



FEDERAL TRANSIT ADMINISTRATION



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**Transit Asset Management  
Facility Condition Assessment & Guideway Performance  
Restriction Guidebooks Webinar Transcript**

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*Presented by*

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## Introduction

Maggie Schilling: All right, everyone. This is a test of the sound through the system. We are asking you to listen through your computer, voice-over IP. We will get started with the webinar in about five minutes. If you are having any problems hearing me, please send a message through the Q and A pod on the bottom left hand corner of your screen. We will get started, as I said, in about five minutes. We had a request for a second audio test. This is our second audio test. If you are having difficulties hearing or I sound garbled, please send us a note in the Q and A pod on the left.

We will get started in about two or three minutes.

Good afternoon, everyone. We are going to get started with our webinar today. I am Maggie Schilling, today's webinar is going to cover the Facilities Condition Assessment Guidebook and the Guideway Performance Restriction Guidebook. These are available for comment through the federal register. Some of that information is over on the left. Jump through these slides.

Couple housekeeping items. If you have any questions, at any time during the presentation, please feel free to submit those to us through the Q and A pod on the bottom left corner of your screen.

We will take all comments at the end, but please if you have a comment throughout or a question please enter it at any time while I'm talking.

We also have a notes pod here, and a download pod, on the upper left-hand side of the screen, we have downloads of each of the presentations available. This is for the entire TAM webinar series. I believe it does not look like we have the actual guidebook available in this pod. But the information on where you can access those is below in the notes pod. The notes pod gives you information where you can see the TAM final rules, where you can find information on the NTD asset inventory and where you can find information on the two guidebooks that we are going to be going over shortly. As I said, these are still open for comment in the federal register. If you have any comments after this webinar, I encourage you to make those comments officially through the federal register process that is the best way to ensure that your comments and questions are addressed through the official FTA channels.

Presenters today, as I said I'm Maggie Schilling, the Program Manager for the National Transit Database. I'm in the Office of Budget and Policy at the FTA. I have with me in the room Mshadoni Smith, who is also from the Office of Budget and Policy and John Giorgis, also Budget and Policy.

Candace Key is another person that you may hear chime in on some of the webinars but she is not joining us this afternoon.

## Agenda

Our agenda today, this presentation will probably take 20 to 30 minutes, and we will have about 30 minutes or more of questions at the end. We are going to go through the two guidebooks, I'm going to give you an overview. This will familiarize you with the guidebooks, but this is not going to cover enough information for you to actually be able to go forward and

do a condition assessment after this session. I wish I were that good in 30 minutes. But I encourage you to read the guidebook that is going to be where additional information is available and will help lead you through the process.

## Webinar Purpose

We will jump right in. As I said, the purpose is to familiarize with you these guidebooks, to remind you that we are still accepting comments through the federal register response and comment process. And to also give you a quick overview of how to calculate these performance metrics.

## NTD Data Requirements: Facility & Infrastructure Condition

All right. NTD data requirements facility and condition infrastructure, MAP-21 added a new requirement to the NTD section of the transit bill which basically requires the National Transit Database to begin collecting more asset inventory information along with condition assessment information.

This obviously overlaps with the Transit Asset Management program rules. What we have tried to do is put these together in a sensible way for the industry. These asset conditions will be collected through the National Transit Database, but they are part of the requirements for your Transit Asset Management plan.

What they do is they help us calculate a state of good repair. Agencies must only conduct and report condition assessments for assets for which they have a direct capital responsibility.

This is a slightly different than what you are required in terms of the asset inventory, in some cases like passenger facilities, you are required to report an inventory of your passenger facilities, even if you don't own them. But if you use them in service, you are required to inventory them. We are only requiring a condition assessment for assets for which you have a direct capital responsibility. If you have full or partial capital replacement responsibility, you are required to do a condition assessment and report that to the NTD.

If you want additional information on the asset inventory, we will be having another webinar in this series next week to cover that. I would encourage you to sign up for the NTD asset inventory requirements webinar as well.

## Guidebooks: Table of Contents

Jumping in, both of the guidebooks here are separated in the way that you see here on your screen. There is a background, scope and purpose section, a reporting procedures and data requirements, and then the actual procedures for calculating the performance metric along with the appendices that include a glossary, references and a sample forms.

### Facility Condition Assessment: Classes of Facilities

The first one that we will go over together is the facility condition assessment guidebook. Your facilities, we separate these into four basic classes, administrative, maintenance, passenger and parking. This is for the sake of organizing these and when you report them to us, and when you set targets against these that are also reported through the NTD.

## Facility Details-Administrative Maintenance

Here you see administrative facilities, these will make sense to you, but they are offices for management and support activities, maintenance facilities, so we have two general purpose and heavy maintenance, general purpose is a garage that basically is where you do your light maintenance, so day-to-day repairs, oil changes, etcetera. Heavy maintenance is where you do overhauls, large builds or replacements of major systems. Agencies must report both of these to us. If you have a facility that is a heavy maintenance and a light maintenance facility or general purpose, would you report that as a general purpose.

If you have a facility that is your administrative offices and your garage or general purpose maintenance facility, you would report that as general purpose.

## Facility Details-Passenger & Parking

Passenger and parking facilities. This is basically any substantial passenger facility. So we are not looking for bus stops. We are looking for stations along right-of-way, or any significant structure.

If you have a transfer point or transfer station, you have a ticket counter, waiting area for passengers, this would be considered a passenger station.

But if you just have a roadside stop with a little bench, maybe a cover on top, we are not considering that a passenger station for the sake of reporting or condition assessment.

## Steps to Conducting & Reporting a Facility Condition Assessment

The steps to conduct a facilities condition assessment, five basic steps. You see the flow chart here on the screen. A little hard to see. If you need this in bigger screen size, the presentation can be downloaded in the upper left-hand side of this webinar room.

Your five steps, you define your facility components. You establish your condition assessment language. This is all explained in the facilities condition assessment guidebook. You are going to conduct the assessment, calculate your overall condition and document and report it to us.

We will walk through the steps a little bit.

## Pre-Condition Assessment Data Gathering Recommendations

Before you get started, we encourage you to do a little bit of data gathering on the front end, so this would be before you even start your condition assessment, your inspector should consider pulling together maintenance information schedules, inspection schedules, any data that you have on those facilities, your warranties and any other background information that might make sense. This is not reportable to us but we encourage you for the sake of easing the process of creating your condition assessment, to get all of this stuff in order before you begin.

## FTA Transit Economic Requirements Model (Term) Scores

Part of the language around these condition assessments is FTA transit economics requirements scale or the TERM scores.

It's a one to five rating scale with 1 being the worst and 5 being excellent, or brand-new

facilities, and 1 being poor or you need immediate repair or replacement or may have critically damaged components.

For the sake of the facilities condition assessments, we are calling anything above a 3 would be considered within a state of good repair, and 2s and 1s are what would be below the state of good repair threshold for your target.

## Components, by Facility Type

Part of the underpinning to the facilities condition assessment is a set of components that you look at and set of sub components within those components that help you build up to an overall score for your facility.

Each facility as you see here, we broke these into two for ease of discussion today. We have administrative and maintenance facilities and components that we recommend you inspect when you are creating your condition assessment, and then the passenger facilities, again with the list of components that we recommend you inspect to create your condition assessment.

The only substantial difference between these two is that in the administrative and maintenance facilities, you see circled here, we have an equipment component section and passenger and facilities, instead of equipment we have fare collection.

## Sub-Component Examples

As I mentioned, underneath these components are a variety of sub components, for each component that you are inspecting as part of your condition assessment, you will have a series of sub components below that.

Here on the slide you see for substructure components, you will have sub components within that, like foundation, walls, columns, pilings, etcetera.

For equipment, you will have sub components within the equipment component category, which is equipment related to the function of the facility including maintenance or vehicle service equipment.

We are recommending in this guidebook that for the sake of looking at systems within your facility, and rolling those into your overall condition assessment that you only include items at \$10,000 or above. Again, the information on your sub components is not reportable to us. What we are asking for is one score for the entire facility.

But what this is leading you through is looking at the pieces underneath that facility, giving those a score that will help you roll up to one overall score.

## Conducting a Component Condition Assessment: HVAC Systems

Conducting a component condition assessment, within the guidebook you will see for each component that are listed on the slides, two before this, there is a breakdown of how you would rate that component in a 1 through 5 scale. Here on the slide we have HVAC.

Component ratings should be based on the descriptions within the facility condition guidebook. For instance, with HVAC an excellent would be new construction, no visible defects, no

damage, meets efficiency and capacity goals and maintains desired temperature and air quality throughout the facility. On the other hand, a poor would be a system that is well past its useful life, has critical defects affecting its function and issues are beyond repair and warrant detailed review.

For each of the components that we are asking you to look at, you will see one of these charts within the guidebook.

## Condition Rating Aggregation Approaches

At the end, you have looked at all the components, looked at the sub components below them, you have created a score 1 through 5 for each component. Now you need to roll that up into one overall score for the entire facility.

Once you have determined the condition ratings for each facility component, you are going to aggregate those scores. We have three approaches that we suggest within the facility guidebook. The first is weighted average. You weight it by the cost for each component, and then you use that, use the weighted averages to come up with one overall score.

In this case, that would be a useful approach if you understood the actual replacement cost for each of the components within your facility. Let's say you don't have that detailed information. You don't know what the replacement cost would be for each component. A weighted average would be difficult for you. A second approach that we recommend is a median value.

The median value allows you to look at the ratings for each of the components, and choose the median value as the overall condition for the facility. In this case, of course, there are some limitations.

Let's say you have ten sub components and, or ten components and five of them are 1 and five of them are 5.

In this case, what we would say is, if half or more are at a 1, the entire facility would be graded at a 1. Essentially you would look at the lowest score there, and that is what the facility would be graded, if you have this sort of discrepancy amongst the components within your facility.

We also allow for some flexibility. A third approach that is undefined but essentially would be a methodology that an agency would use, what we ask is that it is documented, that is repeatable. If you were to give us that methodology and we were to do the same assessment, we would come up with the same number at the end. This is something that you would keep with your Transit Asset Management plan and would be the methodology you would use for each facility.

## Sample Administrative/Maintenance Facility Condition Assessment Form

In the guidebooks we also provide you with a few sample templates, as I said, we do not collect the detailed information behind your facility condition assessment. We only collect the final output of that condition assessment. These templates are intended to be for your use, and to help guide you through the process of creating the condition assessment to us.

This one would not be reportable to the NTD or the FTA.

## References for Facility Condition Assessments

There is also some additional references in the guidebooks available. I have a few of them here on the slide. This is again in the appendix, just useful references, and many of these are what we used in creating these guidebooks.

## Guideway Performance Restriction Calculation Guidebook: Reporting Procedures

All right. Now we will jump to the second one, the Performance Restriction Calculation Guidebook. Reporting procedures for this, this is applicable to agencies operating rail fixed guideway, only rail fixed guideway will have a performance restriction calculation that is reportable to the FTA.

You will be submitting both monthly and annual reports. The primary measure for this, the one difference is the performance restriction calculation is for your Transit Asset Management plan, is percent of guideway under performance restriction. What we are asking you to report to the NTD and to the FTA is the underlying piece of information that calculates this.

We are asking you to report to us the length of fixed guideway directional route miles that are under performance restriction. And in the NTD system we will calculate that as a percentage of your total fixed guideway directional route mileage.

This is a little different than what the performance target is or performance measure is. We are asking you for essentially the numerator for that calculation.

## Data Requirements

There is a couple data elements that you need to understand to be able to calculate this, fixed guideway, directional route miles, fixed guideway directional route miles, the design speed, and the actual definition of a performance restriction.

We will walk through those right now.

### Fixed Guideway (FG) Definition

Fixed guideway. The definition for fixed guideway, if you were on the earlier version of this, we had a much smaller definition on the slide. I've expanded it out. This is actually the definition that is in law, so the NTD and FTA keeps with the definition that is printed in our transportation law. Here it is on the slide. Fixed guideway, public transportation facility using and occupying a separate right-of-way for exclusive use of public transportation or using rail, using a fixed catenary system for passenger ferry system or for bus rapid transit systems. As I said earlier what we are asking for in performance restriction is only for rail modes. This guidebook does not apply to bus guideway or ferry guideway. I can't imagine how you would have that on the water, perhaps that is possible.

### Directional Route Miles (DFM) Definition

Directional route miles. Directional route miles are, this is the same definition that's been used in NTD reporting unto eternity. If you are familiar with NTD reporting and the definition of directional route miles, this will not be new to you. It's the total mileage in each direction that



public transportation vehicles travel during revenue service.

It is specified for each combination of mode and service with fixed guideway. Directional route miles do not take into consideration the amount of lanes or amount of tracks. It is really just the direction of travel.

If you have one single piece of track that is one mile long, and you travel both north and south on that single piece of track, that is two directional route miles.

If you have two tracks, one is north, one is south, again two directional route miles. If you have one single piece of track and you only travel in one direction along that piece of track, that is one directional route mile.

### **Fixed Guideway Directional Route Miles (FG) Definition**

A fixed guideway directional route miles, exactly the same concept, except only fixed guideway. It's just the directional route miles on fixed guideway. Again, this is not taking into consideration the amount of track that are on that piece of guideway.

### **Design Speed Definition**

The next definition and this is one of the new ones for the guidebook, is the design speed definition.

The design speed is what helps you understand whether or not you have a performance restriction. What we are calling design speed is the maximum allowable speed at the time the fixed guideway segment opened.

Determining the design speed can be tricky, maybe you don't have records of what the original design speed was. We recommend in that case that you use the maximum historically scheduled speed. Basically, what we are looking at here is was this track designed for 50 miles an hour? If it was designed for 50 miles an hour, anything that you, any speed restriction that you put on that is below 50 miles an hour, any point you say for reasons of safety or for reasons of track condition, we are not allowing trains to move over this section of track any faster than 35 miles an hour, that would be considered a speed restriction.

The design speed is not taking into consideration what your normal scheduled speed is. If you schedule for less, for a lower speed than the design speed, as a matter of operations, your design speed is still the higher speed. You may travel 35 miles an hour as a matter of your operations, but you could still run a train over that track 50 miles an hour at the original design speed, that the design speed would still be considered the higher of those two.

### **Performance Restriction Definition**

The performance restriction definition, I talked about this a little in the last slide, but it's when the maximum speed of the vehicles on your fixed guideway segment is the below the segment's design speed.

Here is a little funny part of the guideway performance restriction calculation. We are asking for a snapshot each month. In order to try and get the best snapshot possible, we have requested a snapshot at 9:00 a.m., local time on the first Wednesday of each month.

As I said you will be reporting this monthly to us. If you are reporting your fixed guideway under performance restriction, once a month, and it will be from 9:00 a.m. on the first Wednesday of each month. Our thought behind this, is that 9:00 a.m. will generally be at peak

service for most agencies. Wednesdays are unlikely to be holidays, and so we are looking for during the peak of the peak service on a standard operating day, what are your performance restrictions.

Part of the philosophy behind this is, the performance restrictions that we are asking for are all performance restrictions. We are not asking you to break out what types of performance restriction they are. If you have a slow zone in place for a work crew that is reportable. If it's in place at 9:00 a.m. on the first Wednesday of each month, it gets reported to us as a slow zone.

This is really for ease of reporting. Again, going back to why we chose this specific time slot, most people, most operations would try to avoid putting a unnecessary work crew out at peak of the peak service in the middle of a morning commute on standard workday.

We were hoping that choosing this time would eliminate some of the rolling slow zones that are going on day-to-day for maintenance activities that do not point to condition of track. We are hoping that choosing this time will give us the best shot at the clearest and simplest reporting requirement, while also helping weed out some of the day-to-day maintenance, but keeping in long standing performance restrictions that point to the condition of the track.

If you have comments specific to this, we would love to hear them. Please do comment on the federal register related to this.

## Performance Restriction Calculation

How to calculate a performance restriction. Again this flow chart will look similar from the facilities. We have six steps laid out in the guidebook. You are going to list your fixed guideway segments in the total length by lengths for each month. You are going to identify the potential performance restrictions. Itemize actual performance restrictions. Calculate the performance restriction length by month. Calculate the annual average performance restriction and then document and report to us.

Monthly reporting, you will give us that one number each month. At the end of the year is when you aggregate all of those numbers and calculate your average for your final report with your annual NTD report.

### I: List FG Segments

I'll walk you through this process a little now. Start by listing your fixed guideway segment. You see here what you are going to do is for your Transit Asset Management plan and for your NTD reporting, you will be reporting your directional route miles, directional route miles under performance restriction for each mode. You will be giving us a target for each rail mode that you run. If you run commuter service and you run a heavy rail operation, and you run a light rail operation, you will be giving us performance restriction information and a target for each one of those modes.

In that case, three targets.

In this example though, we are going to walk through, we have it looks like we did not specify the type of service here. But you will see that what they have done here, they have listed all of their segments for their service, you will see that they have, the beginning and the end, so from zero to .1 is track I in your west station. It's .1 directional route miles. The design speed

there is ten miles an hour.

There we go. Little arrows in. You will see under that, they have track 1, west to park, this first is intended to be in the station they have a design speed of ten miles an hour. Once they leave the station, they have a design speed of 40 miles an hour. This will be helpful as we move along in this example.

## **2: Identify Potential Restrictions**

The next step, you are going to identify potential restrictions. We suggest that you collect all this additional data beyond what is minimum. Again the way that you are seeing this data collected here, this is not what you will be reporting to the NTD. You will report the number that comes out at the end of this.

Collecting all this data is what we recommend you use as you calculate this metric. This would all be data for your internal use that would then lead to the final piece that would be reportable to us.

You remember from the last slide that there was a maximum speed of ten miles an hour in the station, and that was from mile marker zero to .1 and the maximum of 40 miles an hour between .1 and 2.9.

Here we see at the top, there is a performance restriction in place from the 0 marker to the .35 marker on their track. The performance restriction is ten miles an hour.

So how do we determine what is under performance restriction with the track segment that we have available?

## **3: Itemize Actual Restrictions**

We are going to itemize those restrictions. Here you see for track 1 west in the station 0 to .1, you had .1 directional route miles with the design speed of 10. If you remember from the last slide, the performance restriction in place from 0 to .35 was ten miles an hour. Because the design speed in the station is only ten miles an hour, that station is not considered under performance restriction.

However, the track immediately outside .1 to .35 is designed for 40 miles an hour. It now has a performance restriction in place. Here you have .1 to .35. So .25 directional route miles are under performance restriction.

There we go.

## **4: Calculate Restriction Length by Month**

First one – All right so you'll go through and do that for each section of track. At the end, you will have your directional route miles under performance restriction. You see here we are recommending that you actually put in some notes about what caused your performance restriction. This will be helpful to you. Not reportable to us, again, but intended to be helpful for you as you calculate this.

At the end, you will have directional route miles under performance restriction, you just total them up. Nothing to it.

## **5: Calculate Annual Average Length**

End of the year, here we go. This is the spreadsheet that you would put together throughout

your year. On the left-hand side, you have all of the causes of your performance restrictions. On the right side you have some months, you have how many directional route miles were under performance restriction, due to each of the causes on the left-hand side. You have your total here at the bottom.

For March, these are your total was 4.2 miles, under performance restriction. We have one of these for each. At the end of the year, what you are going to do is take all twelve of your months and you do a straight average. Here we have all 12 months, straight average, total for the year, 3.11 directional route miles under performance restriction.

As I said, the end of each month, this bottom row here circled in blue you are going to be reporting those numbers to us once a month with your monthly NTD reporting. At the very end of the year, you are going to report to us this purple bubble on the right, so what your final number is.

NTD system will calculate the percentage of your track that this represents. That will be matched against the target that you have reported for, in the previous year, that so you will say in the previous year I reported my target, how, what percentage of my track I expect to have under performance restriction for the next fiscal year. At the end of that fiscal year when you report it to us NTD system will calculate based on the directional route miles you have reported, what the percentage actually was. You will see the comparison.

## Guidance on Special Cases

Establishing design speed. The Guidebook also provides some additional information on how you deal with special cases. So how you establish a design speed if you are not sure what the design speed should be, identify when performance restrictions occur and measuring the length of performance restrictions. This is just additional information that you can reference in the guidebook.

## Glossary and Sample Forms

Again the guidebook also has appendices to help lead you through, glossary of terms. There is a sample performance restriction calculation form. I know I'm beating a dead horse on this, but basically that sample form is for your use. You are not required to report all of the data that is collected on the sample form to us. Only the final number that comes out at the end.

As I said, please do comment on these. If you have comments, questions, concerns, the federal register process, the notice and comment process, where you submit an official comment to us, is the best way to ensure that all of the inner workings of the FTA are kicked off to address that comment. That is the best way to have us officially respond to it and have it considered for the final guidebooks that are published.

If you have a comment, please do submit it. Comments are open through September 26 of this year. Here is all the information you need to find that notice on the docket.

Now we will move into questions. Thank you so much. I'm going to jump back and leave this up here for your reference.