

**Financial Contractors' Guide  
for Conducting Financial Capacity Assessments  
for the  
Capital Investment Grants Program**

**THE FEDERAL TRANSIT ADMINISTRATION  
OFFICE OF PLANNING AND ENVIRONMENT**

**OFFICE OF CAPITAL PROJECT DEVELOPMENT**

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## LIST OF ACRONYMS

|        |  |
|--------|--|
| ACOR   | Alternative Contract Officer Representative          |
| ACRF   | Annual Comprehensive Financial Report                |
| BIL    | Bipartisan Infrastructure Law                        |
| BRT    | Bus Rapid Transit                                    |
| CAGR   | Annual Growth Rate                                   |
| CEO    | Chief Executive Officer                              |
| CFO    | Chief Financial Officer                              |
| CFR    | Code of Federal Regulations                          |
| CGA    | Construction Grant Agreement                         |
| CIG    | Capital Investment Grant                             |
| CIP    | Capital Improvement Plan                             |
| COR    | Contracting Officer's Representative                 |
| DSCR   | Debt Service Coverage Ratio                          |
| FCA    | Financial Capacity Assessment                        |
| FCCA   | Financial Condition and Capability Assessment        |
| FEIS   | Final Environmental Impact Statement                 |
| FFGA   | Full Funding Grant Agreement                         |
| FTA    | Federal Transit Administration                       |
| FWHA   | Federal Highway Administration                       |
| HQ     | Headquarters (refers to FTA if not otherwise noted)  |
| IGA    | Inter-Governmental Agreement                         |
| JPA    | Joint Powers Authority                               |
| L RTP  | Long-Range Transportation Plan                       |
| MAP-21 | Moving Ahead for Progress in the 21st Century Act    |
| MPO    | Metropolitan Planning Organization                   |
| NEPA   | National Environmental Policy Act                    |
| NTD    | National Transit Database                            |
| OS     | Official Statement (of a municipal bond issue)       |
| P3     | Public-Private Partnership                           |
| PMOC   | Project Management Oversight Contractor              |
| SGR    | State of Good Repair                                 |
| STIP   | State Transportation Improvement Program             |
| TAMP   | Transit Asset Management Plan                        |
| TIFIA  | Transportation Infrastructure Finance and Innovation |
| TIP    | Transportation Improvement Program                   |
| TPE    | FTA Office of Planning & Environment                 |
| USC    | United States Code                                   |
| USDOT  | U.S. Department of Transportation                    |

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## **GUIDE PURPOSE**

The Financial Contractors' Guide for Conducting Financial Capacity Assessments (FCA) provides guidance on how to perform FCAs for the Federal Transit Administration's (FTA) Capital Investment Grants (CIG) Program. The guide assumes that the Financial Contractor and/or other users are professionals with financial analysis experience and knowledge of financing large transit capital infrastructure projects and the operation and maintenance of transit systems, as well as applicable Federal regulations, policy, and guidance.

The purposes of the guide are to:

- Explain FTA's expectations and best practices for Financial Contractors when performing their work;
- Ensure consistency in the scope and quality of assessments performed.

This document is a guide and is intended to enhance, not replace, the Financial Contractor's professional judgment and analytical skills in the performance of FCAs.

## **ABOUT THIS GUIDE**

This guide is divided into three parts. The main body of the guidance provides the legislative origins of the FCA, the various parties' roles and responsibilities, FTA's performance expectations, the process for completing an FCA, and how to use an FCA report to develop a Local Financial Commitment rating according to the criteria outlined in law under the CIG program. Appendix A provides web links to relevant sections of laws, regulations, and guidance documents that pertain to the FCA process. Appendix B provides an annotated outline for the FCA report, including information that should be described, the types of analyses that should be performed, and the questions that should be asked by the Financial Contractor.

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# 1. The FCA Context

The Section 5309 CIG program is a competitive discretionary grant program that funds major transit capital projects including heavy rail, light rail, commuter rail, bus rapid transit (BRT) projects, and streetcars. There are four categories of eligible projects:

- New Starts -- new fixed guideway projects or extensions to existing fixed guideway systems with a total estimated capital cost equal to or greater than \$400 million or that are seeking \$150 million or more in CIG program funds;
- Small Starts -- new fixed guideway projects, extensions to existing fixed guideway systems, or corridor-based BRT projects with a total estimated capital cost of less than \$400 million and that are seeking less than \$150 million in CIG program funds; and
- Core Capacity Improvement -- substantial, corridor-based capital projects that will expand capacity by at least 10 percent in an existing fixed guideway corridor that is at or over capacity today or will be in ten years.

Each type of CIG project has a unique set of requirements in law, although many similarities exist among them. All projects must be evaluated and rated by FTA in accordance with statutorily defined criteria at various points in the development process. To be eligible to receive a construction grant, all projects must go through a multi-step, multi-year process and receive at least a “Medium” overall rating, in addition to other requirements.

Funding is awarded to projects through a construction grant agreement, called either a Full Funding Grant Agreement (FFGA) for New Starts and Core Capacity projects or a Small Starts Grant Agreement (SSGA) or Single Year Grant Agreement for Small Starts projects. The construction grant agreement defines the project including its cost, scope, schedule, and level of service; commits to a maximum level of annual and total CIG Program financial assistance (subject to Congressional appropriation, if applicable); establishes the terms and conditions of Federal financial participation; defines the period for completion of the project and helps FTA and the project sponsor to manage the project in accordance with Federal law.

Upon completion of the payment schedule outlined in a construction grant agreement, the Section 5309 CIG Program funding commitment is fulfilled, and additional Section 5309 funding is not provided for the project. Any additional costs beyond the scope of the commitment outlined in the construction grant agreement are the responsibility of the project sponsor.

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Prior to awarding a construction grant agreement to a project, FTA conducts several types of reviews to determine project readiness and to ensure that the project meets all statutory and regulatory requirements. An FCA is one type of review that is conducted for New Starts and Core Capacity projects seeking FFGAs to determine if the project sponsor's financial capacity is sound. Thus, the Financial Contractor performing the FCA plays an important role in supporting FTA's decision to award an FFGA to a project. It is vital that the Financial Contractor understand the scope of this role relative to the other types of reviews FTA conducts. The Financial Contractor is expected to provide an objective and well-informed assessment of a project sponsor's financial capacity to build the project while operating and maintaining its existing public transportation system.

The Financial Contractor's work is performed in the context of Federal statutes, regulations, and related policies, the organization of the FTA team, and the expectations that FTA has of the Financial Contractor. This context is described further in the remainder of this section.

## **A. STATUTORY AND POLICY CONTEXT**

The context within which FCAs are conducted is defined by law as well as FTA's regulations, circulars, and guidance.

### **(1) Federal Law**

The CIG program is codified at 49 United State Code (USC) Section 5309, as amended by the Bipartisan Infrastructure Law (BIL).

The BIL describes the following local financial commitment determinations that FTA must make for all CIG projects:

- the proposed project financial plan provides for the availability of contingency amounts that the Secretary determines to be reasonable to cover unanticipated cost increases or funding shortfalls;
- each proposed local source of capital and operating financing is stable, reliable, and available within the proposed project timetable; and
- local resources are available to recapitalize, maintain, and operate the overall existing and proposed public transportation system, including essential feeder bus and other services necessary to achieve the projected ridership levels without requiring a reduction in existing public transportation services or level of service to operate the project.

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## **(2) Federal Regulations, Policy & Guidance**

Current FTA regulations, policy and guidance concerning the CIG program, and in particular CIG projects that require an FCA, are as follows:

- 49 CFR Part 611, Final Rule for Major Capital Investment Projects (January 2013) – This regulation for the CIG program covers the evaluation and rating process for New and Small Starts projects.
- 2024 CIG Policy Guidance (December 2024) – This policy guidance describes project eligibility, the steps in the process, and the evaluation and rating process for New Starts, Small Starts, and Core Capacity projects.
- Guidance for Transit Financial Plans (June 2000) – This guidance outlines what a financial plan from a project sponsor should contain.
- Guidelines and Standards for Assessing Local Financial Commitment of Proposed Capital Investment Grant Projects (January 2025) – This document provides guidance to FTA contractors on how to develop a financial assessment for a proposed project seeking funding from the Capital Investment Grants (CIG) program. Throughout the year, FTA will assign contractors work to perform these financial assessments.
- Reporting Instructions for New Starts, Small Starts and Core Capacity projects – FTA periodically publishes Reporting Instructions to inform sponsors of proposed CIG projects of the information they must provide to FTA for project evaluation and rating. The Reporting Instructions contain the Local Financial Commitment Checklist, which must be submitted every time a project sponsor submits a financial plan to FTA.
- Circular 7008.1A, Financial Capacity Policy (January 2002) – This circular defines the terms financial capacity, financial condition, and financial capability, as well as the basis upon which FTA will make the determination of financial capacity of grantees required by law. This circular is not specific to the CIG program, and instead more broadly applies to all FTA grantees.
- Circular 5200.1A, Full Funding Grant Agreements (FFGA) Guidance (December 2002) – This circular provides guidance and information on developing FFGAs.
- Circular 5010.1F, Award Management Requirements (September 2024) – This circular provides general requirements and procedures for post-award administration and management activities for all FTA programs.



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Web links for each of the above documents are included in Appendix A to this report. These documents may be updated from time to time, and FTA's Financial Contractors should ensure that they are applying the most recent versions of FTA regulations and guidance by reviewing any updated documents posted to FTA's public website.

## **B. MANAGEMENT CONTEXT**

FTA's Office of Planning and Environment (TPE) conducts all FCAs for the CIG program. The Financial Contractor's primary points of contact with FTA are the Contracting Officer's Representative (COR) or the Alternate Contracting Officer's Representative (ACOR) in TPE. The COR or ACOR provide the work scope for the FCA and approve budgets, schedules, travel requests, and final products from the Financial Contractor. All requests from FTA for the Financial Contractor to research concerns or participate in meetings or teleconferences must come through the COR/ACOR. The Financial Contractor does not take direction from anyone in FTA but the COR/ACOR. All reports, correspondence and e-mails are sent to the COR and ACOR.

FTA uses a multi-disciplinary team of staff comprised from multiple FTA Headquarters (HQ) and regional offices to oversee CIG projects. TPE serves as the team lead in FTA for CIG projects prior to the award of a construction grant agreement. The Office of Program Management (TPM) serves as the team lead in FTA for CIG projects after award of a construction grant agreement. The FTA regional office staff serves as the day-to-day contact for the project sponsor. The regional office can provide useful insights on any broader financial concerns with a project sponsor.

## **C. CONTRACTOR ROLE**

The Financial Contractor assists FTA in reviewing the documentation submitted by the project sponsor and provides professional opinions to FTA regarding the adequacy of the proposed financial plan and any issues or concerns. While FTA seeks the Financial Contractor's professional opinion, it is important to remember the FCA is an FTA document that informs and documents FTA's decision to move forward with awarding funding to a proposed CIG project. FTA has final authority on the contents of the FCA report.

If the Financial Contractor identifies an issue or concern with a financial plan, it is important that the Financial Contractor communicate this concern directly to FTA first and not to the project sponsor. FTA will decide the appropriate way to communicate the

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matter to the project sponsor. It is critical that the financial contractor communicate these concerns in a clear and timely manner to FTA.

The project sponsor may reply with proposed solutions or additional materials to better explain the matter. The Financial Contractor must be prepared to assist FTA in determining if the new information effectively addresses its concern. The central role of the financial contractor is to evaluate information provided by the project sponsor, not to offer the project sponsor potential solutions or to aid the project sponsor in organizing information.

The Financial Contractor is not expected to be an expert in construction practices, fleet management, collective bargaining, or legal reviews. However, where key assumptions are found to hinge on these matters, the Financial Contractor is expected to raise questions that FTA may then address accordingly. The Financial Contractor is expected to be very familiar with the transit industry, in terms of financing the construction of infrastructure projects and the operation and maintenance of transit systems.

It is important that the Financial Contractor maintain objectivity while reviewing projects. It is not the Financial Contractor's role to offer technical assistance to the project sponsor unless specifically instructed to do so by FTA's COR/ACOR. Also, it is important to not create even the appearance of a conflict of interest.

FTA expects and needs the Financial Contractor to be completely independent of the project sponsor and its principal advisors who may contribute, directly or indirectly, to the project sponsor's financial plan.

## **2. The FCA Report – Overview**

The FCA report is an important, time-sensitive document that supports FTA's decision to provide a construction grant to a CIG project. This section provides an overview of the FCA report, addressing the timing and content of an FCA.

### **A. TIMING OF THE FCA**

There are three points in the CIG process at which an FCA may be performed:

- An FCA is prepared shortly after a project receives FTA approval to enter the Engineering phase of the CIG process.
- An update to the FCA may be performed before construction grant approval, as determined by FTA.

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- After a construction grant is awarded, an FCA may be performed if material changes have occurred, such as a major cost increase, or if FTA determines that a new financial plan is needed to demonstrate the project sponsor's ability to satisfy the financial capacity requirements.

In any of these cases, FTA will inform the Financial Contractor as to when the preparation of the FCA may proceed, and the date by which it must be completed. The scope of work is generally the same no matter when the FCA is conducted.

In situations where an FCA is being prepared prior to FTA's consideration of a project for a construction grant, it is not uncommon for the FCA to be on the critical path of all documentation needed to support FTA's decision to move forward with the construction grant award. This occurs primarily because other FTA oversight reviews related to project cost, scope, schedule, and risk review performed by the Project Management Oversight Contractor (PMOC), must generally be completed before the FCA can be finalized. Accordingly, the Financial Contractor must be prepared to quickly and efficiently complete the FCA scope of work.

## **B. CONTENT OF THE FCA REPORT**

The structure of the FCA report consists of the following parts:

- An Executive Summary, no more than two or three pages
- A brief description of the scope of the FCA.
- A description of the project and its sources and uses of funds.
- An analysis of the project sponsor's system-wide financial condition, typically using a five-year or ten-year historical data (See Reporting Instructions for New Starts, Small Starts, and Core Capacity projects) though longer-term trends may be used for some items (e.g., sales tax revenues) at FTA's discretion.
- An analysis of the project sponsor's system-wide financial capability. This should be based on the Financial Contractor's evaluation of the project sponsor's financial plan and the trends revealed in the financial condition analysis. The Financial Contractor should identify those assumptions that deviate from historical trends or the current economic outlook. The project sponsor, however, should be given the opportunity to properly justify discrepancies between forecasts and historical trends.
- Stress tests, which explore the impact on the project sponsor's financial plan of changes in assumptions found to be of concern in the financial capability analysis.

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These stress tests may include increases in project cost, changes in projections of operating costs and operating revenues, changes in the ability to fund operating subsidy requirements, or lower growth rates in dedicated funding sources.

- An updated local financial commitment rating (for more details refer to Section 4).
- A summary of conclusions from the above analyses, typically one to two pages.
- The Financial Contractor's assessment of the project sponsor's ability to satisfy the financial capacity requirement for CIG funds.
- Appendices that support certain aspects of the analyses.

The process and methods the Financial Contractor should employ in developing the FCA are presented in section 3 of this report. An annotated outline of the FCA report is provided in Appendix B. Sample FCA reports are provided upon request from the COR/ACOR.

### **3. The FCA Report – Process and Methods**

This section provides specific information on how to conduct an FCA. It addresses:

- Communicating with FTA and the project sponsor;
- Commencing work;
- Acquiring the initial data;
- Determining when and how to conduct field work;
- Performing the technical analyses; and
- Completing the FCA.

Additional information related to the above is presented in Appendix B to this report.

#### **A. COMMUNICATING WITH FTA AND THE PROJECT SPONSOR**

The Financial Contractor is retained by FTA to conduct an FCA and should work on behalf of, and not independent of, FTA. Accordingly, the Financial Contractor should keep FTA fully informed of his/her interactions with the project sponsor and other entities that are appropriate to contact as part of the FCA scope.

The COR is the Financial Contractor's primary point of contact and provides all direction to the Financial Contractor. The COR and ACOR should be copied on all written communications, within or outside FTA, relevant to the FCA. The financial contractor

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should invite the COR/ACOR to participate in all verbal communications with the Sponsor as well as inform them in advance of the financial issues under review as part of the FCA.

At the COR's/ACOR's discretion, this rule may be waived for some types of communication. The COR/ACOR will provide the Financial Contractor with the names and contact information for the FTA HQ Team Leader, the FTA Regional Office team members, other relevant FTA team members who may be consulted on project-specific questions, and the project sponsor's point of contact for the FCA.

The COR/ACOR coordinates all initial communications between the Financial Contractor, the FTA Team Leader, other FTA HQ personnel, and FTA Regional Office personnel. The COR/ACOR should be copied on all subsequent correspondence. The COR/ACOR will inform the Financial Contractor of the types of communication that may occur with FTA personnel without the COR's/ACOR's involvement.

The COR/ACOR coordinates initial communication between the Financial Contractor and the project sponsor, in cooperation with the FTA Regional Office. Once the initial contact has been made, the Financial Contractor may execute its scope of work and contact the project sponsor as needed for information needed to complete the FCA, always copying the COR/ACOR unless directed otherwise.

Field work at the project sponsor's work site performed by the Financial Contractor must be cleared by the COR/ACOR prior to being scheduled with the project sponsor.

The Financial Contractor should not, in any circumstance, voice concerns or share findings with the project sponsor before first communicating these to the COR/ACOR, who will then determine how best to respond. Communications between the Financial Contractor and the project sponsor should be strictly informational and limited to the Financial Contractor gaining an understanding of the project sponsor's financial capacity or requesting clarification of the information submitted.

The Financial Contractor should never communicate with non-FTA personnel about an FCA unless specifically directed to do so by the COR/ACOR. Any problems, issues, or concerns that arise with FTA or project sponsor personnel during the Financial Contractor's scope of work should be communicated to the COR/ACOR for resolution. The COR/ACOR will receive the Financial Contractor's deliverables, coordinate all editing and feedback, and will determine when the deliverables are considered final.

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## **B. COMMENCING WORK**

The COR/ACOR will issue a work order to the Financial Contractor. The work order is the official notice-to-proceed on the FCA. Typically, the work order will indicate a due date for the draft FCA report as well as the number of hours the Financial Contractor is authorized to complete the work. If the Financial Contractor subsequently determines that additional hours are required to complete the FCA, it is the responsibility of the Financial Contractor to obtain FTA approval in a timely manner. This approval can only be obtained through FTA review of the Financial Contractor's written justification for the additional hours.

It is advisable that the Financial Contractor participate in a kickoff meeting or call with the COR/ACOR, the FTA Team Leader, and other FTA staff as appropriate at the earliest opportunity to discuss the FCA. During this call, the Financial Contractor will hear FTA's preliminary concerns and will also be apprised of the project sponsor's point of contact. After this initial conference call with FTA, the Financial Contractor should contact the project sponsor and generally discuss the process for conducting the FCA and required outputs. If the project sponsor has not yet submitted a financial plan for the FCA, this would be a good time to ask when it will be available.

## **C. ACQUIRING THE INITIAL DATA**

The financial plan submitted by the project sponsor for the FCA should conform to FTA's Guidance for Transit Financial Plans. In addition, the financial plan submittal should include all the supporting documentation items listed in the Local Financial Commitment Checklist from the current version of FTA's Reporting Instructions unless previously submitted by the project sponsor and still available to the Financial Contractor. The financial plan is often submitted by the project sponsor to the FTA Team Leader, and the COR/ACOR facilitates its transfer to ensure that the Financial Contractor receives the files needed to begin work. In addition, the Financial Contractor should immediately acquire and compile in an Excel worksheet the National Transit Database (NTD) data that will be used to develop Appendix C to the FCA report (as presented in Appendix B to this report). This data can be downloaded from the NTD website (<https://www.transit.dot.gov/ntd>).

## **D. DETERMINING IF, WHEN, AND HOW TO CONDUCT FIELD WORK**

Field work refers to on-site meetings with the project sponsor to gather additional information on the project, the project sponsor's financial condition, non-CIG funding commitments, and the financial plan. It is important that the Financial Contractor have

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access to key project sponsor personnel and information in a manner that allows him/her to effectively perform the review. Because time is of the essence and travel is an expense, FTA prefers to minimize field work since most documentation is available electronically. Therefore, it is essential that the Financial Contractor be able to justify to FTA as to why field work may be needed. The Financial Contractor should be well prepared prior to conducting any FTA approved field work so that it can proceed as expeditiously as possible. It is advisable that field work occur after the Financial Contractor has conducted steps 1 through 5 in section E, below (Performing the Technical Analyses), and has at least partially performed step 6. This will allow the Financial Contractor to focus on confirming or refining his/her understanding of the project sponsor's institutional context, financial plan, and financial condition. By completing this work before conducting the field work, the Financial Contractor can sharpen the focus of time spent on site.

When proposing field work for consideration to the COR/ACOR, the Financial Contractor should propose a list of interviewees, along with general interview topics. At least one week prior to conducting field work, the Financial Contractor should forward interview questions to the project sponsor's POC along with the COR/ACOR in copy.

Field work should begin with an entrance conference. Typically, this would be attended by the project sponsor's Chief Financial Officer (CFO), project manager, and, to the extent practical, other interviewees identified by the Financial Contractor based on the structure of the agency and the issues that need to be discussed during the site visit. The purposes of the entrance conference are to introduce the Financial Contractor, discuss the interview schedule, and address any other topics relevant to the field work.

Field work should accomplish the following purposes:

- Resolve any questions the Financial Contractor may have regarding the project sponsor's ability to implement its plan of financing for the project.
- Confirm all aspects of the project financing plan, including the commitment of non-CIG funds to the project, and resolve any questions the Financial Contractor may have regarding the approvals or third-party agreements affecting the availability or timing of funds to be applied to the project.
- Address any questions the Financial Contractor has regarding operating, capital, and financial trends affecting the project sponsor's current financial condition. If the Financial Contractor's preliminary analyses (prior to the field work) produced negative findings, the basis for these should be carefully explored with the project sponsor, after having discussed the issue with FTA.

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- Address any questions or concerns the Financial Contractor has about the completeness or reliability of data provided by the project sponsor.
  - Review the financial plan in detail, with particular attention to the organization of the financial modeling effort (i.e., who was responsible for its various parts), forecast methods, and data sources used in the project sponsor's financial plan. The Financial Contractor should determine whether the financial plan is truly integrated and internally consistent.
  - Review the project sponsor's assumptions used in the financial plan. Seek an explanation for any assumptions that present a departure from historical trends, or from the current macro-economic outlook.
  - Review the method and assumptions used by the project sponsor for the stress tests it performed, if applicable.

The field work should conclude with an exit conference to ensure that the Financial Contractor has come away with an accurate understanding of the Sponsor's financial position, non-CIG funding commitments, and project financial plan. Any missing information is restated, and a timeline established for the project sponsor to provide the missing information. The Financial Contractor should not discuss its findings with the project sponsor before FTA until FTA agrees with its findings. Therefore, there should be no discussion during the exit conference of key concerns or problems.

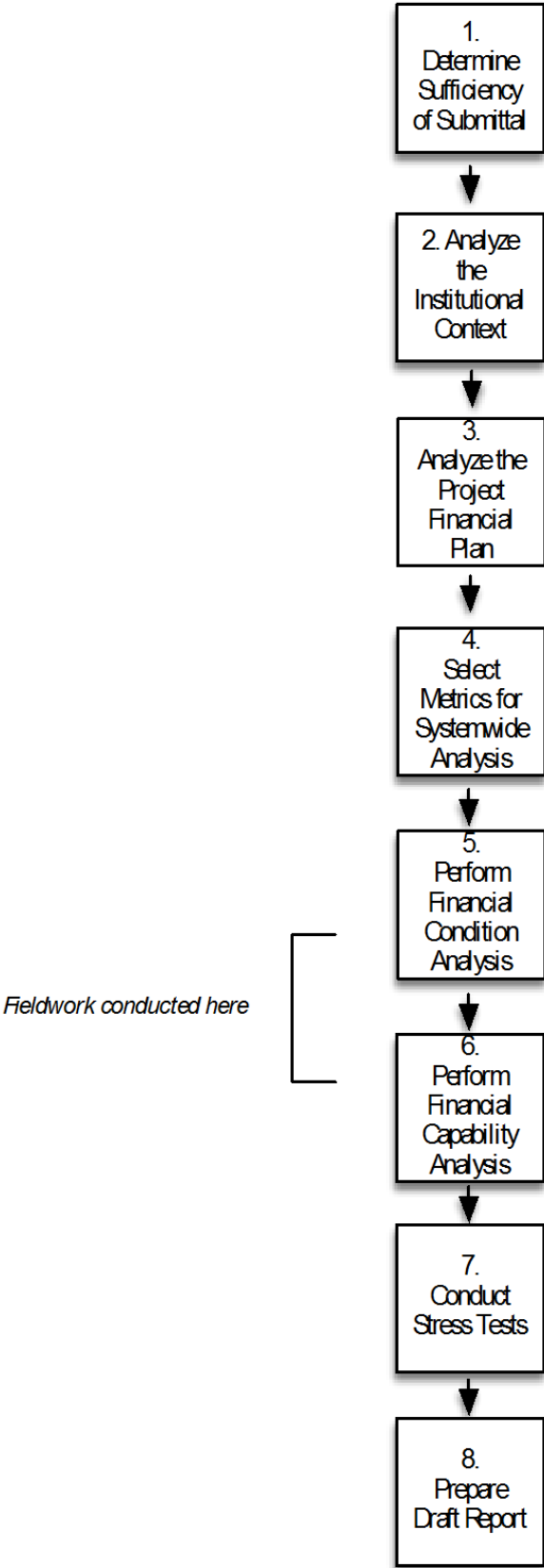
## **E. PERFORMING THE TECHNICAL ANALYSES**

This section describes the specific steps required to conduct an FCA (see Exhibit 3-1). These steps are listed chronologically and assume that the Financial Contractor has commenced work and has acquired the initial financial plan submittal and supporting documentation, as described above in section 3.C.

It should be noted that each FCA is unique, as every project sponsor and project is unique. The technical workflow described below is a general guide. At the COR's/ACOR's guidance, the Financial Contractor may contact the Sponsor during the technical workflow process in Exhibit 3-1 to clarify information or to request the submission of additional information. Ultimately, it is the Financial Contractor's responsibility to determine how best to satisfy the requirements of the FCA in a timely manner.



Exhibit 3-1: FCA Technical Work Flow



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## **(1) Determining the Sufficiency of a Financial Plan Submittal**

The first step is for the Financial Contractor to review the project sponsor's initial financial plan submittal for completeness. This is referred to as the sufficiency review. The Financial Contractor should inform the COR/ACOR at the soonest possible date, but no later than one week after receipt of the submission, of any omissions or other concerns regarding the financial plan submittal.

The Financial Contractor at this step needs only to ensure that the project sponsor has submitted all the documents in the Local Financial Commitment Checklist. It is a good idea at this point to create a folder for all the documents and populate it with the files submitted by the project sponsor. It is also advisable to save all these files *in their original form*. For analysis purposes, the Financial Contractor should make copies of the files as needed, and modify only the copied files, leaving intact the files originally submitted by the project sponsor.

At this time, the Financial Contractor should also review the project sponsor's cash flow model supporting the financial plan (Excel workbook) for conformance to FTA's Guidance for Transit Financial Plans. It is especially important that the project sponsor has included tabs describing its level of service assumptions (e.g., annual vehicle revenue miles), and the debt service schedule (i.e., annual principal and interest payments for each series of debt), including both existing and planned debt. These are often omitted but are essential to the FCA. In general, the Financial Contractor should be as specific as possible as to the information is lacking from the project sponsor's submission. The Financial Contractor may later determine that additional information is required to complete the FCA.

## **(2) Understanding the Project Sponsor's Institutional Context**

Before starting the quantitative analysis, the Financial Contractor should develop an understanding of the project sponsor's institutional context. If the project sponsor has issued bonds, the Official Statement (OS) is often a good source of this information because a bond issuer is obligated to disclose everything that affects its ability to raise and use money. Typically, the OS will include multi-year, historical financial and economic data that can be used in preparation of the FCA. If the project sponsor has not issued bonds, the project sponsor's annual report or comprehensive annual financial report (CAFR) may also provide this information.

The key features of the institutional analysis include:

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- Determine the organizational structures and operating environments for the project. The Financial Contractor should outline the relationship between all parties within the financial scope of the FCA. The financial agreement relationship may have to be defined by the Financial Contractor in consultation with the COR or ACOR.
  - Determine whether the project sponsor is an independent authority, Joint Powers Authority (JPA), state government agency, department or sub-department, municipal department or sub-department, a different legal entity or if another agreement has been agreed upon that impacts project development and implementation.
  - Research the general powers of the project sponsor (or its parent organization) as set forth in law (usually state law) or its creation documents, especially regarding the legal ability to assess fees, impose taxes, issue debt, and provide additional cash or debt reserves in the event of a capital or operating shortfall.
  - Research the structure of the project sponsor's governing board, and the approval process affecting service and capital plans, budgets, capital programs, debt financing, fares and fare policy, and any other matters having a material impact on the Sponsor's financial condition and ability to fund, finance, construct, and operate. If the project sponsor is a JPA, pay particular attention to decisions requiring the approval of the governing boards of the parent entities as well as costs and revenues sharing.
  - The project sponsor, such as municipal or county government, may be responsible for operating and maintaining multiple types of infrastructure and services in addition to the public transportation system. In such cases, the Financial Contractor will need to determine: (i) if it is possible to isolate the costs and revenues of the Project and of the transit system costs from these other services; and (ii) whether the provision of these other services could potentially impact existing public transportation system and the Project.
  - The project sponsor may be distinct from the entity that will operate and maintain the Project.
  - If the project sponsor has issued bonds or intends to issue bonds, research the statutory limits for bonded indebtedness and review the additional bonds test included in the OS.
  - Develop an understanding of the project sponsor's overall financial structure, including its use of funds from other entities.

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- Develop an understanding of practices, policy, or law affecting the allocation or use of funds the project sponsor controls.
  - If an intergovernmental agreement (IGA) exists that specifically affects the project, even if it does not otherwise affect the project sponsor, the Financial Contractor should review the agreement and understand its institutional and financial implications. The FCA should outline the roles and responsibilities of each party to the ILA regarding project funding and financing, approvals, construction, and operations.
  - In general, FTA does not expect Financial Contractors to be experts on the details of complex intergovernmental agreements and arrangements, but rather to be able to understand and summarize the terms and conditions at a high level.

The findings from the above research should substantially inform the Financial Contractor of the financial constraints impacting the project sponsor as well as the section of the FCA report that describes the project sponsor and related institutional arrangements.

### **(3) Analyzing the Project Financial Plan**

The purpose of the project financial plan analysis is to understand the project's cash flow needs and how those needs will be met. Of particular interest, are the amount and timing of non-CIG funds, and the extent to which these funds have been committed or require approvals. The Financial Contractor is also responsible for reviewing the reasonableness of the project sponsor's estimate of financing costs included in the project cost estimate as well as the underlying assumptions for capital and operating financing commitments.

It is essential that the Financial Contractor look beyond the overall picture presented by the sources and uses of funds for the project, and fully understand how Project cash flows to (and from) the project sponsor in delivering the project, including the mechanisms (e.g., short- and long- term borrowing) put in place so that the funds are available when needed.

#### *CASH FLOW*

The sources and uses of project capital funds should be equal on an annual basis. If the uses of funds exceed the sources of fund, then the Sponsor must provide a plan that demonstrates how this difference are covered. For the project to proceed unimpeded by cash flow imbalances, the project sponsor would need to rely either on cash reserves, draw on other internally controlled resources (e.g., transfers from a general fund), or borrow funds.

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It is essential that the Financial Contractor understand not only the planned project cash flow, and planned means to mitigate temporary cash flow shortfalls, but also the possibility that variances to the planned cash flow may occur that could necessitate more extensive mitigation measures. Part of this uncertainty is related to the degree to which funds have been committed to the project, discussed below.

There may be situations in which the sources of funds exceed the uses of funds. Potential cash flow surpluses, include the retention of surpluses, the transfer of some or all surplus funds into reserve funds, or the transfer of some or all surplus funds to other Sponsor accounts are to be documented.

### *COMMITMENT OF FUNDS*

Each source of non-CIG funds should be classified as one of the following:

- Committed – Committed funds are those having all the necessary approvals (legislative or referendum) to be used to fund the proposed project without any additional official action. These capital funds have been formally programmed in the MPO’s TIP and/or any related local, regional, or state Capital Improvement Plan (CIP) or appropriation. Examples include dedicated or approved property or sales tax revenues, state capital grants that have been approved by all required legislative bodies, cash reserves that have been dedicated to the proposed project. Additional debt capacity that requires no further approvals and has been dedicated by the project sponsor to the proposed project.
- Budgeted – Budgeted funds are those that have been budgeted and/or programmed for use on the proposed project but remain uncommitted, i.e., the funds have not yet received statutory approval. Examples include debt financing in an agency-adopted CIP that has yet to receive final legislative approval, or state capital grants that have been included in the state budget but are still awaiting legislative approval. These funds are reasonably certain to be committed. Funds will be classified as budgeted where available funding cannot be committed until the FFGA is executed, or due to local practices outside of the project sponsor’s control (e.g., the project development schedule extends beyond the TIP or CIP period).
- Planned – Planned funds are those that are identified and have a reasonable chance of being committed but are neither committed nor budgeted. Examples include proposed sources that require a scheduled referendum, reasonable requests for state/local capital grants, and proposed debt financing not yet included in the agency’s adopted CIP.

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- **Uncertain:** This category is applied when it is unclear from the project sponsor's submission whether a funding source is committed, budgeted, or planned. Instances where the plan to secure funds is deemed to be unreasonable may be classified as uncertain. This category applies to funding sources for which no supporting documentation is provided. Also, funding proposals that have repeatedly failed (more than once), such as failed local referenda or repeated denial of state grants, should be classified as uncertain.
  - **Unspecified:** This category is applied when the proposed non-CIG funding sources are not sufficient to cover the proposed share or have not been clearly identified. The FCA should describe each proposed source of capital funding for the project. For each source, the FCA should state whether the funds are committed, budgeted, planned, uncertain, or unspecified and state the reasons why the source is classified as such. The FCA should also describe the documents submitted by the project sponsor as evidence.

If possible, the Financial Contractor should determine if project funds that are planned have a reasonable chance of being committed. This is a factor to consider in the financial commitment rating (see section 4.C in this report) and is important to highlight in the conclusions section of the FCA report.

For funds that are considered planned, the FCA should describe in detail all the additional steps needed to classify the funds as committed, including projected timing for each step based on information from the project sponsor. In addition, the Financial Contractor should document the timing of, and conditions under which the funds are to be made available, if sourced from an external party or parties. Some grant funds, for example, are provided on an expense reimbursement basis. It is important to ensure that the project sponsor has adequately addressed its ability to finance the project from external sources of funds.

FTA does not require that project sponsors have all sources of funds immediately available to them at the time of FFGA approval. However, the Financial Contractor should verify that the funds will be available to the project sponsor in accordance with the planned cash flow needed to construct the project. In conducting this assessment, the Financial Contractor must consider any limitations or conditions that could affect the timing of funding availability for each proposed source.

### *FINANCING COSTS*

Every FCA should include a section that describes the project sponsor's assumptions regarding the amount of finance charges associated with the proposed project and the

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Financial Contractor's opinion as to the reasonableness of the estimated finance charges. Finance charges must be included in the capital cost estimate of all CIG projects. Specifically, only the project-related finance charges expected to occur prior to either the revenue service date or the fulfillment of the CIG funding commitment in the construction grant, whichever occurs later in time, should be included. Financing costs include interest on borrowed principal, lender's fees, and issuance or other handling fees associated with debt transactions such as a bond sale or loan.

The Financial Contractor should understand how the project sponsor has projected the borrowing requirements of the project, and the assumptions the project sponsor has made regarding interest rates, fees, and issuance costs. The Financial Contractor may rely on the project sponsor's historical cost experience or published or fee-based sources to confirm the reasonableness of the financing cost assumptions. The Financial Contractor should also understand the borrowing limits the project sponsor is subject to, and the conditions (if any) that must be met to obtain additional funds. These latter items may be documented in an agreement between the project sponsor and the lender. The Financial Contractor is also responsible for identifying any other funding limits, requirements, or other conditions that could constrain the availability of funds from the project sponsor (e.g., Board-approved debt service coverage policy, reserve fund contributions) or its partners that could impact cash flow and borrowing requirements.

#### **(4) Selecting Metrics for System-wide Analyses**

Metrics are useful in measuring and evaluating trends to determine the general direction in which a transit project sponsor is developing or changing, which is one of the primary tasks of the Financial Contractor in conducting an FCA.

The project sponsor's financial plan presents the Financial Contractor with a potentially voluminous, complex, and interrelated set of data, generally organized as an annual time series values. In addition to macro-level economic factors, the transit system under review typically has experienced, or may be projected to experience, changes in scale, for example, as new projects or services are introduced to the overall transit system. Thus, the Financial Contractor has the task of interpreting trends in the time series data, usually accompanied by changes in scale. Interpreting these trends are critical to answering the question of whether projected outcomes are reasonable. The choice of appropriate metrics can help simplify this task.

In the FCA, metrics are used to measure and explain historical trends in the assessment of financial condition, to evaluate the reasonableness of projected outcomes, and to assess financial capability. This general framework uses metrics to allow for greater

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consistency in the comparison of both historical (actual) and future projected values. Generally, projected values are viewed as reasonable if they represent a continuation of a historical trend or are consistent with the current economic outlook. The metrics employed for a given FCA should be selected by the Financial Contractor based on the Project's financial context and professional judgment. Some suggestions are provided below with respect to trend analysis transit operations, capital programs, and financial management.

### *GENERAL TREND ANALYSIS METRICS*

Trend analysis in the FCA focuses on the change in some attribute of the financial plan between two points in time. In the financial condition analysis, historical trends are typically evaluated for a five-year period ending with the most recent fiscal year for which audited financial data are available. In the financial capability analysis, implicit assumptions about the continuation of or change in trends are inferred from projected values for the variable(s) under review, usually measured between the most recently completed fiscal year and the horizon year of the forecast. However, changes in trends are sometimes evaluated for some breakdown of the 20-year forecast period (e.g., between the first full year of operation of the project and the horizon year of the forecast.

Per CIG Policy Guidance, Sponsors may submit a 10-year financial plan provided that: (i) the project construction period plus five years of operations is less than 10-years; and (ii) the Sponsor is not submitting 20-year horizon information for other CIG evaluation and ratings criteria. In these cases, a review of 10-year financial information is appropriate.

The most generally applicable trend analysis metric is the compound annual growth rate (CAGR), calculated as follows:

$$CAGR = \left( \sqrt[N]{L/F} \right) - 1$$

where: N is the number of periods (e.g., years) being analyzed

F is the value for the first time period

L is the value for the last time period

or, in Excel notation:

$$CAGR = ((L / F) ^ (1 / (N - 1)) - 1)$$



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Note that in a time series with N periods, there are N-1 compounding periods. For example, for a five-year period, you must calculate CAGR as the 4th root of the ratio of L to F, minus 1.

The CAGR is a rate of change that, if applied to the beginning value for N-1 periods, will yield a result exactly equal to the ending value. The CAGR is a proportion, normally expressed as a percentage (e.g., 0.025 is 2.5%). The CAGR is useful for evaluating a variety of trends (including trends in operating and other metrics described below), but has some limitations:

- The CAGR is based on historical data, and thus the Financial Contractor should not depend on the CAGR historical values as the sole method of assessing the reasonableness of future assumptions. In this respect, FTA expects Financial Contractors to use their professional judgment to determine the appropriate methods to employ to evaluate and assess future assumptions included in a project sponsor's financial plan submittal.
- A potential problem is introduced by the selection of the beginning year and the ending year of the trend analysis, since either of the two may be an outlier. Similarly, the impacts of COVID-19 may have impacted the financial condition of the Sponsor, especially in terms on farebox revenues. These limitations may be dealt with by extending the historical trend analysis to a more distant past, or, in the case of evaluating a trend implicit to a financial forecast, by breaking the analysis down into time periods that filter out known sources of variation (e.g., evaluating projected passenger revenue growth before and after project implementation). However, presenting an analysis of multiple time periods can be difficult for readers to follow. If this method is employed, great care should be taken to describe the analysis in a clear, straightforward manner.
- The item being analyzed may need to be normalized to account for certain changes that affect its value (e.g., farebox revenue affected by a change in price). This limitation may be addressed by selecting a specific operating, capital, or financial management metric, discussed below, that adjusts for known sources of variation or can be used as a proxy for the item of interest. For example, a trend analysis of operating costs will not yield useful information if there have been changes to the amount or type of service provided. In that case, a metric such as operating cost per vehicle revenue mile would yield a more specific measure of the trend in operating cost.
- There may be no discernible trend due to extreme variability in the data (e.g., annual capital expenditures). This limitation may be addressed by calculating an

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average annual value for the period of interest. If the item is measured in dollars, however, it is necessary to convert the time series into constant dollars, using an inflation rate or price deflator.

The general-purpose metrics described above should be used for interpreting trends in the more focused metrics described below, as well as revenues or costs that need no normalizing for changes in scale or changes in underlying rates. These include revenue streams other than those produced from operations (e.g., tax revenues), operating and capital grants, and non-fleet capital expenditures.

The Financial Contractor may elect to use other metrics to measure and evaluate general trends, but if so should be prepared to present its rationale to FTA.

### *OPERATING METRICS*

Operating metrics should be used by the Financial Contractor to evaluate trends in the efficiency and effectiveness of the project sponsor's transit operations and whether the financial plan envisions a change in efficiency or effectiveness compared to the historical trends.

For the top 50 agencies reported by NTD in a recent reporting year, operations accounted for 69 percent of total expenditures, and operating revenues (principally passenger revenues) accounted for 28 percent of total income (i.e., operating and capital). It is clear from these figures that transit operations have a significant effect on the project sponsor's cash flow, and thus its overall financial performance.

The interpretation and evaluation of operating trends is made complex by changes occurring in levels of service operated over time, and by the different economic characteristics of the multiple modes of service operated as part of a single transit system. Thus, it is important to understand how to develop and apply operating metrics when conducting an FCA.

Operating metrics can generally be divided into two categories:

- *Efficiency* – Efficiency refers to the relationship between inputs and outputs (e.g., how many inputs required per unit of output). Typically, inputs are measured collectively as dollars, although they may be measured as non-dollar resources, such as labor hours. Outputs are typically expressed as units of service provided, using some measure that has very small increments and a direct effect on cost, such as vehicle revenue miles. This yields a more consistent description of the cost function than would a more aggregate measure of output (e.g., peak vehicles,

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route miles), because the more aggregate measures of output mask the effect of changes in component cost drivers (e.g., peak vehicles may remain constant while vehicle miles increase or decrease).

- *Effectiveness* – Effectiveness refers to the relationship between consumption and output (e.g., how many units consumed per unit of output). Consumption is measured in terms of numbers of passengers or a related metric, such as passenger revenue, parking revenue, advertising revenue, or passenger miles. Output is typically expressed as units of service provided, using some measure that has very small increments such as vehicle revenue miles (output is output, and is measured the same way whether one is evaluating efficiency or effectiveness).

When conducting an FCA, the focus is on financial sustainability, which is more heavily influenced by efficiency. Operating effectiveness is of secondary importance, due in part to its comparatively lesser influence on overall financial performance. Nonetheless, trends in operating effectiveness are of interest, and serve as a good check on the project sponsor's assumptions regarding the operating revenue forecast.

Exhibit 3-2 presents suggested operating metrics. The trends in these metrics should be evaluated based on their CAGRs. The metrics should be calculated on a modal basis (e.g., bus, light rail, demand response), especially in the financial condition analysis. Higher-level trends can be abstracted from the historical modal data if the project sponsor's projections of operating costs and operating revenues are for the system as a whole or include aggregations of certain modes.

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**Exhibit 3-2:  
Suggested Metrics for Evaluating Trends in Transit Operations**

| <b>Metric</b>                                 | <b>What it measures?</b>   | <b>Why is it used?</b>  |
|---|--|---|
| Vehicle Revenues Miles (VRM)                  | Output – the amount of revenue service available to carry passengers over some distance (see Note 1) | VRM is one of the base factors on which formula funds are allocated and should be reliably reported; accurately reflects extent of service provided |
| Operating Cost per VRM                        | Trend in general operating efficiency (unit cost of operations)                                      | Varies significantly by mode and reveals costs implications of changes to service strategy (see Note 2)   |
| Operating Subsidy per VRM                     | Trend in the efficiency of subsidies applied to operations (see Note 3)                              | Varies significantly by mode and reveals subsidy implications by distance   |
| Unlinked Passenger Trips per VRM              | Trend in the general effectiveness of transit service  | Useful for evaluating system-wide financial condition, since ridership forecast is evaluated separately by FTA                                      |
| Passenger Revenue per VRM                     | Trend in the income-generating ability of the transit service  | Scales passenger revenue history trends to the level of service operated; serves as a benchmark rate for evaluating passenger revenue forecast.     |
| Passenger Revenue per Unlinked Passenger Trip | Trend in average fare paid   | Useful for comparing forecast average fare to past practices and for cross-checking the average fare used in the ridership model                    |
| Operating Revenue per VRM                     | Trend in the income-generating-ability of all operating resources relative to the service provided   | Scales operating revenue history trends to level of service operated; serves as a benchmark rate for evaluating operating revenue forecast.         |
| Farebox Recovery Ratio                        | Trend in the effectiveness of transit pricing and ridership relative to costs                        | Useful in interpreting financial condition, and interpreting the reasonableness of the passenger revenue forecast                                   |

Notes:

1. VRM is preferred over, Vehicle Revenue Hours (VRH), since VRH is measured without regard to the distance actually travelled. For example, a revenue vehicle that stands still for one hour would represent one VRH of service but would provide no travel benefit since no distance was traveled.
2. Care is required in interpreting this measure since increases in VRM typically result in lower unit costs, while decreases in VRM result in higher unit costs, all other factors held constant, due to fixed costs being spread over more or fewer VRM. This is particularly true for rail systems, which have relatively high fixed costs.

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3. The "subsidy" refers the difference between operating cost and operating revenues. It is a measure of the level of financial support required, e.g., dedicated revenue sources (e.g., a sales tax), an operating grant, budget allocations from a parent agency or institutionally separate entity, or other financing source.

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## CAPITAL METRICS

One of the tasks of the Financial Contractor in performing an FCA is to determine whether the project sponsor is managing its capital program on a financially sustainable basis. Capital program metrics should be used by the Financial Contractor to evaluate the pace of rehabilitation and replacement of capital plant and equipment (i.e., ongoing state of good repair), and trends in the sources of funds to support the capital program.

The pace and adequacy of the rehabilitation and replacement of plant and equipment is difficult to quantify, due to the sheer volume and diversity of depreciable capital assets owned by the typical project sponsor, as well as year-to-year variability in capital expenditures that makes trend analysis difficult.

To consistently measure the condition of capital assets, as well as the effectiveness of a project sponsor's plan to maintain a State of Good Repair (SGR), FTA has collaborated with the nation's transit systems to define a transit asset management program, as required by law under 49 U.S.C. Section 5326. Every agency must develop a transit asset management (TAM) plan if it owns, operates, or manages capital assets used to provide public transportation and receives federal financial assistance under 49 U.S.C. Chapter 53 as a recipient or subrecipient. The capital projects included in the transit asset management plan and related SGR projects will be included in the regional TIP and should provide a reasonable basis for the Financial Contractor to determine whether the project sponsor is sustainably managing its capital program.

Until such time that the transit asset management plan is fully implemented by FTA and the transit industry, the following metrics may be considered when evaluating a project sponsor's capital program:

- *Average age of the revenue vehicle fleet* – On a steady-state basis (i.e., excluding major fixed guideway extensions or capacity enhancements), revenue fleet replacement is the largest element of a transit agency's capital program. NTD reports this metric every year, by mode, for every transit system. Projected average fleet age can be derived from fleet management plans, which are part of the supporting documentation submitted by the project sponsor for the FCA. For all non-rail fleets, average fleet age is an excellent indicator of whether vehicles

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are being replaced as needed.<sup>1</sup> In a broader sense, average fleet age is a good barometer of capital condition – fleet replacement is usually the top priority of a capital program due to its visibility to the customer and its effect on schedule reliability. If a project sponsor is having difficulty keeping up with fleet replacement needs (evidenced by steadily increasing fleet age), it is probable that other asset replacement needs are going unmet as well.

- *Percent of useful life remaining in depreciable assets* – The age and replacement needs of the project sponsor’s transit assets can be established generally by the cost basis, accumulated depreciation, and net book value of its depreciable assets, all of which are reported in a note to the project sponsor’s CAFR. When a depreciable asset is purchased, the purchase cost (or cost basis) is amortized (i.e., depreciated) over subsequent years, according to its estimated useful life. Buses, for example, are usually depreciated over 12 years, with one-twelfth of the cost recorded as depreciation expense each year. This expense is accumulated in the fixed asset ledger for as long as the asset is owned by the project sponsor. An asset’s net book value is the cost basis less accumulated depreciation. Summed over all similar assets (e.g., buses, fare collection equipment), the ratio of net book value to cost basis provides an estimate of the percentage of the average remaining useful life for a class of assets. This technique is useful for assets replaced on a relatively frequent cycle, but provides a less definitive estimate for long-lived assets, such as structures. The average annual replacement cost can also be estimated from this data, based on the ratio of cost basis to depreciable life, where the cost basis is escalated from the midpoint of the depreciable life to denominate the cost in constant dollars.

In addition to the metrics discussed above, trends in average annual constant-dollar capital expenditures and average annual constant-dollar capital program funds will give an indication of whether projected capital expenditures and funding are commensurate with the recent past.

### *FINANCIAL MANAGEMENT METRICS*

Financial management metrics should be used by the Financial Contractor to measure and evaluate liquidity, financial strength, and debt management. Although only the latter item may be determinable in the future, the first two items, which are measured from

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<sup>1</sup> The trend in the average age of rail fleets is worth noting in the FCA report. Rail cars are replaced over a long cycle. As a result, they often have mid-life overhauls to extend their useful life and tend to be bought in large groups. The condition of the rail fleet and plans for its rehabilitation or replacement may be addressed in the project sponsor’s Rail Fleet Management Plan.

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information reported in the annual CAFR, are essential in evaluating the current financial condition of the project sponsor.

The following financial management metrics should be considered by the Financial Contactor:

- *Current ratio* – The current ratio is a measure of liquidity; that is, the ease with which a project sponsor can meet its short-term financial obligations with the liquid assets available. It is calculated as current assets divided by current liabilities, as presented in the Statement of Net Assets in the project sponsor’s CAFR. A ratio of 1.0 indicates that the project sponsor has the cash, or items convertible to cash within one year, to meet liabilities coming due within one year. Ratios greater than or less than 1.0 indicate greater or lesser degrees of liquidity, respectively.
- *Weeks of working capital* – This metric is related to the current ratio but expresses liquidity relative to expenditures. Working capital is calculated as the difference between current assets and current liabilities. Weeks of working capital is calculated as working capital divided by the sum of annual operating (net of depreciation) and capital expenditures, times 52. Operating expenses can be found in the CAFR Statement of Revenues, Expenses, and Changes in Net Position. Capital expenditures can be found in the CAFR Statement of Cash Flows.
- *Unrestricted net assets* – Unrestricted net assets comprise cash or other assets that are not needed to pay liabilities and are not earmarked for a specific purpose. It is a measure of financial strength and communicates the latitude a project sponsor may have in responding to unforeseen financial needs. It is reported in the CAFR Statement of Net Assets.
- *Gross debt service coverage ratio (Gross DSCR)* – This ratio measures the financial ability of the project sponsor to meet its debt service requirements (i.e., principal and interest payments) from revenues pledged for debt repayment. It is calculated as annual pledged revenues divided by annual debt service payments. This information is usually presented in notes to the CAFR or may be directly reported by the project sponsor. The gross DSCR is usually referenced in the official statement (OS) for a bond issue, under the heading, “Additional Bonds Test.” It is the minimum level of debt service coverage the pledged revenues must provide for the project sponsor to issue additional bonds that use the pledged revenues as the credit. If the project sponsor has multiple credits, a gross DSCR



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should be calculated for each outstanding debt. A ratio of less than 1.0 indicates the project sponsor may not be able to meet its current debt obligations.

- *Net debt service coverage ratio (Net DSCR)* – This ratio is similar to gross DSCR, but the numerator is adjusted to reflect the amount of pledged revenues used to subsidize transit operations. It is a measure of the financial ability with which the project sponsor can meet its debt service requirements without putting current service levels of transit service at risk. A ratio of less than 1.0 indicates the project sponsor may not be able to meet its current debt obligations.

In addition to these metrics, the Financial Contractor should also review trends in unfunded pension liabilities and unfunded other post-employment benefits (OPEB) to understand how the project sponsor plans to address these unfunded liabilities in the future, and how these planned actions are incorporated in the financial plan.

### **(5) Performing the System-wide Financial Condition Analysis**

The financial condition analysis focuses on the project sponsor's historical ability to operate and maintain consistent (or greater) levels of service, and its ability to pay current costs from existing revenues. Secondly, the financial condition analysis establishes benchmarks against which to evaluate the project sponsor's financial plan.

The financial condition analysis is performed on a system-wide basis, using the metrics described in the prior section. The metrics are developed from annual data for the five-year period ending with the most recent fiscal year for which audited financial data are available. The analysis should consider the trend for each metric, noting especially if the trend is stable, improving, or declining.

For some items, a longer look-back period is advisable. Sales tax revenues, for example, can be volatile over a five-year period, and the calculation of a trend may be difficult to generalize. Revenues from property taxes and payroll taxes also exhibit volatility on a short-term basis. For these types of revenue sources, the Financial Contractor should analyze at least a 10-year trend and consider not just the CAGR between two end points, but also a rolling CAGR (e.g., 5-year rolling trend) to justify a reasonable trend metric to be later used as a benchmark in the financial capability analysis.

Exhibit 3-3 provides a summary of the questions that should be addressed in the financial condition analysis and identifies a metric or metrics that can be used to support the Financial Contractor's findings.

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**Exhibit 3-3:  
Suggested Metrics for Evaluating Trends in Transit Operations**

| <b>Financial Conditions Questions</b>                                       | <b>Metrics</b>  | <b>Interpretation</b>  |
|---|---|--|
| Has the project maintained proper service levels?                           | <ul style="list-style-type: none"> <li>• Vehicle Revenue Miles (VRM) CAGR</li> </ul>  | Yes, if CAGR is stable or increasing   |
| Have trends in transit costs been comparable to trends in transit revenues? | <ul style="list-style-type: none"> <li>• Operating cost per VRM CAGR</li> <li>• Operating subsidy per VRM CAGR</li> <li>• Total operating subsidy CAGR</li> <li>• Operating subsidy sources CAGR</li> </ul> | Yes, if sources of operating subsidy are growing at a rate comparable (or exceeding) growth in operating subsidy per VRM   |
| Has the project sponsor met its capital replacement needs?                  | <ul style="list-style-type: none"> <li>• Average fleet age CAGR</li> <li>• Percent of useful life remaining CAGR</li> </ul>   | Yes, if trend in average fleet age and the percentage of useful life remaining are stable or improving (i.e., fleet age decreasing and the percentage of useful life is increasing). |
| Is the project sponsor's debt level affordable?                             | <ul style="list-style-type: none"> <li>• Gross DSRC</li> <li>• Net DSRC</li> <li>• Current Ratio</li> </ul>   | Yes, if gross DSCR satisfies the additional bonds test, and the current ratio exceeds 1.0  |
| Does the project sponsor have adequate working capital?                     | <ul style="list-style-type: none"> <li>• Weeks of working capital (current and CAGR)</li> </ul>   | Yes, if weeks of exceed weeks of weighted average accounts receivable and CAGR is positive   |
| Can the project sponsor pay its current costs from existing revenues?       | <ul style="list-style-type: none"> <li>• Current Ratio</li> <li>• Unrestricted Net Assets</li> </ul>  | Yes, if the current ratio exceeds 1.0 and the trend has been stable or improving and if unrestricted net assets are positive and the trend has been stable or improving              |

**(6) Performing the System-wide Financial Capability Analysis**

The financial capability analysis considers the stability and reliability of revenue sources needed to meet future annual capital and operating and maintenance costs. It also seeks to determine whether based on projected revenues the project sponsor can meet its expansion costs, in addition to its existing operations, while maintaining the existing transit system in a state of good repair.

The financial capability analysis consists of two steps:

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- Interpret and synthesize the project sponsor’s financial plan, employing the use of metrics like those included in the financial condition analysis to the extent practical,<sup>2</sup> and address the following aspects of the plan:
    - Describe the impact of the project on system-wide operations and identify any future project-related costs that are not included in the project cost estimate (e.g., additional rail cars acquired for service on the project alignment after the project is complete);
    - Discuss the project sponsor’s projected sources and uses of funds for the entire system, and the methods used to make the projections, with particular emphasis on the maintenance of existing service levels and meeting capital replacement needs;
    - Describe the project sponsor’s projected cash flow, cash reserves, and net debt capacity (i.e., the additional debt the project sponsor could incur without impinging on existing cash flow or exceeding legal debt limits); and
    - State whether the financial plan, as presented by the project sponsor, indicates that the project sponsor has the financial capability to construct and implement the project while operating and maintaining the existing transit system throughout the 20-year period (10-year period, if applicable) covered in the financial plan, including any other expansion projects planned during that time.
  - Critique the project sponsor’s financial forecast assumptions by comparing projected trends to historical trends and the current economic outlook to indicate whether the forecast assumptions are conservative, reasonable, or optimistic. The Financial Contractor should invite the project sponsor to explain or justify any deviation from historical trends, except those resulting from a change in economic conditions. The Financial Contractor should apply professional judgment as to whether this information is reasonable. This section should address each proposed funding source individually. For each proposed capital and operating funding source, the Financial Contractor should indicate whether the assumptions for future revenues are optimistic, reasonable, or conservative relative to historical trends and/or other metrics based on the Financial Contractor’s professional judgement. In addition, the Financial Contractor should address whether each proposed funding source for the proposed project is committed, budgeted,

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<sup>2</sup> Metrics derived from the CAFR’s Statement of Net Assets are unlikely to be included in the financial plan forecast.

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planned, uncertain, or unspecified in the first full year of revenue service operations. The Financial Contractor should include a description of why the funds were classified as such and of the documentation received from the project sponsor, or lack thereof, justifying such classification.

Based on the critique of the project sponsor's financial forecast assumptions, the Financial Contractor should identify assumptions or financial plan variables for which a less favorable or less optimistic outcome may be reasonably expected. These are referred to as at-risk assumptions and may be evaluated in the stress tests.

### **(7) Conducting/Reviewing the Stress Tests**

A stress test is intended to estimate the impact on the project sponsor's financial capability of less favorable outcomes for at-risk assumptions defined in the financial capability analysis. A stress test is conducted for each at-risk assumption identified by the Financial Contractor, and for all the at-risk assumptions as an aggregate. The Financial Contractor should apply professional judgment in deciding whether an at-risk assumption is of material importance. The Financial Contractor should identify and explain the rationale in the FCA report for why at-risk assumptions were not evaluated under the stress tests.

The stress tests are not performed to find the breaking point in the financial plan. Rather, they are performed to analyze the impact on the project sponsor's financial capability of revenue and cost outcomes that are adverse, may be reasonably likely to occur, and have a material impact on the proposed project. FTA relies on the Financial Contractor's judgement to determine the appropriate assumptions to test. The Financial Contractor must fully document in the FCA the reasons for choosing the stress tests undertaken. The stress tests should always include the project sponsor's capacity to accommodate a 10 percent increase in project cost, a 10 percent project funding shortfall, in addition to other at-risk assumptions identified by the Financial Contractor.

A stress test typically estimates the impact of a change in an assumption on:

- end-of-year cash balances, including a comparison to any policies regarding reserve funds that the project sponsor may have adopted;
- limits on borrowed funds, either statutory or set by policy; and
- gross DSCR and net DSCR, including a comparison to any policies regarding debt service coverage that the project sponsor may have adopted, or that are stated in a bond indenture.

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In addition to a stress test for each at-risk assumption, the Financial Contractor must also include a “super stress test,” which evaluates the combined effect of the individual stress tests.

In most cases, the stress tests can be performed by calculating the net annual impact on cash flow (i.e., incremental costs or revenues) in the change of the relevant assumption being tested. This net annual impact can then be used to adjust the annual cash flow and year-end cash balances that the project sponsor has projected in its financial model, as well as other metrics (e.g., the DSCR) that are affected by the stress test. This can be done through a series of simple calculations and need not require the Financial Contractor to manipulate the project sponsor’s financial model or to build a parallel financial model. An example is provided in Appendix C.

If, as part of the stress tests, the Financial Contractor finds it necessary to evaluate the project sponsor’s net debt capacity (i.e., the capacity to assume additional debt beyond that included in the current financial plan), it may be possible to estimate via a simple series of calculations, presented in Appendix C. The analysis of net debt capacity, however, can be complicated, particularly if the project sponsor has multiple credits or if the project sponsor uses a combination of internal cash and debt to fund its capital program. In these circumstances, it may be necessary to request the project sponsor to conduct a stress test, per the specifications of the Financial Contractor. The Financial Contractor would still be responsible for exercising due diligence and validating the accuracy of the stress test provided by the project sponsor.

Note that the direct use of the project sponsor’s financial model by the Financial Contractor can be trouble-prone and introduces the possibility of making unintentional errors. The models are often quite complex and include macros or third-party software that may not be present or may not execute properly. Also, please be aware that the creation of a parallel financial model is time-consuming and may be difficult to validate against the project sponsor’s financial plan. The examples of simple calculations illustrated in Appendix C will, in most cases, provide accurate results for the stress tests. The Financial Contractor may, however, propose alternative methods to FTA if they can be shown to be necessary, and an effective use of resources.

The Financial Contractor should document whether the sponsor’s financial plan can weather the stress tests, one-by-one and in combination. If the project sponsor’s fails to withstand one or more stress tests or the combined stress test, then this should be discussed in a conference call between the Financial Contractor and the FTA COR/ACOR. FTA will then coordinate with the Financial Contractor to determine the appropriate steps for follow-up action.

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## **(8) Preparing the Draft Report**

The FCA report is essentially a story told from numbers. If the Financial Contractor assembles the data and performs the analyses described above, and addresses the content described in the annotated outline presented in Appendix B, preparation of the FCA report should proceed in a straightforward manner. As a way of keeping an organized flow of the elements of the story being told in the FCA report, the Financial Contractor should provide clearly stated conclusions at the end of each section, and often at the end of each paragraph. A direct reference must be given between each such conclusion and the reasons supporting that conclusion.

In preparing the report, the Financial Contractor should be aware that the report is reviewed by a multitude of people at FTA HQ and the FTA Regional Office. The importance of a timely, complete submittal cannot be over-emphasized.

The text of the draft report should be submitted in Word, dated, and marked “draft.” Any exhibits, to the extent that they are necessary, should be submitted at the same time as the report, in the Word document or in a separate PDF. This is advisable because the FCA report is often long, and FTA’s comments may be voluminous. FTA prefers that Financial Contractors limit the use of tables and graphs to those that are necessary to visually display an aspect of the Financial Contractor’s analysis, findings, and conclusions. Financial Contractors should not prepare tables and graphs that replicate data and information included in the project sponsor’s financial plan submittal unless it is necessary to convey a vital piece of information about the Financial Contractor’s analysis.

Similarly, the text of the FCA should present findings in an orderly and succinct fashion, avoiding excessive amounts of information, extraneous discussions, and duplicative information. In each round of revisions, it is useful to submit a marked-up version of the text, so that all edits and comments incorporated in the current version can be traced, as well as a new clean version incorporating all previously agreed edits. All comments made by FTA must be addressed in some manner, even if stating disagreement or proposing an alternative thought.

When the draft text and exhibits have been edited to FTA’s satisfaction, the Financial Contractor should integrate the text and exhibits into a single, properly formatted report in a PDF format.

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## F. COMPLETING THE FCA

Once FTA’s comments have been addressed to FTA’s satisfaction, the Financial Contractor will prepare a final version of the report and submit it to FTA electronically as a PDF. This step completes the FCA.

At its discretion, the COR/ACOR may transmit the FCA to the project sponsor. Generally, FCAs are shared with the project sponsor so it is aware of the financial issues that need to be addressed prior to the project’s consideration for a construction grant agreement. Thus, it is important that FCAs contain clear and concise recommendations for improvement. FCAs conducted just prior to construction grant approval generally are not shared with the project sponsor until after the construction grant is awarded.

## 4. Preparing a Financial Rating from the FCA

FTA is required by law to prepare a local financial commitment rating at specific points in time and prior to awarding a construction grant agreement. Local financial commitment is assessed according to three ratings factors:

- Current capital and operating condition, weighted at 25 percent;
- Commitment of capital and operating funds, weighted at 25 percent; and
- Financial capacity and reasonableness of estimates and assumptions, weighted at 50 percent.

The evaluation and rating process for local financial commitment is described in FTA’s *2024 Capital Investment Grants (CIG) Policy Guidance*.

Updated ratings for local financial commitment should always be provided as part of an FCA.

The FCA addresses each of the criteria for local financial commitment at specific places in the FCA report. Therefore, the project sponsor’s rating for local financial commitment can be determined directly from the FCA report. This section explains how to develop a local financial commitment rating from information contained in the FCA report.

### A. LOCAL FINANCIAL COMMITMENT RATING PROCESS – OVERVIEW

The evaluation and rating process for local financial commitment is described in FTA’s *2024 CIG Policy Guidance*. Rather than repeating the information found in that document, the purpose of this section is to provide guidance to Financial Contractors on how to derive the rating for local financial commitment from the FCA report.

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## **B. CURRENT CAPITAL AND OPERATING CONDITION**

### **(1) Summary of FTA rating guidance**

The rating for the current capital and operating condition is based upon the average bus fleet age, the current ratio as calculated from the project sponsor's most recent audited statement, bond ratings if given within the last two years, and historical cash flows.

### **(2) Sources of information in the FCA report**

Information in the FCA report to support the rating for this subfactor should be in the FCA section on system-wide financial condition.

## **C. COMMITMENT OF CAPITAL AND OPERATING FUNDS**

### **(1) Summary of FTA rating guidance**

The rating for commitment of funds is based on the percentage of funds (both capital and operating) that are committed or budgeted versus those considered only planned or unspecified.

### **(2) Sources of information in the FCA report**

Capital funding commitments for the project should be addressed in the FCA in the section on the project financial plan. Operating funding commitment for system-wide operating funds in the opening year of the project should be described in the section of the FCA report that discusses system-wide financial capability for the project sponsor's operating plan.

## **D. FINANCIAL CAPACITY AND REASONABLENESS OF ESTIMATES AND ASSUMPTIONS**

### **(1) Summary of FTA rating guidance**

The rating for the reasonableness of the financial plan is based upon whether capital and operating planning assumptions are comparable to historical experience, the reasonableness of the capital cost estimate of the project, adequacy of meeting state of good repair needs, and the project sponsor's financial capacity to withstand unexpected cost increases or funding shortfalls.

### **(2) Sources of information in the FCA report**

Capital planning assumptions and the project sponsor's adequacy of meeting state of good repair needs should be described in the section of the FCA report in which the



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Financial Contractor provides an assessment of the project sponsor's system-wide financial capability for its capital plan. Operating planning assumptions should be described in the section of the FCA report in which the Financial Contractor provides an assessment of the project sponsor's system-wide financial capability for its operating plan.

The reasonableness of the capital cost estimate of the project should be described in the section of the FCA report that discusses the project budget, and specifically references the PMOC report.

The project sponsor's financial capacity to withstand unexpected cost increases or funding shortfalls should draw from the section of the FCA report in which the Financial Contractor provides an assessment of the project sponsor's system-wide financial capability for its capital plan. The basis for this subfactor may also draw from the sections of the FCA report that discuss the project financial plan specifically, the project sponsor's capacity to accommodate higher project costs or funding shortfalls, and the section on stress tests.

The portion of the rating addressing the project sponsor's projected cash balances should draw from the section of the FCA report in which the Financial Contractor provides an assessment of the project sponsor's system-wide financial capability for its operating plan. The basis for this subfactor may also draw from the section of the FCA report addressing stress tests.

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## Appendix A: Web Links for FCA-Related Statute and Policies

- 49 CFR Part 611, Final Rule for Major Capital Investment Projects (January 2013):  
<https://www.gpo.gov/fdsys/pkg/FR-2013-01-09/pdf/2012-31540.pdf>
- 2024 Capital Investment Grants (CIG) Policy Guidance  
<https://www.transit.dot.gov/funding/grants/grant-programs/capital-investments/2024-cig-policy-guidance>
- Reporting Instructions for New Starts, Small Starts, and Core Capacity projects:  
<https://www.transit.dot.gov/funding/grant-programs/capital-investments/how-apply>
- Guidance for Transit Financial Plans (June 2000):  
<https://www.transit.dot.gov/funding/funding-finance-resources/guidance-transit-financial-plans>
- FTA Financial Contractor Guidelines and Standards for Assessing Local Financial Commitment of Proposed Capital Investment Grant Projects (January 2025)  
<https://www.transit.dot.gov/funding/grant-programs/capital-investments/guidelines-and-standards-assessing-local-financial>
- Circular 5200.1A, Full Funding Grant Agreements (FFGA) Guidance (December 2002):  
<https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/full-funding-grant-agreements-guidance>
- Circular 5010.1F Award Management Requirements (November 2024):  
<https://www.transit.dot.gov/regulations-and-programs/fta-circulars/award-management-requirements-circular>

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## **Appendix B: Annotated FCA Report Outline**

This appendix presents the outline (i.e., headings) for the FCA report, with bullets indicating the minimum content.

### **REPORT COVER**

- Financial Capacity Assessment of the (Sponsor Name) for the (Project name)
- prepared for the Federal Transit Administration
- by (Financial Contractor name)
- contract number
- date
- version (e.g., draft, final draft, final)
- for the financial plan dated (date)

### **TABLE OF CONTENTS**

- include first (e.g., 1.) and second (e.g., 1.1) headings only;
- separately identify appendices; and
- include list of exhibits (i.e., tables and charts)

### **GLOSSARY OF ABBREVIATIONS, ACRONYMS, AND TERMS**

- see standard list following the Table of Contents for these Guidelines; and
- include other entries as needed.

### **1. EXECUTIVE SUMMARY**

- Identify the project sponsor and project name and provide a brief description of the project. Provide a forward reference to Section 2 for additional details.
- Identify sources of project capital funds, indicate the percentage of non-CIG funds that are committed or budgeted, and summarize the process required to commit any remaining funds. Provide a forward reference to Section 3 of the report for additional details.
- Summarize at a high-level the financial condition of the project sponsor, interpret trends, and summarize the sponsor's ability to meet state of good repair needs, other major capital project commitments (if relevant), and cash flow. Indicate

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whether the project sponsor can meet current financial obligations from current resources. Provide a forward reference to section 4 of the report for additional details.

- Summarize the financial capability of the project sponsor as presented in the project sponsor's financial plan. Indicate whether the financial plan meets the requirements of FTA's *Guidelines for Transit Financial Plans*. Critique the financial plan and summarize any critical issues raised by the analysis. Provide a forward reference to section 5 of the report for additional details.
- Summarize the results of the stress tests and provide a forward reference to Section 6 of the report for additional details.
- Indicate whether the project sponsor can sustain current operations, including state of good repair, in addition to constructing and operating the project, in light of the results of the stress tests.
- Note that concluding statements in the above bullets should be consistent with the report's conclusions.
- Identify recommendations for improvement. Provide a forward reference to the section on recommendations for additional details.

## **2. SCOPE OF THE FCA**

- Provide a brief introduction to this section.

### **2.1. Project Description**

- Describe the key features of the project, including alignment, technology, high-level operating features (e.g., peak headways), opening date and projected ridership. Provide a forward reference to Section 3 for details on cost and funding.

### **2.2. Project Sponsor**

- Describe the project sponsor, including its corporate characteristics (e.g., independent authority, joint powers authority, component of government, etc.) and governing board.
- If the project sponsor is not an independent authority, then describe its relationship to the parent organization(s) regarding legislative, executive, operational, and financial decision-making. If the project is being developed through an IGA, then describe the roles and responsibilities of the parties to the agreement.

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- If the project sponsor is not the sole owner-constructor-operator, describe the other entities involved in the project, their respective roles and responsibilities, and the type and nature of agreements among the parties regarding their roles, in particular funding, capital cost sharing, and operating expenses.
  - Describe any special features of the institutional arrangements that may affect the financial plan (e.g., authority to issue debt, debt limits, taxation, lawsuits, etc.).

### **2.3.Limitations of Data and the Report**

- Identify the major source or sources of documents used to perform the FCA, including the date of the financial plan, and provide a forward reference to Appendix A (List of Documents Reviewed). Identify any concerns about the completeness or reliability of data provided by the project sponsor.
- Indicate whether the financial plan complies with FTA's *Guidelines for Transit Financial Plans*, and if not, why not.
- Indicate that financial forecasts which assume the occurrence of future events that are unlikely to occur exactly as planned; variances between projected and actual outcomes may occur and could be material.
- Summarize the scope of work performed by the Financial Contractor In the review of the reasonableness of the forecast assumptions used in the Sponsor's financial plan, the Contractor should note that it did not attempt to fully proof the forecast methodology. Where appropriate, the Contractor should note that it evaluated the risks posed by a potential, material variation in assumptions. Provide a forward reference to Section 6, Stress Tests.
- Describe any conditions of the project sponsor's submittal or the scope of the Financial Contractor's review that vary from the typical FCA. Not all FCAs fit the model in which a transit agency is the project sponsor. FTA encounters an array of management structures, agency responsibilities, sponsorship arrangements, and funding mechanisms. Sometimes these unique circumstances require that the methodology of the FCA be altered to conduct an FCA that meets the requirements in law. If a different approach or method was used, describe how the method was applied and the implications on the analysis.

## **3. PROJECT FINANCIAL PLAN**

- The introduction to this section should summarize key findings regarding the project budget, cash flow, and the project sponsor's capacity to accommodate higher project costs, funding shortfalls, or delays. The capacity to handle higher

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costs or funding shortfalls or delays will, in most cases, be referenced in Section 5 (Financial Capability) or Section 6 (Stress Tests). In some cases, project financing is isolated from the project sponsor's broader financial responsibilities and should be evaluated in Section 3.3.

### **3.1. Project Budget**

- Provide a summary of this section.
- Provide a complete breakdown of the project's sources of funds, identifying for each individual source:
  - The source of funds, the authority by which the funds are being applied to the project and note if any of the funds have already been obligated in an existing grant.
  - The amount of funds, in total and the amount already expended on the project.
  - The amount of funds committed to the project, the action taken to commit the funds, and the documentation submitted as evidence by the project sponsor to demonstrate that the funds are committed.
  - A description of all additional action(s) needed to commit the funds to the project.
  - All the above should be organized by funding entity in the following order: Federal, State, local, and private sector. Any bond or loan sources should describe the source(s) of repayment.
  - Provide a forward reference to Appendix B, which provides a summary of the funds applied to the project, by fiscal year of the project sponsor.
- Describe the uses of project funds:
  - Summarize the project's baseline cost estimate at a high level. Indicate the date of the PMOC report and results of the PMOC cost review in a very brief summary (2-3 sentences).
  - Describe and assess the reasonableness of the estimate of financing costs, including the assumptions regarding the interest rates and fees.
  - State whether the cost of the project includes all finance charges incurred by the project sponsor that are expected to occur prior to either the revenue operations date or the fulfillment of the Section 5309 CIG funding commitment in the FFGA, whichever occurs later in time.

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### **3.2. Project Cash Flow**

- Describe the annual cash flow sources and uses of funds, including project-specific cash balances that may accrue in some years and be drawn from in others.
- If debt is being incurred specifically for the project, and payable from project funds, confirm that the projected cash flow is consistent with the terms of the indenture or loan agreement with respect to debt service coverage or other factors governing funding draws and repayment. Describe the degree of excess debt service coverage that exists.

### **3.3. Capacity to Accommodate an Unexpected Project Cost Increase or Funding Shortfall**

- Summarize any analysis performed by the project sponsor of its capacity to accommodate an unexpected cost increase or funding shortfall for the project.
- If the project is funded in a matter distinct from the project sponsor's other financial obligations, present an analysis of the capacity of that funding structure to accommodate an unexpected cost increase or funding shortfall for the project.
- If the funding structure includes a multi-party or third-party cost agreement, evaluate the agreement's provisions to address unexpected cost increases or funding shortfalls. If the funding partners are sharing this responsibility with the project sponsor, or if the funding partners are taking responsibility independent of the project sponsor, it may be necessary to evaluate the relevant partner(s)' funding source(s) that would be provided in the event of an unexpected cost increase or funding shortfall. The Financial Contractor should discuss this situation with FTA and obtain FTA approval before taking any steps to evaluate the project sponsor's financial partners.
- If the project sponsor is solely responsible for addressing unexpected project cost increases or funding shortfalls from the funds over which it has complete control, summarize the results of the Stress Tests (section 6) and provide a forward reference to that section.

## **4. SYSTEM-WIDE FINANCIAL CONDITION**

- The introduction to this section should summarize the project sponsor's current financial condition with respect to its operating and capital programs and highlight trends over the past five years that have contributed to the current financial condition.

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- Note that a key product of this section is a set of metrics that will be used to evaluate the project sponsor's assumptions, explicit or indirect, used in developing its financial plan.

#### **4.1. Transit Operations**

- Reference Appendix C, Operating Trends, which will support the analysis of service, ridership, operating revenue, operating cost, and operating subsidy trends summarized in this section of the FCA report.
- Discuss trends in the annual amounts of service provided by mode of service (e.g., bus, demand response, light rail).
- Discuss trends in ridership, passenger revenues, and other sources of system-generated operating revenues, if applicable, and evaluate the trends using appropriate metrics. Provide a breakdown by mode of service if the data is available.
- Discuss trends in operating costs and evaluate the trends using appropriate metrics. Provide a breakdown by mode of service, if practical.
- Discuss trends in operating subsidies (i.e., all forms of revenue applied to operations other than revenue generated directly from operations) and evaluate the trends using appropriate metrics. Provide a breakdown by mode of service if practical. This section may require an exhibit presenting the trend data.
- Summarize the project sponsor's operating condition. Has the project sponsor maintained or expanded service in the past five years, or has the project sponsor reduced service? Is the project sponsor able to finance current operating costs from current sources of revenue?

#### **4.2. Transit Capital**

- Discuss the age and condition of transit capital assets.
  - Discuss and evaluate the trend in average revenue fleet age. Discuss the current fleet age profile by mode. Discuss fleet reliability, if supporting data is available and measured in an internally consistent manner over the historical look-back period.
  - Discuss and evaluate the age and condition of non-fleet capital assets that are depreciable.
- Discuss trends in the sources and uses of capital funds.



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### **4.3. Financial Management**

- Discuss trends in key indicators of financial management, such as:
  - the current ratio (i.e., current assets ÷ current liabilities);
  - weeks of working capital;
  - cash flow;
  - unrestricted net assets (i.e., assets minus liabilities minus restricted net assets);
  - bond ratings; and
  - debt service coverage ratio.
- Concluding statement for Section 4 – Summarize the project sponsor’s capital condition. Has the project sponsor maintained the age and condition of capital assets during the historical look-back period, or have replacement needs been deferred? Is the project sponsor able to finance current capital replacement costs from current sources of revenue?

## **5. SYSTEM-WIDE FINANCIAL CAPABILITY**

- The introduction to this section should summarize the financial impact of the project, the project sponsor’s prospective financial capability to financially sustain current services while undertaking the project, and the Financial Contractor’s critique of the financial plan, drawing heavily on the metrics developed from the trend analysis in section 4.
- Reference the 10-year or 20-Year financial plan included to the FCA report.

### **5.1. Operating Financial Plan**

- Discuss and evaluate the operating impact of the project:
  - describe the project sponsor’s estimates of the incremental effect of the project on ridership, operating revenues, operating costs, and subsidy requirements for the opening year and for the horizon year of the financial plan;
  - discuss and evaluate the methods used by the project sponsor to develop these estimates; and
  - evaluate the estimates based on appropriate metrics or comparisons.
- Discuss and evaluate the project sponsor’s operating financial plan:

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- describe the projected sources and uses of operating funds, cash flow, and operating program year-end cash balances;
  - identify operating fund sources in the opening year of the project as being committed, budgeted, planned, uncertain, or unspecified;
  - discuss and evaluate the methods used by the project sponsor to develop these projections; and
  - summarize the project sponsor’s presentation of operating financial capability, as presented in its operating financial plan.
- Critique each of the above elements of the operating financial plan:
    - using the financial metrics developed in section 4, calculate comparable values for (the 10-year or) 20-year financial plan, as applicable;
    - evaluate the reasonableness of the financial plan assumptions by contrasting the historical versus projected financial metrics, and/or to any other relevant and reasonable macro-level forecasts (e.g., US gross domestic product); and
    - based on the evaluation, identify the key risks posed to the project sponsor’s financial capability for inclusion in the stress tests described in Section 6.

## **5.2. Capital Financial Plan**

- Discuss and evaluate the capital impact of the project on the on-going capital program.
  - Note that the project’s direct impact on the capital program was described in Section 3;
  - Describe the impact on the on-going capital program of project- related costs that are not included in the project cost estimate, for example:
    - any concurrent non-project activities associated with the project that are being funded by local sources but are not included in the project’s baseline cost;
    - for New Starts projects only, any future project-related costs needed to achieve the horizon year service plan for the project. The Financial Contractor can identify if such costs are needed by consulting the “Build Annualized – Horizon” worksheet of the SCC workbook provided by the project sponsor. Any additional

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capital costs, such as additional vehicles or parking facilities, would be identified as the difference in quantities and cost between the “Build Annualized – Horizon” worksheet and the “Build Annualized – Current” worksheet; and

- changes to other revenue fleets such as feeder bus service needed to accommodate changes to the system operating plan due to or associated with the project.
- Identify the percentage of on-going capital program costs that is represented by the project-related costs identified above. If possible, verify that these costs are included in the project sponsor’s financial plan.
- Discuss and evaluate the capital financial plan:
  - describe the projected sources and uses of capital funds, cash flow, and capital program year-end cash balances, with particular emphasis on the costs necessary to attain and sustain a state of good repair;
  - discuss and evaluate the methods used to develop these projections; and
  - summarize the project sponsor’s presentation of capital financial capability.
- Critique each of the above elements of the capital financial plan:
  - using the financial metrics developed in section 4, calculate comparable values for the 20-years (10-years, if applicable) financial plan;
  - evaluate the reasonableness of the project sponsor’s financial plan assumptions by contrasting the historical versus projected financial metrics, and/or to any other relevant and reasonable standard or macro-level forecasts (e.g., US gross domestic product); and
  - based on the evaluation, identify the key risks posed to the project sponsor’s financial capability for inclusion in the stress tests described in section 6.

## **6. STRESS TESTS**

- The introduction to this section should introduce and summarize the stress tests and how and why they were performed. Historically, there are a minimum of three individual stress tests, and one super stress test that incorporates all the tests together. These individual tests are up to the Financial Contractor to decide and assess based on the observations and analysis within the project sponsor’s capital and operating plan.

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- The stress tests should be related to the critique of the operating financial plan and capital financial plan presented in the prior section. Although the project sponsor may have included sensitivity tests in its financial plan, these are not to be used as substitute for stress tests performed by the Financial Contractor.
  - For each stress test (which should be formatted as a separate heading), describe:
    - why the at-risk assumption was chosen to be tested;
    - how the stress test was conducted (method and scope); and
    - the effect of the stress test on measures of financial feasibility, such as annual cash flow, ending cash balances, debt service coverage ratios, debt ceilings, or other appropriate measures.
  - Provide a concluding statement as to whether the stress tests impinge the project sponsor's financial capability, both singly and collectively.

## 7. CONCLUSIONS

- Conclusions should be formatted as a bulleted list;
- The conclusions should be abstracted from second- and third-level headings in the body of the report; and
- Each conclusion should reference the section of the report to which the reader can refer for additional information.

## 8. RECOMMENDATIONS

- **Recommendations should be formatted as a bulleted list.**
- Identify major recommendations for improvement, including missing information and financial plan weaknesses. Be as specific as possible.
- Additional recommendations to increase the project rating can be then divided into:
  - Capital Plan assumptions and,
  - Operating Plan Assumptions
- *Below are some examples of common recommendations:*
  - *Clearly identify the steps required to gain funding commitments and complete those steps.*
  - *Revise the growth rates used in the financial plan for [cost or revenue sources] to better match historical experience or provide further*

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justification for the growth rates assumed since they differ significantly from historical experience.

- Disaggregate the data in the financial plan, providing greater information on each source. Clearly identify the assumptions used to generate the information for each source.
  - Provide historical vehicle revenue miles and vehicle revenue hours of service data for each mode operated and provide the same information for the 20-year forecast period (10-years if applicable) included in the financial plan.
  - Identify specific debt capacity, cash reserves or other sources of committed funds that demonstrate the financial capacity to cover unexpected cost increases or funding shortfalls in an amount equivalent to at least 10 percent of the total Project capital cost.
  - Provide a sensitivity analysis.
- Each recommendation should address an issue affecting financial capacity or funding commitment that FTA should pursue with the project sponsor as a condition of the project's consideration for a construction grant agreement.

Note that if directed by FTA, a section discussing the local financial commitment rating may be included following section 6 (Stress Tests). In that case, sections 7 and 8 above would become sections 8 and 9. For a project to receive a construction grant, there historically cannot be any outstanding Recommendations. Any questions should be discussed with FTA.

## **APPENDICES**

### **Appendix A: List of Documents Reviewed**

- Provide a title, source, and date of publication for each document reviewed.

### **Appendix B: Sources of Project Funds**

- Insert a one-page PDF of a worksheet showing the sources of funds for the project for each of the project sponsor fiscal years, from the current FY through the year of project opening, or final CIG funding allocation, whichever is later. Use a portrait orientation if practical.

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## Appendix C: Transit Operating Trend

- This appendix presents trend data for the five-year historical look-back period analyzed in section 4. Use data reported to NTD, unless the NTD data is found to be unreliable for interpreting performance trends (e.g., due to a material change in how operating costs are allocated to modes), in which case the Financial Contractor should acquire the best available trend data from the project sponsor (e.g., operating data tracked by the project sponsor that are internally consistent and reliable for the look-back period). This type of anomaly usually becomes evident when unexplained or unreasonable changes in performance trends occur in the historical data. When such conditions arise, the Financial Contractor should review with the project sponsor specific examples of the apparent anomalies and determine whether other data should be used for the trend analysis or determine how the NTD data may be adjusted to present an internally consistent trend over time.
- NTD data can be easily acquired from the annual NTD profiles available online.
- For each transit mode, provide annual values, the change over the five- year historical look-back period (i.e., ending value less beginning value), and the CAGR for the historical look-back period for the following items at a minimum:
  - Operating cost
  - Farebox revenues
  - Non-farebox operating revenues
  - Subsidy (calculated as operating cost less farebox revenue less non-farebox revenue)
  - Unlinked passenger trips
  - Passenger miles
  - Vehicle revenue miles (VRM)
  - Vehicle revenue hours (VRH)
  - Peak revenue vehicles (i.e., maximum vehicles in service)
  - Total active revenue vehicles
  - Average fleet age
  - Selected metrics referenced in section 4; some suggestions:
    - Operating cost per VRM

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- Farebox revenue per VRM
  - Farebox ratio (i.e., farebox revenue divided by operating cost)
  - Total operating revenue per VRM
  - Subsidy per VRM
  - Unlinked passenger trips per VRM
  - Average farebox revenue per unlinked passenger trip
- Also include a system-wide summary for the above non-fleet items

#### **Appendix D: 10-Year/20-Year Financial Plan**

- Reformat and abstract as necessary the project sponsor's 20-year (10- year, if applicable) financial plan to present major sources and uses of operating funds, operating cash flow, major sources and uses and capital funds, capital cash flow, and ending cash balances.

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## Appendix C: Stress Test Examples

This appendix presents two step-by-step examples of conducting a stress test. These examples are provided to illustrate two possible methods for conducting stress tests. FTA expects Financial Contractors to use their professional judgement as to the appropriate stress test methods and to document and explain the methods in the FCA. The first example illustrates how to calculate the net annual impact on cash flow associated with a change in a forecast assumption. The second example illustrates how to calculate a project sponsor's net debt capacity (i.e., its capacity to issue additional debt beyond that included in its financial plan).

### EXAMPLE 1: CALCULATING THE NET ANNUAL IMPACT ON CASH FLOW

In most cases, a stress test can be performed by calculating the net annual impact on cash flow (i.e., incremental costs or revenues) of a change in the relevant assumption that is being tested. This net annual impact can then be used to adjust the annual cash flow and year-end cash balances that the project sponsor has projected in its financial model, as well as other metrics (e.g., the DSCR) that are affected by the stress test. This can be done through a series of simple calculations and need not require the Financial Contractor to manipulate the project sponsor's financial model or to build a parallel financial model.

An example of this approach can be illustrated by a stress test of the project sponsor's assumption regarding the projected rate of growth in O&M unit cost (i.e., O&M cost per VRM). For illustrative purposes, assume that the project sponsor has assumed a 3.0 percent CAGR for O&M unit cost, but the stress test is for a 4.5 percent CAGR, which was observed to be the historical growth rate. The Financial Contractor would calculate the net annual impact of this change in assumption by:

- using the unit cost for the first year of the forecast as the point of departure;
- calculating a new unit cost for each subsequent year in the forecast by applying the 4.5 percent growth rate to the prior year's unit cost;
- calculating new annual O&M costs by applying the stressed unit cost to the VRM forecast to be operated each year; and
- calculating the difference between the project sponsor's forecasted O&M cost and the stressed O&M cost.

Assuming an O&M unit cost of \$10.00 in the first year of the forecast, the stressed unit costs would be \$10.45 in year 2, \$10.92 in year 3, \$11.41 in year 4, and so forth. If in the fourth year the project sponsor plans to operate 20 million VRM, the stressed O&M cost



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would be \$228 million ( $\$11.41 \times 20$  million VRM). The project sponsor's forecast for year 4, at a 3.0 CAGR for O&M unit cost, would be \$219 million. Thus, the net annual impact of this stress test, in year 4, is estimated to be \$9 million.

In this example, the stressed O&M costs are higher than in the original forecast. The additional cost would decrease the project sponsor's projected annual cash flow and reduce the year-end cash balance. The project sponsor would survive the stress test if the resulting year-end cash balance is positive, and the project sponsor is able to satisfy other relevant metrics posed by its financial policies and credit agreements.

For example, the stress test may have an impact on the project sponsor's forecasted DSCR. In that case, the net annual impact of the stress test would be considered in calculating a stressed DSCR. For example, consider the case where the project sponsor's goal is to maintain at least a 1.5x net DSCR, wherein the net revenues used to calculate the net DSCR are equal to total sales tax revenues, less sales tax revenues used to subsidize the operating deficit. In the example above, the net annual impact of the stress test (i.e., higher operating costs) would result in a higher operating subsidy, thus reducing the net revenues used to calculate the net DSCR and producing a lower DSCR. In this case, if the stressed DSCR stayed above 1.5x in all years of the forecast, the project sponsor would have survived the stress test.

There may be other metrics that are relevant to determining whether the project sponsor can survive the stress test. It is the Financial Contractor's responsibility to identify these other metrics

## **EXAMPLE 2: CALCULATING NET DEBT CAPACITY**

If a stress test requires an analysis of the project sponsor's debt capacity to accommodate the net annual impact as described above, additional calculations will be necessary. Consider, for example, a stress test that produces a negative ending cash balance or violates some other financial policy of the project sponsor (e.g., cash balance falls below a Board-approved reserve threshold, such as an operating reserve sized at 15 percent of O&M costs). It may be necessary to determine whether the project sponsor has the debt capacity to finance a temporary cash flow shortfall. The simplest way to do this is calculate the project sponsor's net debt capacity in every year of the forecast, which can be determined generally as follows:

- Calculate a capital recovery factor (CRF), which expresses level annual debt service as a proportion of debt proceeds. In Excel, this is calculated using the PMT (or payment) function as follows: = -pmt (interest rate, number of payments,

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- 1). For example, the CRF for debt at a 4 percent interest rate amortized over 30 years is 0.0578. For every \$10 million of cash flow available to service debt, the maximum allowable debt would be ( $\$10 \text{ million} / \text{CRF}$ ) or about \$173 million.
- Calculate the revenues that are pledged for debt service (e.g., net revenues as described above). Assume, for example, that pledged revenues are \$50 million.
  - Divide the pledged revenues by the DSCR to yield the pledged revenues available to service debt. Assume, for example, that the DSCR is 1.5. The pledged revenues available to service debt would be ( $\$50 \text{ million} / 1.5$ ) or about \$33.3 million.
  - Subtract debt service cost as forecasted by the project sponsor, to yield the amount of revenue available to service new debt. Assume, for example, that forecasted debt service is \$25 million. There would about \$8.3 million available to service new debt (i.e., \$33.3 million minus \$25 million).
  - Divide by the CRF to estimate the debt proceeds that this amount of revenue could support. Based on the above assumptions, the project sponsor could finance an additional \$144.1 million ( $\$8.3 \text{ million} / 0.0578$ ).

The minimum net debt capacity in all years of the forecast is the most additional debt the project sponsor could incur, without affecting other financial plan assumptions.

However, please note that the calculation of net debt capacity can be complicated by other factors not considered above, that are specific to the project sponsor or to the characteristics of the project sponsor's forecasted cash flow. It is up to the Financial Contractor to conduct the due diligence to ensure that net debt capacity calculation is reasonably accurate.