Please stand by for realtime captions.

Welcome to the how to prepare a benefit cost analysis for INFRA grant application. All participants are in a listen only mode and later we will conduct a question-and-answer session and instructions will be given at that time. If you should require assistance please press star zero. Today's conference is being recorded. I would now like to turn the call over to Avital Barnea. Please go ahead.

Thank you. On behalf of the US Department of transit taste I would like to welcome everyone to today's webinar and how to prepare a benefit cost analysis for a INFRA grant application. My name is Avital Barnea and am

with the undersecretary transportation. Before introduce our presenter I would like to point out a queue -- key feet -- few key features. If you are disconnected from the webinar and any time and reconnect to the audio.

Below the audio is a list of attendees. Below the list of attendees is a box titled materials for download where you may access a copy of today's presentation. , click download file and follow the prompts on your screen. In the lower left corner of your screen is a chat box where you can submit questions during the webinar. US DOT staff will be answering your question throat the presentation or it may choose to answer your question via phone afterwards. There also be an opportunity for participants to ask questions over the phone after the presentation and instructions will be given at that time. If you express any type of difficulties please use the chat box to send a private chat message to our technical assistance providers. Our webinar scheduled to run for two hours today

and well be recorded and posted to the info website so that anyone unable to join us may review the material at a later time. The recording will also be sent to all registrants and posted on the info Graham website. Finally as you may have seen we have to poll questions that we would like you to answer to help us better understand our audience. Have you participated in a DOT discretionary grant before and which type of applicant the represent? And we will then close the polls. And with that I would like to turn the webinar over to our presenter Darren Timothy Chief economist at the US Department of transportation.

Thanks Avital and appreciate all of you joining us today as we talk about benefit cost analysis for grant applications. The requirements for INFRA are that all project sponsors should submit a BCA as part of there INFRA grant application. BCA will be used in two ways and the INFRA program. One is assessment a project cost-effectiveness and also be used in evaluation of the economic vitality selection criteria for this program.

Which you may have on earlier webinars. For grant program. Requirements for the program. Slightly different. For large projects we are determine if a project will be cost-effective and for small projects required to consider cost-effectiveness. And so determines our base on the results of the benefit cost analysis. We need to be able to find me benefit of the project are [ Indiscernible ]. We need that. The next slide is carries over from previous webinar and describing me regional or national economic vitality and criterion. Highlighted in evaluation of this will include an assessment of the applicant for benefit cost analysis. A review of BCA submitted will be conducted by USDA and multiple levels of review. We'll examine a key assumption in the analysis. We will make corrections that we find with sensitivity analysis where possible. Can put and also consider any [ Indiscernible ] and talk more about some of these later. And we do require the same for both large and small.

We have updated our BCA guidance this year. As in the past, we were provide multiple pieces and everything into a single box. We cover some additional topics related to benefits and cost and we have additional and updated recommended values for key parameters using an office and you can see the link there that will take you to that BCA guidance. And analyses one of the key things we are really looking for is to have a BCA BCA that

is transparent and reproducible. Lee providing information to follow the logic, how the analysis was conducted and the results. A key to this something we really would encourage you to provide an show the actual calculation. Really makes our analysis much more of a -- sometimes we -- and we are talking about actual files, they are unlocked and we can go in and review the robustness of the results. I've had applicant send us a picture of a spreadsheet which is better than I have a picture. For the same level of review. We have access to the underlying analysis. Provide any technical memos. Document and sources. And key input. And three times in the presentation. Present annual benefit by the type of cost and benefit. Not just a summary output.

Some of the key topics a benefit cost analysis. Was important feature is having a good baseline. What we do BCA and cost and benefits and project. World in which the product that is incurred. Some do's and don'ts. One is you should factor in any protective changes that would occur even in the presence of a [ Indiscernible ]. And this

is growing over time. Should somebody be -- and the base year. You should factor on that might occur. And you should consider the impacts of what it means -- what it means in the absence of doing a project. If you -- reconstruct or replace the bridge, you might have a -- even with routine maintenance overtime the point where it has to because -- which would lead to significant diversion of traffic. That's the kind of effect that would be -- would make sense. And we get questions how do justify a good repair type of project. This is one of the ways. This baseline. In that way, would be appropriate in that case. Some don'ts. Included don't assume to a baseline in which the same improvement would be done at a later date. We're looking to find information on whether the project itself makes sense. Not just whether it would be better to do it sooner rather than later. And also we are cautioning against using unrealistic assumptions. You're baseline cave should really be matchup with the project you are doing. And past webinars. Assuming that construction absent the construction all traffic would be the facility would be across the entire country. A closer location. Coming by rail to a closer look and other similar examples. Baseline, an important part of the analysis. And depend on ridership or usage estimate we SQ provide supporting information on the forecast and the assumptions that are. The geographic scope of the analysis.

Especially important where analysis regional model. And better understand what exactly what those forecast means. We recognize off -- oftentimes or constructed using a base year and forecast year. And interpolate values and in between those two data points. And applies take the forecast and as part of that, we often times -- when you describe the project providing information about current usage levels. Which is also really helpful. And caution about long-term growth assumptions. Particularly cases where we sometimes see -- assuming some sort of -- and then [ Indiscernible ] and is conducted over a long period of time. You can end up with situations -- and naïve after a long period of time. In high usage level that though take into account capacity. And be careful

there. We talked more about that in our guidance.

The analysis period, and our update. Should cover both the initial development of the project and construction and the instrument -- generally it should be tied to or the asset. The number of years until you anticipate having to take the same action again. Capacity improvement for 20 years or some other point in the future, that would be the relevant time frame. Of approval.

However, we would ask you avoid excessively long analysis periods. We suggest no more than 40 years of operation, and really this wasn't coming into play for these structures. Such as bridges. Most other improvements, highway, pavement. We’re not suggesting everybody do 40 years. And the vast majority of cases the period would be somewhat less than that. And the asset we will talk more about using residual value and when you get into these extremely long analysis period the analysis starts to lose reliability -- looking at the analysis period. Inflation and discounting. And discounting are the analysis. May have cost data and

in particular that incurs in different years. You adjust those and you can adjust those to a common base year, we recommend everyone use 2016. The analyses. In our guidance at the player commonly used the index. Discounting one of the key principles for the cost analysis where they are looking at benefit and cost that the crew over period of time. Asking that all.

And in the past our guidance has been a little bit [ Indiscernible ] in some ways. And we talked about 7% and preferred. And in some cases we think the guidance provided and it suggest 7% should be -- the same time we do if you would like to sensitivity analysis 70% analysis that you are looking at the scope analysis. The project scope including me -- and otherwise you're making up and caution against claiming benefits from a larger

project but only considering the cost [ Indiscernible ]. This should also cover a project and he may have a project the underfunded piece may be part of a larger or center projects that are necessary that would be necessary in order to achieve the benefit protecting. In those cases he would need incorporate those cost for those other improvements. I have seen the number out that I think get a good job of acknowledging an accounting for it.

And not only that in some case you would be looking at improvement that of already been implemented. Which would be needed in conjunction with the new projects in order to achieve the results. And also as we have indicated in the past our project elements should have their own BCA. Can also roll those and summarize those results to cover the overall projects but again, key feature of BCA and [ Indiscernible ].

Next we will talk about benefits and some of the common cost analysis. Benefit should we said we four. And crashing against assuming cost and annual benefits unless we have a good reason. Also, the factors we will be talking about you may have negative outcomes. Those are to be counted as just benefits. One particular type of benefit and particularly where you may be making an improvement to the existing asset or trying to maintain on that facility, there is often some pain that is incurred for the long-term game. Don't forget about accounting for that short-term gain within the analysis. For estimated travel time savings I recommend values on BCA guidance. And one in PC, the table there is a little bit smaller than where we had it. Subset of the values that are found in larger departmental guidance in particular, for local travel values for for long-distance intercity travel

what we suggest in our guidance, if if you have specific information of local and long-distance travel in your area. You're welcome to reference those but for the vast majority we are looking at absent that specific information we would encourage you to use the local travel guide which of the ones that are reflected in the BCA guidance document. You should consider vehicle occupancy where its appropriate to do so. Obviously it is [ Indiscernible ]. Passenger travel, but the fact that it sometimes -- delay estimate to travel time savings or vehicle base don't forget to do that. And that we have some recommended national values and encourage you to use occupancy that are relevant. To locally specific to facility and absent of those we have some recommended guidance.

Other impact. Travel please there are methodologies out there and [ Indiscernible ] analysis. You carefully document the methodology and tools that are yours. I would also show how the evaluation parameters, choosing the trouble savings. And not easy to get things that may not be entirely -- specific recommendations on methodologies. And information as you can. For operating cost savings, and such as travel time -- for trucks.

And reductions. Fuel usage reduction you need to make sure that is not any other cost savings.

We were per -- prefer to use local a specific data. All kinds of projects. However we have provided hundred values and operating cost and -- [ Indiscernible - low volume ] and we're trying to ensure a little more consist the. Associated with [ Indiscernible ] and from crashes. And projected improvements in explain in document. And how come. Ask if you can use facilities Pacific data history. And justify assumptions and reductions in crashes. There is an assumption and put it out there in this project will result in a 50% reduction in crass crashes however there is no real backing to that. We will talk more about this but our Davis sources -- our data sources, again we also ask you to think about since it is ask acted and maybe we will -- the crash rates will be reduced.

Doesn't really get to as a result of particular project. There is also injury data. In terms rather than more details. Simply -- simply getting you the -- hitting the math for you. [ Indiscernible - low volume ]

Permissions reduction benefits, keep in mind the emissions reduction particular the day of function. Recommended unit values for criteria however that should be careful without the measurement units. And other other types of conversions. And in the past we have provided [ Indiscernible ] missions, we have provided specific recommended values based on interagency guidance. Is off-line guys are not being rescinded. That doesn't have current values. For that. We would know that if you would like to apply values for this, unlike a recommendation in the past and should be the value of that. And should we be based on the damages. Again in keeping with the current [ Indiscernible ]. And talk about benefit important to keep in mind and primary benefit improved artistically and directly by users of the improved facility. Include both existing users and when we say existing we mean users even under the baseline. And [ Indiscernible ] as well as additional users may be attracted to the. Practice and BCA is to would tell you the benefits of additional users. And we discussed that.

We often times -- we get focused on talk about and we will talk next. But we get so focused talking about how it would -- and people who don't use the facility. And we sometimes -- what is this doing for [ Indiscernible ] which is specifically where the focus would be. Having said that, the version is often important. Important feature of benefit cost analysis. And perfectly legitimate to consider that. And looking the projected magnitude of any person, it should really be based on careful analysis of the market and potential for [ Indiscernible ].

Might be [ Indiscernible ] to the project rather than using some kind of broad assumption. And we would like to see a case that is specific to this. And then we caution you again, benefit estimates that are -- simply compare user cost of the old mode, and sometimes it is on average the average cost user cost, little more refined on that. Conceptually that is really not the current way. Or talked about if you are properly estimating benefits and recruiting new users that's where Windows elephant would show up. At the same time there may be external cost as a result of that [ Indiscernible ]. Emissions cost. Those would certainly be relevant. And feature could be conduction -- congestion cost, and ought to be tied to the same type of modeling. And broadly rather than

assume the assumptions. [ Indiscernible - low volume ] a common source of values is as Journal cost savings. And published by federal highway. And values in urban areas and for world truck travel. If you're looking at diversion in several hundred miles, use the value work the portion of that diversion [ Indiscernible - low volume

] and payment damage specifically the highway users by truck. And there are a number of hard to quantify benefits, and examples here, resilience, noise reduction, emergency response improvement. This is an area that we discussed in there is actually methodology that is developed by FEMA that we refer to and link to in our guidance. And some analyses looking at [ Indiscernible ] improvement. Existing situation and you may have a --

cut off from access to [ Indiscernible ] and provides way. Acquired by impacts. Property value increases are tricky. In our guidance. Credit quality of life. From improvement if you once you consider these we would suggest that you trying quantify, we talk about hard to clarify many cases it may be possible to quantify some of these difficult monetize. And provide and you should clearly link to specific project outcome. To any claim to benefits. We will take those into account. And now turning to cross side, all the costs of -- design the -- and those costs are included and you should also whether -- previously incurred. We're looking at this project as a whole. Implemented in preparing that [ Indiscernible ] project. Maintenance cost, net maintenance cost may be positive or negative depending on the nature of the project. For brand-new facilities there would be some ongoing maintenance cost particularly in later years. That would occur -- that wouldn't occur otherwise. But at the same time, often for rehabilitative reconstructive ability, maybe lower and [ Indiscernible ] in fact -- the baseline. Service life at the end of the analysis period. We want to calculate a residual value. Assuming linear depreciation. Once those asset life is 30 and 50 years. And those 20 years straight-line depreciation. Will be based on the prior 20 years. Importantly do that. This counting can be discounting -- from relative today. And also you account for any major maintenance and revalidation action would occur. You may gather some residual values and there is also some major improvements. Just outside that window. Again, in conjunction with the

analysis period and the assets, and a reasonable analysis period keep in mind that there may be -- the main value. In terms of where that goes, when comparing benefits -- two different ways we look at -- other ways. And comparing that. Net benefit. We are -- benefit and [ Indiscernible ]. It doesn't really matter what is classified as a benefit. Positive or negative. Accounted for the same either way. If we calculate the cost ratio, calculating the BCR, this program for some of the types of analyses where you are basically looking at we are funding available for capital cost of various projects. Which is -- denominator should only include those -- which would imply that residual audience should be included in the numerator even where it makes sense [ Indiscernible ]. Cost that would be incurred. I wouldn't get too hung up on doing this calculation correctly. We would really rather's have good estimates of cost and that they are -- it is aggregated, categorized, and if there is an issue there, we can always make the correction there. And we will recalculate. Another issue is event across analysis. Important to distinguish analysis and don't confuse benefits with impact. Where measuring the value of the project and

benefit and cost to society. Economic impact analysis is a different type of analysis which measures impact to increase activity within a region attributable to a project. Are present the translation of the first order benefits. And two other economic outcomes. These are added benefit that should be counted. We already touched on -- transfers, benefits, and things like taxes or wages paid. And in most cases you can [ Indiscernible ] revenues and fairs. So there are simply transfers for would to another. Would not be considered additional benefits. And another temptation is to the [ Indiscernible ] and improvement. As a benefit and discourage you -- but for example you may see projects -- and alternative mode that can improve. Categorized while it would be this improvement. You would have to expand and across that manager project or benefits to project. It's really [ Indiscernible ] is really not the proper way to go about even thinking about benefit cost analysis? And accomplished in the same and with that information and I would be happy to take any questions that anybody has.

It's that time of the out where we've got some time here for questions. We've got one that came in through the chat window, but we also can take questions over the phone so if the operator would like to read the instructions for how to do that.

Ladies and gentlemen if you wish to ask a question press star than one on your touchtone phone. When your line has been open. You may remove yourself from the queue by pressing this dark he followed by the digit 2. If you're using a speakerphone press the corresponding digits. Once again please press star one at this time.

While we wait for people to get up at the queue we will go to Karen's question that came in pretty early. What is the BCA you would lies the proprietary model? How should you provide that or what can they provide that to you

As much information as you are able to provide. More information you are able to provide to us, the better. Limitations if there are limitations we will deal with those limitations. But if you have specific questions, related to a particular model or something of that nature we would be happy to address those off-line. But in general, as much as we can possibly seek. I think it is not an absolute requirement that the analysis doesn't come in perfectly

way we would love to see it that your project will be rejected or won't be reviewed. The more transparency we see, the better.

How it you factor in disaster preparedness in the BCA?

This goes to what we mentioned on resilience. And there is increasing focus on -- the way I would approach that, you need to key pieces of information. One is the -- what is the impact of particular type of disaster. It would be transportation systems and therefore increasing cost of transportation users. In such a way, costs of having to replace infrastructure in the end -- event like that.

You need to be able to describe what the impact of the disaster would be. The other key pieces of information are the probability of that disaster occurring. And in BCA guidance, a particular type of event to occur certainty

and the [ Indiscernible ] provided the two key areas. A transportation infrastructure. But perfectly legitimate way to approach it. You need to be able to define both of those [ Indiscernible ].

Inflation adjustments. If a project did not begin until 2016. Only future cost. What is the recommendation to address such costs and in 2016. Typically -- if you have a project that is over 100 years. And those costs and [ Indiscernible ]. And cost for budgeting purposes. When have some kind of factor embedded in the -- you need to [ Indiscernible ] in order to do -- come up with [ Indiscernible ]. It was present on me [ Indiscernible ].

Hearing asked can you provide guidance on including the cost of debt and the cost analysis? For example is a portion of the project cost will be funded using [ Indiscernible ] how do you want the cost of debt for the interest payments shown or include the benefit cost analysis.

Benefit cost analysis is really independent of the mechanism. So the cost of the resource cost to society implementing the project and so it should really be tied to when the cost of construction or the actual activities and projects are incurred. And they should be independent of whether those costs are incurred on as you go far -- whether the department funds or finance of the project it would be funds.

Would development cost associated with building a nonexistent bridge fall under the small categories of the anticipated development of cost? Will be under $10 million, or well it be under the large category if the anticipated end of the result will be under $25 million.

I think there may be some confused numbers here, so I appreciate the opportunity to clarify. In order for a project cost, a project to be considered a large project you need to have cost in excess of $100 million and this would be the future cost of the project you're going to build. Previously incurred cost. In this case if you're

bridge fully built is less than $100 million in most states, if you are in a particularly small date that special might be lower but in no case is a lower than $50 million I believe. But if you are full and all and cost of the bridge itself constructed is less than $100 million, then it is a small project. And it's more than $100 it's a large project. If you're looking for let's say you want to request funds for only the design and feasibility, for project that you are going to build at some point in the future undefined, that is a somewhat different category and that's a little bit tricky. Did that project later on undefined is a large project? If not it's going to stand one of our which is a requirement that the project be able to reach construction with 18 months of obligation of funding for the

project. That test applies only to large projects. If you're bridge is dirty million dollars, that requirement does not apply and you could apply for five and preconstruction work. Our notice makes clear we are interested in investing in projects that are going to be built and not so much interested in investing in a bunch of paper. They take that into the account as to whether or not you think it would be wise to submit application for just the

design and feasibility. If your project requires but also the award and your match are going to get all the way through to construction than that is a different story. But for the purposes of meeting the large project requirement, we look at the full cost and more than $100 million and dollars and not $25 million.

Would travel claim reliability benefit contributed to the improvement and maintain good flow condition irrelevant the DOT have any suggested guidance for that for that. If your project includes -- and towing has been

-- is being done and the facility and improve reliability, that certainly would be relevant.

Various methodologies out there. At this time the department doesn't have any say in improved standard. And something [ Indiscernible ] in pursuing again a lot of research has been conducted. We don't have a specific methodology to offer you. But that certainly would be a legitimate [ Indiscernible ]

Other any questions on the phone line?

There are no questions at this time but as a reminder it is star one if you would like to ask a question. There are no questions on the phone.

Again, that is star one if you would like to ask a question over the phone. There are no questions. Can you go over again how to evaluate the value of real estate development?

[ Indiscernible ] talks about this. Where this gets tricky is in carefully estimating me increased real estate value that is actually attributable to the particular type of improvement, there are a lot of issues with taking estimates from other studies or projects that may be similar directly transferable to what you expect. Also important to that with the coming. If it is any impact and improvement that it would have on real estate development. Ready to

the other benefits for the users and nonusers built of the project. You need to make sure those are not being double counted. But beyond that, we don't have any hard and fast rules. It is something that is challenging that the pretty careful and very specific. Estimates. Make sure those are relevant to you [ Indiscernible - low volume

] I don't know if that fully answer the question.

Can you clarify whether Bennett cost analyses the rat -- last round of [ Indiscernible ] can be really -- resubmitted or have to be redone?

I think to the extent that it is possible to make a parameter adjustment and based on updated guy and we would encourage you to do so. We recognize that -- benefit cost analysis and [ Indiscernible ] and you guys don't really have to go and. If urinalysis does allow -- given to us in a format that allows us to a [ Indiscernible ], we can account for those factors, updated guidance is providing more clarification or more suggestion, as opposed to a ruling out guidance or actions that up and taken. If what you had in the past was only presented -- the discount rate we would want you to submit analysis. [ Indiscernible - low volume ]

Please confirm if the benefit cost spreadsheet analysis counts towards the allocation of [ Indiscernible ] or not.

No they don't. The 25 page limit limit is for your primary guidance but you can also attach [ Indiscernible ] including the actual benefit cost Excel spreadsheet or other useful items such as support letters of support or other documents you may wish to use to supplement your primary [ Indiscernible ]

And often times applicants will provide -- given the limits that there are [ Indiscernible ] for the materials that

are submitted. Provide a link to a website or to the files that need to be downloaded. Those are certainly fine. We would encourage you and help maintain -- ensure those are maintained. We run into issues of trying to -- or they are not [ Indiscernible ] in the password we don't have and in those cases we have to go back and reach the applicant. To try to get them.

There was a question about collaborating on quantifying emergency response benefits.

Again we refer to the [ Indiscernible ] in the BCA guidance and it does provide a link to further more complete discussion of emergency management and administration methodology. It especially looks at the response time. Patient outcomes and reduced response times. We can improve those outcomes.

Do we have any questions over the phone? There are no questions on the phone.

We have almost and hour. If we don't have questions coming and we probably won't take be full-time so please take this opportunity to ask questions you might have. Libby asks are there any examples of complete successfully funded grant available as resource tools?

We have a list of the of the applications that were received as well is the list of the 2016 awarded project on our website. We also have the 2017 small projects are still in there .-period-paragraph and review you can find a list of those selected projects there. We don't publish applications ourselves because we want to allow for applicants to provide information that they wish to they may not want to have published a note that and of course ultimately all of that information is accessible via information related request but at the end of the day what we recommend for folks looking to see applications is to reach out to the project sponsors themselves who may have applied for and we have found that there is a pretty large community out there that would be willing to share with you their application and benefit cost analysis. So feel free to reach out to the folks that have been awarded in the past. Daphne asks will projects be compared against each other in terms of their benefit cost ratios and net present value in economic vitality? The short answer is yes. That is currently the plan and the

economic vitality great hearing also leverage, innovation and performance and accountability which we will also be using. Unlike in previous rounds, we will be trying to assess the benefit cost ratio as well as the net present value of the projects that are submitted in order to assess how will they address that selection criteria.

Other any recent examples of DOT providing some grant funding for public private partnerships?

Absolutely. And the last round one of the projects that was selected was submitted from the Virginia Department of Transportation. Called the Atlantic a way project and included a number of different concordance but one of which was the 395 hot Lane extension and conversion here in Northern Virginia and [ Indiscernible ] that is being pursued between V DOT and trans urban and where our money is awarded to V DOT and this combined with other V DOT state money as part of the state contribution to that otherwise public-private partnership to convert the hot lanes to existing HOV lanes to high occupancy lanes. That's an example. Obviously we have a number projects that are not in the asset leasing world but instead just combining our dollars with private sector dollars for things like shoreline rail projects or support projects or sometimes we partner with terminal operators to invest in infrastructure so there are many examples where our private funding is applied to infrastructure alongside the -- the local government as well as the federal government.

Kathy Parker asks, our project will eliminate the floodplain designations for a portion of an industrial era, a designation which has resulted in buyers backing out a purchasing that property for their warehouses and businesses because of their fear of flooding. Can we include be additional jobs that will be added due to the development of this area and the benefit cost ratio or would that be a peripheral in a fit?

A peripheral benefit, that would be correct. You would not directly count a value associated with jobs. However at the same time however, thinking about it in terms that we -- you have a situation where the improvement would result in more [ Indiscernible ] and I am not sure of the specific situation here and that increasing economic activity would result in a greater use of transportation systems then you would get under -- then you would otherwise get. Under the [ Indiscernible ] case and those would be the value of the additional system usage would be perfectly legitimate. To incorporate. Within the [ Indiscernible ].

Enema and the risk of twos we also talk in our analysis need to be very careful on how this was framed. In our discussion about benefits, also sometimes the case that a transportation improvement results in land new land being available that was not previously available. You have a rightsizing high medium -- highway improvement. Being cut down inside involving low-grade freeway for example. But to the extent that new land being created as a result of the project and that would also be -- included is a benefit. It's a value of the land in the value of any improvement that occur. In any of this particular case that may be something that could be relevant. But again you need to be very relevant. And draws [ Indiscernible ] from the improvement.

As a follow-up to the last question, how will net present value be used to compare from competing projects a total dollar amount and empowered by which net benefits can see that cost.

That is true. In the NPV does reflect both the size of the project as well as the actual benefit cost ratio and we will be looking at the benefit cost ratio different information that can be conveyed in both both of those will be used alongside the other three criteria. To allow our senior decision-makers to make their decisions as to whether they are is longer project and they factor in other considerations such as balancing needs between urban and

rural areas. Geographic diversity, project delivery risk. There is no exact science to it. Trying to provide the best information the senior decision-makers. And so they can assess that information in determining which projects you would like to its not as though a specific way to find -- it's a holistic review. Once the various details are filled in.

Question here do you have any recommendations about how to improve -- include a request for TIF IA funding for a portion of cost?

As such it is a loan. The first question we would want to know when tends to also apply for a loan as part of a project cost or how are they intending to pay back the loan? Depending on their answer we're obviously not doing a very deep credit worthiness related analysis of the presumed credit that will repay the loan. But I would really and assessing that, want to know if for whatever reason the department decides they are not unwilling to provide them along -- a loan, does the borrower -- other sources of -- using that source. In some cases we are project sponsors that say we are going to build our project and that project will go off revenues. We intend to -- we hope to borrow from TIF IA to fund project cost that will retain the tool revenue but in case EIFA is insufficient we feel like we have done a pretty good job with our toll revenues and we will borrow from toll revenue bond or even if that is not sufficient we will back it with a general observation from the government in charge so really if you intend to apply for TIF IA that is great. We want to see those programs put to use. They can be of great value and save you a lot of money. At the end of the day I statement that you will receive TIF I funding without describing how that part of the project would be repaid is going to prevent a lot of risk for us because we frankly won't know if you even have a revenue source lined up to repay that one, in in which case we would be stuck a grant to a project that doesn't have the money. You can indicate you are interested in eight TIF IA loan but describe how you will fund the project otherwise. Or if the loan is really necessary because the benefit -- lower cost that can provide as well and we will take that into consideration. But present additional risk for us if we have to essentially hope that in several months time we will be able to make a loan to a credit worthy entity when we don't know what the credit is.

What a projects direct impact and in this case increase an agency's enterprise feet be considered a -- benefit?

In general this sounds like something that would be considered a transfer. However I'm not entirely clear what you mean by enterprise fees. What the specific situation is. I encourage you to send an e-mail to the [ Indiscernible ], with a little more information and they might be able to give you a little more specific guidance.

Return to increase in land values. Does the investment in new facilities improvements to real property go into the benefit cost analysis or to the economic impact assessment or both?

The improvement on the current land, something that would be captured and [ Indiscernible ]. It would not be something that is a part of the benefit cost analysis.

Kathy asks are Garvee bonds considered federal as far as match dollars are concerned or does this also depend on how they will be repaid?

Typically repaid with federal funds. So in this particular case, I believe they are counting as federal source for the purposes of meeting the maximum federal participation rate of 80%. So even though it is a finance vehicle that prolongs because there repaid using federal sources I do believe they do constitute a federal source of the payment. But I will double check that and we will try to get -- if you want to send an e-mail to DoD .gov we will try and make sure we get that answered nail down but I am pretty sure this federal.

Any questions on the phone line?

There are no questions but as a reminder in this star one if you would like to ask them. There are no questions in the queue.

Any other questions from anybody? I don't see anyone typing in the chat pod.

To me asks can you walk us through the calculation of netting out maintenance and residual value in the numerator.

It is basically when you calculate these values, discounting, you produce a present value for that term if the net project will result in a net increase maintenance cost over time you would on the other hand it resulted in that savings. And that would be positive and numerator. Along with other benefits. Residual value and calculated. By discounting recently you can add. Travel time savings would have you that are including and numerator.

We will give it another minute. Do we have any questions over the phone? There are no questions in the queue.

Looks like there are no -- did I correctly hear that residual values of capital asset should be a numerator adjustment to the benefit cost ratio? Yes.

And denominator should only include the capital cost to the project. And being presented. Okay. Questions have trickled off. Last chance to ask a question.

As reminder if any other questions come up issued an e-mail to info grant at DOT .gov. We will respond to that.

I don't see anybody tapping typing in the chat pod and we will conclude today's conference. Thank you everybody.

That concludes our conference for today. Thank you for your participation and using AT&T teleconference service. You may now disconnect. [ Event Concluded ]