as need, as high-need areas and in a way that was in you know, the we were certain that that was, we were we can move forward with it, and

then looking for opportunities to where we could get some quick wins or just efficiencies from building and where we would need to, which is a good chance we'll need to explore multiple options, such as in Oakland or elsewhere to really see what the best solution for addressing that need is.

So when I see somebody I guess my next question is, how much of this is going to be for middle mile for unserved versus underserved? When I see large swaths of Los Angeles County, Orange County, the Bay Area, I get concerned especially and I'm going to speak for others who might have angst over the maps when I look at the maps and realize I represent the north coast, the single lowest, lowest served area in the state according to my understanding from the PUC and none of it none of these 18 projects touch that. I imagine there's others that feel, you know, that feel the same. So, you know, how much of this is unserved? How much of it is underserved as a percentage and I totally respect that we need to get going on these projects as soon as possible, but Senator McGuire and I don't want to speak for Senator McGuire but I will say for me, we have a huge swath of unserved people who have been waiting for years and years and years and the maps. This these projects are going to give people some eggs.

You're right 100%. Right and we understand that, you know, that's a risk we have we, we, we take on when we when we come out with initial projects like this, that we understand that there is a great need along that that whole North Coast swath and when that's something that we're going to help, we'll be addressing the months to come. But in terms of the split between unserved versus underserved I don't know that we have enough information to really break that make that distinction at this point. We really were just looking at the at the general we'd have, you know, some combination of those two, I think as PUC moves forward with their processes, we will get more information on that split. But we understand there's certainly some areas of the state that have a really great need and there's no intent here to artificially delay anything we just can't get ahead of that PUC process in terms of making sure that we've done we've let them do the analysis they need to do and so as you know, whether it's the communities in your district or around the state, where we're, we can look at it and say what, why am I not there. Understand that's, this is something that we'll be addressing in the months to come. When we have a more finalized, you know, map coming out from PUC staff towards the end of the year, that's really going to be able to help us identify where those areas are. And what I can tell everybody is that in the first quarter of 2022, you'll see a lot more projects than this coming out and we would anticipate those and really prioritize the unserved.

Final point here, Madam Chair, and that is that I guess what I think, reason I asked about unserved versus underserved. These are these are projects that are going to go out they're going to get going. I just get you know, want to be sure that there has been adequate time to look at lease options in those areas that are unserved, maybe there are existing opportunities there. So I just want to be sure that we're not over building and, and, and, and not so that we're not focusing on some of these unserved areas. So can you say that there that this is been looked at that some maybe lease options from current infrastructure that's available? Or are we just building because there's an opportunity?

Well, certainly one of the advantages of you know, as you mentioned, lease options such as IRUs is that the infrastructure is already there, or is in the process of being built already, but to the extent it's already there, then that that has the promise of being able to provide connectivity much sooner. So, you know, I think there is that is part of this process as part of where we want to move forward with, with these projects. Here, and especially those such as Oakland or West Fresno or the Central Coast is that we want to, we want to get a better understanding of the mechanics of that because we want to make sure we maximize those opportunities that has the benefit obviously, as I mentioned, being faster and providing some quicker service there. And, and also to

acknowledge that, you know, when we look at the overall funding for the project, that's that we're going to need to do some IRUs and so that's why it makes so much sense for us to move forward with these projects at this time to really inform that process going forward, as the number of projects and areas really grows.

Thank you, Mark, I want to make sure that I, there are other team members such as the TPA, or you know Scott from the digital literacy the broader broadband for all, you know, feel free to chime in if you guys have any additional information you'd like to offer. I do see two more hands from the committee member and as well as the earlier question about unserved and underserved. I believe that even though it was not the primary criteria but it was definitely considered so it wasn't an area that you know, come you know, not used as evaluation, but that is part of the CPUC analysis that's yet to come. Am I understanding that correctly, Mark.

Yes. Okay. All right. Before I go to the two additional hands raised from the committee members, anything Tony? Scott, you guys like to add especially on the lease options.

Thanks director Tong. This is Tony Naughtin from the third party administrator organization, just simply to say and actually I'll talk about this briefly in my presentation that in every location, we will examine all the build requirements if it's a new build, but we'll also see if in parallel, there's dark fiber option available, and I'll talk more about that in my presentation coming up in a few minutes.

Thank you. All right. Assemblymember thank you for your patience. You're next and followed by Miss Miller.

Did you say Quirk-Silva. Yes. Oh, sorry. I didn't hear that. Yeah, good afternoon to everybody. And I really have been really quite stunned and surprised at how well this process is moving forward. I know that the maps are, I think a little bit kind of like our districting maps where you see it and your immediate thought is to look in your own region to say, Hey, how is this looking? But I do appreciate that we have to get started that looking at not only following what the PUC is doing, but also what Caltrans has already initiated are important processes, as I said at the very beginning in my comments, not today but over several meetings now. Certainly looking at and not only looking at but doing something about the unserved and the equity is always going to be a lens. That's important to me. And I think many others that have pushed for broadband for all. I'll just end with I really appreciate the work being done. One of the things that came up last week at the California economic summit and I was there with my colleague Assemblymember Cecilia Aguiar-Curry and we were actually on a mapping literally paper pin type of not remote paper pin firsthand talking about broadband, and what are some of the barriers, what are some of the important aspects and there were several things noted. But one is that when we talk about broadband, I think in the future, one of the things that we really have to start to a frame is that this is now an essential service, meaning that you know, 10 years ago, a decade ago, maybe even more 15 years ago when people started to be connected. That was a choice. You know, most people kind of evolved into it. First with the cell phone, maybe even you know their desktops, but now for our communities to be educated and also to work remotely as some are doing. This is now essential. So we have to look at that with that urgency and make sure that we don't give access to some and others continue to be shut out. But like I said, I want to thank you for the hard work that's been going on. I'm quite impressed.

Thank you. Thank you Assemblymember Quirk-Silva. Miss Miller.

Thank you, Director Tong, and thank you for these really important questions. I think every time we have one of these meetings that it informs the next phase and that's so important. I really am incredibly proud that that we are early and ahead of schedule. I think that is, I agree

Assemblymember Quirk-Silva it is, it took an incredible amount of work by Miss Tong and her team and everyone on the call and it is an example of the beginning this large scale statewide infrastructure project. On the question of unserved Mr. Wood, I think it's really important that we'll continue to drill down into that. I do want to clarify, I know that other folks will as well that all their projects do represent unserved what we saw in even in the urban areas, and we will continue to be equitable in our in the way that that this project rolls out that there are unserved areas because there are entire swaths of communities that have absolutely no access. So that absolutely was the criteria will always be one. I think that was really important in the legislation, that even in those urban areas, even though they're surrounded by so much middle mile, and there may in fact, be a middle mile that we can tap into to Mr. Naughtin's point that the communities the people in those communities have not had the access to it. So I do want to clarify that for the committee that it's absolutely a priority will remain one and that the issue of unserved is as true in some of the, as we call them digital doughnuts in the urban areas as they are in the world. So again, I hope that's a little bit helpful, but we'll continue to work with, with each of you and really everyone to make sure that we understand that community need that is the point of public comment. I know Miss Tong will talk more about wanting to receive as much of that as we can as we go through all the phases of this project. So thank you again, and thank you, Director Tong.

Thank you, Miss Miller. Any other questions or comment by the committee member before I share my two cents worth? And then we can move to the next speakers. All right, seeing none I do want to pile on the appreciation and first to the team, the entire team. It's a collective team from you know CPUC, the TPA, Caltrans, CDT. As Miss Miller you know, mentioned that as a firsthand you know, watching how this whole thing whole process developed, being very diligent and finding that right balance while knowing that there is a bit of a risk of going forward with a set of initial projects, but it is showing that seriousness and the commitment for moving rapidly on this because we really need to make this happen. And really as Mark has presented, the intention is to learn from this initial sets to better inform how do we go forward with additional phases to come? The other thing is important to acknowledge the fact that the I don't want to use the word rest of the locations because it's actually the bulk of the locations, the complete map that we have received commitment from CPUC. Thank you Commissioner for that to have a complete map by December 31 2021. So looking forward to more after that, my understanding is there'll be additional analysis and that's why as these locations get just going to be on the continuous rollout process for more, more work to come. Last point I want to make on this is that making sure equity you know, it's a constant goes without saying type of criteria, especially when it comes to unserved and underserved. Comments from Assemblymember Wood and other committee members are very, very welcome. And this is exactly the purpose of having this advisory committee is for you to provide this level of advice and guidance to staff as they continue to take these feedback as well as the public feedback to continue to refine the subsequent steps. And lastly, I again, I think we are really at a point that it's very, very exciting. It's a good day, it's a good moment to have these locations identified so we can move the conversation forward and get into an implementation, the hardcore design and engineering that I know the TPA and Caltrans has been long waiting for, to really explore all the options possible to get that connectivity sooner than later for our residents. So with that, let's continue with the next speaker. I think Tony, you're up right.

Thanks director Tong. Yes. The TPA update, third party administrator update. Again, I'm Tony Naughtin with the TPA. I thought it would be useful to start out with just some fundamentals, key definitions we can revisit, what is the middle mile we've talked about this in the last few meetings but just to revisit it so all understand and there are many in this session today who perhaps weren't in the other meetings. The middle mile is the midsection in a network of networks. The Internet, of course is a network of many networks. The middle mile span interconnects, the last mile broadband provider network to the upstream global core of the internet, the global core of the internet is the place physically speaking, and virtually speaking, where the major internet networks

all exchange traffic with one another in a process known as "peering." But the main the main point here is that the interconnect between that global core of the internet and the last mile broadband network and the residential and business users is the middle mile span quite generally speaking, middle mile development in this context really takes on two forms. Development of middle mile infrastructure by means of construction and newly built optical fiber routes, as well as leasing capacity from existing networks, such as dark fiber capacity, and we'll talk a little bit more about that in a moment. We can go to the next slide please. So this is a depiction of a network of many networks, if you will, you can see on the left hand side the last mile which services homes and businesses. On the far right are large networks and destinations on the global Internet. And then between you have servicing the last mile, the middle mile network. And then of course the middle mile network connects through an exchange point to the global core of the internet. This is of course a conceptual overview showing the interrelationship between these networks. It's for general explanatory purposes, but it's important to note also in regard to the middle mile. It also includes regional exchange points which will be developed and built out as part of this effort. Optical switching equipment that provides interactive network transmission and as well, other equipment involved such as inline amplifiers that are used to amplify and regenerate optical LightWave signals over long distances. But many of you may be familiar with this type of schema, but I just thought it would be useful to make sure everybody's on the same page in terms of what we're talking about and differentiating between the last mile, the middle mile, and the global core of the internet. If we can go to the next slide please. So the TPA is already deeply involved with CDT, CPUC, Caltrans and other agency partners with regard to both new construction of fiber as well as the prospect of leasing in other locations. For newly built fiber, we're in, this is an overview obviously, we're confirming routes, which includes an analysis of interconnectivity to last mile, as well as to the upstream core of the internet. We're providing our agency partners, starting with CDT with feasibility analysis, including any options for dark fiber that may exist, even if new construction is called for. We think it's important to review dark fiber options for the reasons that were discussed a few minutes ago. The design process all the way through the final design for construction. We are responsible for as well as oversight of the construction activity while it's taking place alongside our partner of Caltrans for this purpose, and of course, acceptance testing and ultimately activation of an optical fiber span as part of the middle mile in a newly built context. If we can go to the next slide, please. So with regard to sorry, with regard to network development projects, this is the term we're using to refer to middle mile capacity using leased infrastructures such as dark fiber IRUs, what is a dark fiber IRU. It's the leasing of an inactive optical pair that's already in place already built typically by a carrier or some other type of service provider on a given route that we would like to use in the middle mile infrastructure. The concept which is a very long standing concept in the telecommunications industry, is based on the idea of an indefeasible right of use, and that's an IRU agreement that typically lasts for 20 years. The IRU essentially means that the lessee has an unrestricted use of the fiber as if the lessee owns the fiber for the term of the IRU. The lessee in this case the TPA on behalf of the California Department of Technology will activate and operate dark fiber subject to the terms of an IRU agreement. And in these telecom projects, we're responsible for the design and final design toward activation, oversight of the activation engineering work which means termination of fiber and optical equipment, and that type of thing. The acceptance testing and then activation into production status of a middle mile span using dark fiber IRUs. So that's a high-level overview of our activity. And we look forward to working with our interagency partners over and over and over again, during the term of this large program. The largest of its kind in the history of the US internet in order to bring critical broadband services, which are as fundamental as water and power, quite frankly, to all the people of California, many of whom have been unserved or underserved up to this point and I think if there any questions regarding my presentation, I believe those are going to be held until the end of all the presentations. That's it, director Tong.

Thank you, Mr. Naughtin for this. I just want to also acknowledge you for your strong leadership

and partnership throughout this. Really, really appreciate it. I like to do a very quick time check before we have two more presenters from representing CPUC and Cal Trans. I want to make sure that there's ample time for the public comment to take place. And then as those of you who are participating and would like to public comment, please make sure that you use your hand raise signal in about 5 to 10 minutes and Jules will give you that so that she can go ahead and call a public speaker. And also Senator McGuire, I know you have to depart a little bit earlier today. So feel free to jump in at any time during the presentation. If you need to make a last comment before you depart. I just want to make sure that you have that opportunity before you exit. With that said, let's go ahead and move forward with the last two presenters and CPUC up next.

I'm Robert Osborne director, sorry to interrupt. I'm Robert Osborne, director of the communications division at the PUC and I'm going to provide a brief update on the PUC activities. So yesterday President Marybel Batjer and sorry yesterday, President Batjer wrote a letter with staff concurrence on the initial project locations to the California Department of Technology, the government, GovOps—Government Operations Agency, Caltrans, and the California State Transportation Agency. A link to that letter is on the CPUC deployment website, which I've got a number of links listed here that I'll go through, as well as the middle mile locations and a map showing the middle mile comments that were made that we processed in geo-processing and put into a map format so people can see what sections of the middle mile were addressed in the public comment period. So the letter, the transmittal letter that I mentioned earlier outlines three groups of categories of initial projects for the statewide open access middle mile network, and I'll go through those so Group 1, focused on service to unserved areas that can be built expeditiously and are tied to projects that the CPUC or the federal government has or is considering funding for last mile service. Group 2 projects focused on service to unserved areas that can be built expeditiously which is in coordination with Caltrans. And this should get to Assemblymember Woods' question. And then Group 3, focused on service to unserved areas that have a great need or are opportunity areas which are demonstrated by public comment. So the transmittal letter that I mentioned has a table at the back that lists all the 18 projects, and in some cases are, or actually in many cases the projects fall into multiple categories, groups 1 through 3. So these initial projects represent a first step for the SB 156 staff report on middle mile locations from the PUC, and these initial locations will be among the locations in the final staff report. We look forward to providing an updated middle mile locations map on or before the end of the year. And we'll be updating that with further analysis. So just to run through the links that we have here on the slide the first link to the PUC implementation page for the PUC work on the open access middle mile locations and that includes public comments, last mile resources, and the relevant proceedings. The second link is to the CPUC the initial map of proposed locations on which comment was based and that shows the unserved communities throughout the state. The third link is to the broadband deployment proceeding. For which Commissioner Guzman-Aceves is the assigned commissioner. And the fourth link is I mentioned earlier a link to a page that has the middle mile locations and informal comments in one place as well as a map version of that so you can see where those comments are matched along different highway segments. So I encourage everyone to see where the comments were submitted for their areas or areas that they're interested in. And so that's just a high-level overview. That concludes my remarks, but I'll hand it over to Commissioner Guzman-Aceves to see if she has anything more to add.

Alright, Commissioner, anything you like to add to the CPUC update before I move to the final presenter?

No, thank you, Amy.

All right. Thank you. All right. Let's quickly move to Miss Dooher from Cal Trans. There you go. I believe this is our last slide.

Great, thank you. Good afternoon. I just wanted to thank everyone for the opportunity to be here today to talk about the 18 locations that have been discussed, as well as all of the identified broadband middle mile locations and to be able to share Caltrans' efforts in the delivery of these projects that will result in the construction of the broadband middle mile network. Caltrans continues to work closely with CDT and PUC for the direction on the build locations with CDTs authorization to proceed, Caltrans will identify an efficient and effective delivery method. So in addition to our traditional design bid build delivery method, as Mr. Monroe mentioned earlier, Caltrans will be taking advantage of the alternative delivery methods including CMGC, design build, Job Order contracting, and all of these will provide us with some flexibility to be able to streamline project delivery. Caltrans will carry out the pre-construction activities necessary to build the broadband middle mile network in the defined locations. And this includes preparing our construction contract plans, specifications and estimates. Caltrans will complete our efforts by advertising and awarding these construction contracts and then administration of these construction contracts before turning the broadband middle mile network over to California Department of Technology and the TPA in order to operate and maintain. Thank you very much.

Thank you on Miss Dooher. All right. Let's go ahead and unshare the slides so we can open up to the committee member for questions or comment. Why all the public? It's getting ready for their public comment period. Senator McGuire, I'll just start with you. I know you have to exit just want to make sure you have an opportunity to make any last comments or questions you might have.

Thank you so much, Madam Chair. My only item is we move forward looking at the infrastructure bill that was recently passed. I think it'd be helpful if we could just get a report out and I know that staff are crunching numbers now about what we think is going to be coming in on the broadband front whether it's subsidize service and or middle and last mile for an upcoming meeting that would be greatly appreciated. Thank you Madam Chair for all your good work.

Sorry, I didn't unmute myself. Thank you for that. Any other committee members have any questions or comments for staff? Right. Seeing none, Jules, why don't you go ahead. Go ahead and talk about the process for opening the public comments.

Sure. So basically, public comment is limited to two minutes per commenter one commenter per entity and should address the work discussed during the meetings. Public comment should be public comments and not questions. If you do have questions, please direct them to the email account on the website. This will enable everybody to have the opportunity to make their public comments because there are so many. We're going to start with online public comments. So we did receive earlier this month a letter from, a letter of support from Assemblymember Stone supporting a route for the middle mile. If he or an aide is in attendance and they'd like to speak please go ahead. Don't think they are because we looked for their names. So we have one other public comment and it's in the form of a question. If Mr. McLaughlin would like to rephrase the most public comments, please go ahead.

Sure Aloha, thank you for this opportunity to pose some questions. I put a couple in the in the in the email that maybe a little more developed. I'll just mention one of them is a question about how to how you might consider engaging local governments and what used to be local cable franchise authority that had a social contract to compensate local communities for use of public rights of way by setting aside channels on cable TV systems, and by funding community media centers and facilities and operations that help to inform communities. And I know it's a little bit of a stretch for your immediate focus, but I think the cable industry piece of this is kind of missing. And as we saw in SB 28, and the Governor's message approving it, I think there's more work to do in reforming. So I just wanted to make note of that. And then I had a couple of very quick comments. One is

looking at OMB's recent information they shared as far as allocation of federal funding to different counties. We find the OMB's analysis much preferable to the RCRC analysis, and would hope that to the extent that this group has any influence on that, that you would lean towards the OMB allocation to actually address rural needs in that allocation of federal funds. I'm reminded that the public utilities commission now has a slate of universal service funds, the high cost funds and I wonder if you looked at the history of all the public funds that have gone to remote rural telco operators under the old regime, how that map would compare to these new investments that are being made. And I wonder if the same people are getting, are still at the trough essentially tapping those funds has had in the past. I think of small rural telcos in particular, they're inside just point that out as potentially a PUC interest. I hope that Caltrans is following dig once policies now. And therefore, anything that Caltrans is doing would include fiber regardless of whether it's a project under this funding or not. So I don't know the status of dig once but I hope that this group would support dig once policy. And my last question is not intended to be snarky, but did CENIC change its name or is there a separate entity operating as a TPA? It's a little misleading if it's still CENIC, to just sort of operate under a different name, potentially, terms of accountability. So thank you for this opportunity. Much appreciated. All your strong work. Aloha.

Thank you. Is there anybody on the phone that like to make public comment? Hearing none, we'll move on to raising your hand on Zoom. We currently don't have any hands raised. Is there somebody that needs to physically raise their hand? I see one hand raised and Jorge Pacheco.

Hi everybody, I'm Pacheco Jr. I'm the digital equity specialist with community health partnership at Santa Clara County. And I just want to say a couple of things. But first is how thankful I am that the PUC really reads our comments that we submit. Not just myself, but others in our county as parties to the broadband deployment proceeding and really took those into account when choosing these initial projects for middle mile infrastructure. I was really happy to see that our comments were reflected in in the in how the initiative for Project 9 was being proposed. So I really just wanted to take this time to thank the PUC for your responsiveness and for your engagement with us, as well as give a special shout out to Commissioner Guzman-Aceves for also reaching out to us and to making sure that our communities in Gilroy are being taken care of and we really like to me that's what represents excellent and responsive government at the state level and I really just it's really nice to see all of this come together and be prioritized and I'm excited to see what further projects will come so that we can close this digital divide once and for all across all of our unserved and underserved areas. So thank you to everybody, for all of your hard work.

Thank you. Melissa Slawson. Yes, hi, everyone. Thank you. So much. Just briefly. So let me first echo what Jorge just said, I agree very much. I would encourage the Commission and the committee to continue to look at all the comments in this proceeding and the ongoing proceeding at the CPUC has, in particular take account of all the viewpoints of things and competitive providers, G-Links is a competitive provider, and that we provide fixed wireless access so we would encourage you to take into account all technologies as being rules for the middle mile going forward. And then secondly, I would just urge the committee and the CPUC to take into account ongoing work that various communities are doing to improve connectivity within their areas to avoid duplicative funding. The example that I have in front of me is the Val Verde school district is currently working on expanding connectivity not only to the school district but to the surrounding community, and has gotten kind of far down the path on the beginning of the planning. And so that is an example of something that, you know, we don't want to come to a screeching halt, for example, if there are rules that that hinder it. So just I would just ask that a holistic view is taken when considering where the middle mile is going to go, how it's going to be implemented, what's going to be considered existing to be folded into it, because there are a lot of initiatives happening throughout the state that that maybe are just not making their way to the committee. Thank you

very much.

Thank you. Cole? Good afternoon. Again, I think I'm going to reiterate what Jorge and the last speaker just said, which was thank you CPUC for actually looking at those comments and listening and hearing what we have to say, wanted to reflect something that Senator McGuire said about making sure we're having conversations about rural and understanding that there are other ways to access as the last comment said, and making sure that we are being aware of the projects that are in counties and regions, as in Central Sierra. We're working on a broadband roadmap that will have some of the permits processes right away and some of the additional information that would be very useful for this conversation. So the request would be to make sure that this process is making sure to reach out to regions and understand the priorities in progress we're making as well to help assist in this conversation. Again, very excited about the process. And look forward to assisting you with any of the projects that are coming towards the central Sierra region. So thank you.

Thank you. Frank?

I think you're still muted. You need to unmute yourself.

Thank you, everyone. This this is a very historic effort, as Tony said, and I'm happy to be a small part of it. I just have a couple of comments. One has to do with a discussion about underserved and not served. And while I appreciate everybody acknowledging the intent of the legislation, both at the California and at the federal level, I think it's important as we roll this project out. There are numbers out there that we can identify and share with people in terms of the underserved and no service. And I think it's important to have that available as you roll this out. The other item with respect to Tony's presentation I agree that there are multiple ways to solve this problem. My concern is a wonder if Tony and his crew are developing standards of operation or international standards of operation so that we don't squelch an effort that could be that as far down the road, in terms of implementing broadband in their communities, but they're meeting technical standards that make it seamless throughout the throughout the state. Those are my comments and thank you for everybody's hard work.

There aren't any other hands up so, Chair Tong?

Thank you, just want to give it a moment to see there's any other public would like to provide comment, and for earlier, if there were questions as part of the comments if especially those were sent over, those will be addressed separately, and maybe after the meeting that will be followed up by staff. Just want to give a last opportunity to see if anybody wanted to speak up from the public. Alright, I guess quiet group today. Which is just totally, totally fine. We get to wrap the meeting early. I'm gonna go ahead and close public comment and turn it back to the committee members to see if there's any, trying to see are there any more public comments. If you are, please raise your hand before I close it.

I believe my hand is raised could I just chime in.

Oh I'm sorry. I knew something was. Yeah. There you go. Go for it.

Yeah, so my name is Patrick Messac and I'm with the Oakland Undivided Coalition, a collective impact model seeking to close the digital divide here in Oakland where we have 94,000 residents currently without connection or device. I want to uplift some of the previous comments I've heard. You know, oftentimes we hear about these democratic processes where we can offer comments only to kind of go into the void and the engagement from the CPUC, the California Department of

Technology, and just this broader coalition has been really heartening for OU alongside Oakland NAACP as we seek to ensure that this historic investment in our broadband future kind of counteracts the long history of infrastructure investments being used to divide and to have somewhat disastrous effects on BIPOC communities. So I just want to you know, uplift the importance of this process and thank you for your responsiveness and willingness to hear the voices of folks all too often overlooked in this process, and really look forward to continuing to work alongside the California Department of Technology and the CPUC to ensure that all of our residents have access to this 21st century necessity. So thanks again.

Thank you, thank you for that. Any other public comment before I close up public comment period? I want to make sure I'm not missing any hands. I did see a thumbs up earlier on so I acknowledge. Okay, I don't think I'm seeing any more hands, Jules.

Can you confirm? I don't want to miss anybody. I don't see any more hands.

There hasn't been anything else that's coming to the mailbox. Is there anybody on the phone who would like to speak? I think that's a no.

Okay, great. Oh, there's one more. Oh, okay. All right. I think we are going to go ahead and close the public comment. Let's come back to the advisory committee and Assemblymember Wood you have your hands raised?

Yes Madam Chair.

Oops, you went back on mute.

Am I unmuted now? Okay. Thank you, Madam Chair. I just wanted to know what we expect what you're expecting for our next meeting, what what topics will be will be discussed at that meeting if you have decided at this point?

Good question. My understanding is that the staff will be checking with the advisory committee members to see if there's any topic that they'd like to cover some of those topics may not be covered in the immediate follow meeting like for example, we're in November may not be covered in December, but they would have a month or two if some of those topics would take a little bit of time. So we will make sure that solicitation of the agenda will be covered. But I will say at the minimum. As always there there's progress update from each of the partnering agency, especially now the locations are identified.

I would be interested to see what progress has made since that announcement. I would just like to ask at some point if we could get possibly a report from the PUC on how many projects last mile projects are pending? Roughly where some of those are in the process by category possibly. I know that there are a lot of projects out there that have historically run into challenges along the way with permitting and a variety of things and so I guess, as we build out this middle mile, would be really great. If we can be sure that once we have this, this opportunity here that that some of these last mile projects will actually be able to be far enough along through the PUC process to actually expedite or move forward as quickly as possible so we can deliver the connectivity that's so critical to the people that we represent, and the people who live in our communities.

And chairwoman Tong, if I could just respond. We'd be happy to do that for the I just maybe, we can follow up with you somewhere offline on the scope of your question. Of course, we have the pending CASF applications that we could provide an update on but we don't know the universe of projects, of course out there. So we just want to make sure we're meeting your requests, but we

certainly could provide an update on the pending CASF applications.

And that's actually what I'm looking at. I know there's another there's some in my district that have been pending for quite a while and you know as the middle mile gets built out, we want to be sure that there's a there's a con there's a there's a process of that once hopefully we can get to a point where we can just move to the next stage and not have a lengthy lengthy delays so hopefully as we work through this entire product process obviously the middle mile is the critical piece of this but there's all these other pieces of what I don't want to see is that we build the middle mile and then and then we're you know five years waiting for final mile projects last mile projects to be improved that would that would not be a desirable outcome for a lot of people.

Absolutely. And then of course there will be so many more projects that are not even CASF dependent that are going to be able to utilize the middle mile.

Thank you.

Thank you both. Miss Miller.

Thank you, Madam Chair. I just to build on Mr. Woods point if in addition to the last mile progress, potentially at our next meeting, if we could then get an update on the loan loss reserve program and the technical assistance and all the ways in which that those all of those will come together to kind of put the third leg on the stool so to speak. If that's okay with you, thank you.

Yes, and actually, I think it was Assemblymember Wood or maybe it was Senator McGuire that made a plug for one of our proposals that is out for comment. And so I want to take advantage and ask again that folks take the time to comment on the last mile federal funding formula allocation that is out for comment, and is a major decision point for how the funding for the last mile will be allocated.

Alright. Any other comments from the committee members? All right, so I'll take that cue as we are ready to wrap. I do want to just take another moment to really, really acknowledge the team and earlier throughout the presentation you heard a lot about CPUC, the TPA, the CalTrans. Yeah. But, but I also want to do a special shout out to the Department of Finance especially miss Miller under her leadership have provided outstanding support and guidance, especially you know, we're talking about a lot of money here. Anytime you have a budget that start with a B, you know, it requires a lot of attention. So thank you for partnership there. And of course, the GovOps Agency, not only because my secretary is here, but I do want to acknowledge the fact that Stuart Drown has been an outstanding outstanding partner in helping the comms team and outreach team. Just so much work. I probably are not doing it justice at all in recognizing the folks and the number of hours and the flexibility and the nimbleness and to you know, be thinking 18 size is easy to pick, is not easy at all. And I know the team from all of these organization have put a lot of lot of hard work and thoughtfulness into it. As you have heard we know it's not a perfect list, far from it. But it's the right list to get things moving and with a goal to really really learn from it. And I with that I don't know about you. I think one of the gentlemen said earlier that this is an exciting day and historic day that I do want to echo, I think it was Frank that said that, I want to echo that comment. So with that, I want to wish everybody a great rest of the afternoon. Reminder that next meeting will be December 15 on the calendar for the middle mile initiatives and many of the conversation have also started to evolve to last mile as well as you know, I'll call it the alphabet of A through Z, middle mile is only a portion of it, last mile, as well as the digital literacy side of the digital inclusion to close that digital divide and that's where is the California Broadband Council, led by Scott Adams with the 12 members is going to be increasing the broadband council public meeting to four times a year instead of three times a year to provide additional opportunities for the members

of the public to provide feedback and input. So all of those can be found on our website. And once again, for those of you that are continuously joining these topics and support all of us in providing the necessity service to residents of California. Thank you so much and have a great rest of the afternoon. Take care everyone.