

Technical Appendix A

Interview Questions

The specific questions varied depending on the background, experience, and expertise of the interviewee. The questions below illustrate the nature of the questions.

1. Tell me about your professional background in the public transit industry.
2. What has been your experience with the New Starts program?
3. Can you give an overview of the New Starts process and what it looks like on your end?
4. Can you tell me about the process of preparing an application for entry into preliminary engineering?
 - a. What is your role in that process?
 - b. How long before entry into preliminary engineering are cost and ridership forecasts typically prepared?
5. Can you tell me about the process of preparing an application for entry into final design?
 - a. What is your role in that process?
 - b. How long before entry into final design are cost and ridership forecasts typically prepared?
6. Can you tell me about the process of preparing an application for entry into a full-funding grant agreement?
 - a. What is your role in that process?
 - b. How long before entry into a full-funding grant agreement are cost and ridership forecasts typically prepared?
7. Can you tell me about the process of preparing a Before and After Study?
 - a. What is your role in that process?
8. Is there a project you have worked on where you were unhappy with the outcome?
 - a. What do you feel went wrong with that project?
9. Is there a project you have worked on that you are particularly proud of?
 - a. What contributed to the success of that project?
10. With respect to your particular job duties, how do you define success?
 - a. What makes a forecast a success?
 - b. What makes a transit project a success?
11. What changes to the New Starts program over the years have been the most important?
 - a. Why?
 - b. How have these changes affected your own approach to cost and ridership forecasting?
 - c. How have these changes affected the approach of others within your organization to cost and ridership forecasting?
 - d. How have these change affected your overall organization's approach to cost and ridership forecasting?
 - e. How do you think these changes have affected the approach of other organizations to forecasting?
12. Can you think of a time when *your organization's* approach to forecasting has changed in response to a recent policy change?
 - a. How did forecasting practice within your organization change?
 - b. How long after the policy changed did they begin to do things differently?

13. Can you think of a time when *your own* approach to forecasting has changed in response to a recent policy change?
 - a. How did your own forecasting practice change?
 - b. How long after the policy changed did you begin to do things differently?
14. Can you think of a time when *your organization's* approach to forecasting has changed in anticipation of future policy changes?
 - a. How did forecasting practice within your organization change?
 - b. How long before the policy change did they begin to do things differently?
15. Can you think of a time when *your own* approach to forecasting has changed in anticipation of future policy changes?
 - a. How did your own forecasting practice change?
 - b. How long before the policy change did you begin to do things differently?
16. Is there anyone else who might have a relevant perspective on cost and ridership forecasting for New Starts projects that you would recommend I speak to?

Technical Appendix B

Quotations from Interviews

Table B1. Characteristic quotations relating to limiting the federal role in transit funding.

Quote no.	Interviewee role	Quotation
1	Federal agency staff member	Reagan's first budget said, "We're going to do away with the New Starts program entirely. We don't need that. It's not a federal responsibility...." But by 1984, the administration had come to recognize that Congress wasn't going to let the program go away. Congress was continuing to earmark the program.... So after three years of that, the administration said, "You know, if we're going to have a program, we want to manage the program. Let's create a ratings system...." They never really had their heart in funding them at all.
2	Staff member for a local transit operator	The big thing [the FTA has] typically been holding us up on is ridership. That's been their governor, if you will, like the governor on an engine that limits how much you get through. That's been their tool to limit how many projects are getting federal funds.

Table B2. Characteristic quotations relating to forecasts as a means to position projects competitively.

Quote no.	Interviewee role	Quotation
1	Staff member for a local transit operator	We all recognize that FTA has a limited budget, so the reality is, part of the New Start process is to get the best projects. ... There's a very challenging exercise to compare one transit property to another. So the essence of it is a fair effort.
2	Staff member for a local transit operator	The competition is getting fiercer right now because many more cities are competing for federal New Starts funds, and the pot of money that they're giving out is not increasing dramatically.
3	Staff member for a local transit operator	[Project evaluation has] changed as, really, the industry has given comments to FTA, saying, "Well, this is not quite fair" or "That's not quite fair."
4	Federal agency staff member	Where politics comes in is when you've got a slew of projects, all of which rate well, but there's not enough money to fund them all. Then it becomes a political question and it's often been driven by trying to distribute funding across the U.S.
5	Consultant	[The FTA has] taken measures to make the evaluation of transit projects and investments more equitable between large and small projects and multiple types of rail initiatives.... They've also diversified the portfolio of investments geographically.... The steps that they took when they implemented the environmental benefits, mobility benefits, and congestion relief have certainly contributed to FTA being able to implement a more diverse array of projects.
6	Federal agency staff member	It's been said, and I don't know if I agree with it, but somebody once said that all the cities that need urban rail systems have them. And now, these next-tier cities in terms of size should be thinking about bus rapid transit and lower-cost investments. And maybe you start with [bus rapid transit] and you build the market and then you go to a higher capacity mode of transportation.

Quote no.	Interviewee role	Quotation
7	Consultant	They often, particularly in the early days, a client would want a light rail line, or they would want this or that project, and they viewed the New Starts process as a hoop to jump through in order to get the federal funds.
8	Staff member for a local transit operator	The job of the folks in Washington is to make sure that everybody is playing by the same rules.... Everybody needs to play by the same rules so that somebody can't claim a higher forecast and get awarded funding on the basis of that if they didn't use the same rules. So I think FTA's in this position where they've tried to level the playing field and make sure everybody is using the same methodologies.
9	Staff member for a local transit operator	They're not just tweaks, but they're catching omissions or errors.... Those are the types of quick things that should be done regardless of where you are, but just because of time constraints, you may not focus on them unless you're running into issues with cost effectiveness. You can only do so much on the model. It has to be as reasonable and reflective of reality as possible. You can't just tweak something to increase ridership purposefully. You have to find out if there's a problem.
10	Consultant	You could also do sensitivity testing around some of the forecasting, either in the STOPS [Simplified Trips-on-Project Software] model or your regional model. You can do different sensitivity tests with those. Sometimes they'll give you different answers. You can do tests with the projected year. There's lots of stuff you can do with the modeling effort. FTA has to buy off on it, but there are things you can do there.
11	Consultant	The Pickrell report documented some really horrendous misses, which is a reputation that the program has struggled to shake in all the years that have gone by since.

Table B3. Characteristic quotations relating to forecasts as a means to select the best project.

Quote no.	Interviewee role	Quotation
1	Consultant	If the forecaster has to lie to get the project built, it's not something I want to do. I've always thought that the forecaster has to have a higher sense of public duty.
2	Consultant	Don't just go through this process to make yourself eligible for federal funds. If you go through all this effort of planning, use it for your own information.
3	Consultant	I don't think there are any easy projects left out there. If they were easy, they would be done already. What you have left now are ones that are...very challenging.... The more rigor you can put into the planning process...and help people use that information to make decisions, the better off people are. They're making very expensive decisions these days.... Those are very tough decisions to make when there are...limited pots of money, both locally and at the federal level.
4	Transit agency executive	We used [FTA's criteria] as our measuring stick for the value and effectiveness of the project.... We didn't know what was a good project and what wasn't. So we actually ended up using the New Starts process in our local decision-making process to answer the questions: Is it a good project? Does it add value? What are its benefits?

Quote no.	Interviewee role	Quotation
5	Consultant	New Starts forecasts made with travel models have historically had the highest scrutiny. And they're the most rigorous types of forecasts that you can make, as far as reviewing the model and reviewing the reasonableness of the project assumptions.... I always try to hold any forecast we do to that standard.
6	Consultant	[Summit] was a big game-changer because you could actually identify and describe the major problems that the model had. Previously, you would just be lost and swimming in too many numbers, and you couldn't actually figure out what the hell was going on.... Summit allowed you to look at it...and actually see that the model's not doing a very good job at all...to the point of being almost criminal or fraudulent.... That was a complete watershed moment. We unlearned more about what we knew than I had ever learned.
7	Federal agency staff member	[Summit] was the equivalent of shining a light into a really dark box, and there was all sorts of pretty ugly stuff going on that you would normally have a very hard time finding because of the complex nature of ridership forecasting.... And all of a sudden, the ridership stuff got a lot more rigorous.... We were all a whole lot better off in terms of seeing where there were mistakes happening. So the hope is that for projects since then, that ridership forecasts may be somewhat improved.
8	Transit agency staff member	So all of that stuff goes into the analysis for explaining why you were accurate or if you were not accurate, where do you think you could do better? So I think the Before and After Study, as long as it's not used to be a gotcha, is actually a pretty good process.
9	Transit agency staff member	I don't know that [other agencies do refer to completed studies]. I think that was the FTA's desire: that these would be made available and that they would know how to use them. I guess I don't know that that happens.
10	Consultant	If somebody asked me the question, "How accurate are these forecasts?" or "How accurate have transit forecasts been over the last 5 or 10 years?" no one could actually say what those numbers were. I find that pretty abysmal that over 40 years we can't say that.... But now I can actually put a number on it. It's pretty empowering.
11	Consultant	[The FTA staff have] some tools that they use that I have some real heartburn over, but...they'll get that sorted out too. I'm sort of retired and I don't have to worry about it anymore.... I'm delighted that this is what I did for 35 years. I feel like I can look back and say I did good planning, and I did it right, and I can stand by everything I did.