

REGIONAL FREIGHT AND GOODS MOVEMENT STUDY - PHASE III PROJECT MANAGEMENT PLAN



prepared for
Nashville Area Metropolitan Planning Organization

prepared by
Cambridge Systematics, Inc.

November 2014

Regional Freight and Goods Movement Study - Phase III

Project Management Plan

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date

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■ Introduction

The Nashville Area MPO is charged with providing the tools and plans necessary to help ensure that a multimodal transportation infrastructure system is maintained and developed in a manner that supports all modes of travel. This includes the safe and efficient movement of freight and goods. The MPO has developed and continues to develop several tools and plans to assist in maintaining and enhancing the regional transportation infrastructure and the Regional Freight & Goods Movement Studies are one of those tools. These documents identify many potential infrastructure and policy related projects to maintain and improve the freight transportation network over the next several years.

In 2003, the Nashville Area MPO published the results from Phase I of the Regional Freight & Goods Movement Study. That report served to highlight the role that the freight industry plays in the success of local economy and to illustrate the movement of freight in, out, around, and through the Nashville region. The principal goal of that study was to build a foundation to formally integrate freight into the overall MPO planning process. To that end, the study was designed to achieve the following objectives:

- Establish the basis for subsequent freight planning efforts by assembling a regional Freight Advisory Committee and developing a regional freight profile.
- Identify quick-action freight-related strategies, policies and projects specific to the Nashville area that could be implemented into the MPO's plans and programs.

Building upon the accomplishments of Phase I of the Regional Freight & Goods Movement Study, the Nashville Area MPO completed an effort to identify and plan for long-term freight needs in the Nashville region. Phase II of the study provided the needed technical tools to help regional partners including developing techniques and tools to:

- Predict future freight traffic volumes through the year 2035.
- Identify areas likely to see future capacity constraints and infrastructure deficiencies
- Identify possible traffic bottlenecks and safety concerns
- Evaluate the costs and benefits of potential improvements

The second phase of the study was also used to develop specific long-range transportation projects, identify potential funding sources for those projects, and evaluate policy-based solutions to accommodate future levels of freight on our regional transportation system while protecting the mobility and safety of the traveling public.

The Freight & Goods Movement Study – Phase III is expected to build upon the Nashville Area MPO's previous efforts in order to provide the MPO, its member jurisdictions, and strategic partners with information and recommendations to help minimize the negative impacts of freight movement on local communities, while also embracing freight's key contributions to regional prosperity. Highlights of the effort include:

- A review and analysis of historic trends and existing conditions in the region including an analysis of commodity flows, import/ export trading partners, local freight attractors and generators, freight networks and routing, economic impact of freight and logistics, etc.;
- A review and analysis of future conditions including a forecast of future commodity flows and freight movements, and an evaluation of programmed and planned transportation improvements, future land use policies, economic and community development plans, etc. that may affect or be affected by freight and goods movement;
- Development of a guiding vision for the region’s freight system, including a designated truck route network, and supporting polices, strategies, regulations to facilitate its implementation;
- Recommendations for optimizing local land use plans and land development policies, codes, and ordinances in support of improved freight access and delivery;
- Print and web-based communication tools that help promote awareness of freight movements, associated benefits and challenges, proposed strategies, and proposed improvements across the region.

■ Overview of Project Management Plan

The Project Management Plan is designed to guide the team’s work activities and execute the management and reporting activities to ensure the project remains on-track. The Plan will be updated regularly (at least once per month) to continuously take stock of task-level progress and identify emerging risks and strategies to manage them. Table 1 outlines the CS project management approach strategy for this study. The remainder of this document provides detail on each project management element.

Table 1 CS Project Management Approach Summary

| Project Management Element | CS Approach |
|-----------------------------------|---|
| Scope Management | <ul style="list-style-type: none"> • Finalize scope, including detailed description of tasks and major deliverables. • Scope elements to be deconstructed to assess local data and information needed to carry out the scope of services and a corresponding data collection/assembly plan. • A list of project participants and their expected level of participation (e.g., MPO staff, steering committee members, Freight Advisory Council, etc.). • Continuous monitoring of project scope by CS Principal-in-Charge and Project Manager. |

| | |
|-------------------------------------|---|
| Cost and Schedule Management | <ul style="list-style-type: none"> • Development of detailed schedule and budget for each major task and requested deliverable. • Ongoing assessment and tracking of costs by CS financial reporting system to support invoicing requirements and ensure project is completed on budget. |
| Quality Management | <ul style="list-style-type: none"> • Implementation of CS best practice quality assurance, including proactive communication with the Nashville Area MPO regarding expectations for the project and deliverables. • Project Manager review of all key deliverables, and adherence to established document review and resubmittal cycle. • Timely submittal of deliverables to allow MPO a minimum of one week to review documents. |
| Human Resources Management | <ul style="list-style-type: none"> • Develop and adhere to a predefined organization chart with specific roles and responsibilities for all proposed staff. • Utilization of CS internal staffing tool to assign staff to the Nashville Regional Freight and Goods Movement Study (Phase III) to ensure that employees have sufficient available time to meet their commitment to this project. • Day-to-day management of Volkert and RPM Transportation Consultants (RPM) technical staff working on this project. |
| Communications Management | <ul style="list-style-type: none"> • Development of specific project management protocol, including information exchange between CS and MPO. • Principal Investigator to be fully engaged in working with the Nashville Area MPO and the CS team. • CS to support regular team meetings with the MPO key staff, key CS staff, and subcontractors at the MPO’s discretion. • Monthly progress reports containing a one-page view of technical progress and budget. |
| Risk Management | <ul style="list-style-type: none"> • Implementation of “Risk Log” methodology successfully used on previous CS tasks. • Risk Log to be updated at least monthly; existing and emerging risks to be noted in monthly progress reports. |

■ Scope Management: Milestones, Deliverables, and Team Member Responsibilities

The following is a work breakdown structure for the Nashville Area MPO Freight and Goods Movement Study Phase III:

| Milestone Title | Milestone Description | Milestone Date |
|-----------------------------------|--|--------------------------------------|
| Project Kick-Off Meeting (Task 1) | Conference call to review project objectives, task structure, and near-term deliverables | June 27, 2014 |
| Project Management Plan (Task 1) | Plan to outline team roles, responsibilities, deadlines, | July 11, 2014. Plan updated monthly. |

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|---|---|---|
| | issues, etc. | |
| Project Update Calls | Bi-weekly conference calls to update on progress and prepare for near-term activities. | TBD |
| Outreach Plan (Task 2) | Describes approach to engaging both public and freight industry in the Goods Movement Plan. Develop options for communications and visualization. | July 28, 2014 |
| Existing and Future Conditions (Task 3) | Assemble, review, and analyze existing data on freight flows in the region | September 30, 2014. |
| | Assemble, review, and analyze data on truck and rail-related crashes in the region | |
| | Assemble, review, and analyze access management, environmental, and land use data in the region | |
| | Perform cluster analysis for key industries within GIS | |
| | Describe logistics patterns for key industries | |
| Freight Stakeholder Interviews | Interviews of key stakeholders to provide input on early tasks. | September – November, 2014. To be decided based on outreach plan. |
| Regional Freight Profile (Task 3) | Develop a profile covering each freight mode, as well as logistics and cargo handling facilities | September 30, 2014 |
| Regional Vision Document (Task 4) | Identify goals and objectives of regional freight planning effort | November 30, 2014 |
| Truck Route Network (Task 4) | Summarize current and future commodity flow patterns | November 30, 2014 |
| Trucker’s Forum | Assemble local truckers to discuss truck route network routes and design | October 30, 2014 |
| Freight Advisory Council Meeting #1 | Meet with public and private sector stakeholders to review existing and future conditions, provide input on vision and truck route network characteristics, and discuss local freight and land use issues | November 19, 2014 |

| | | |
|--|---|-------------------|
| Freight Advisory Council Meeting #2 | Meet with public and private sector stakeholders to discuss draft recommendations and project deliverables | February 28, 2015 |
| Consultant Solutions Session | Review analysis and outreach conducted to-date and brainstorm solutions for remainder of project | November 20, 2014 |
| Preliminary Recommendations for 2040 Plan | Develop preliminary recommendations based on timing, scale, and funding limitations of 2040 Plan | November 21, 2014 |
| Zoning, Site Development and Route Standards | Develop freight intensive land use zoning and standards best practices. Develop model zoning language and site development standards for freight developments. Develop truck route design standards | December 30, 2014 |
| Develop Final Project Recommendations | Identify all project, policy and design recommendations for Goods Movement Plan | January 31, 2015 |
| Final Documentation and Presentation | Develop draft and final plan documents and supporting materials. Develop presentations for use by MPO. Develop final website materials. | Ongoing |

Deliverables

| Tasks | | Deliverables | Due Date | Team Lead |
|-------|---|---|--------------------|-----------|
| 1 | Project Management Plan | Project Management Plan | July 11, 2014 | CS |
| 2 | Outreach Plan | Public, Stakeholder and Media Outreach Plan | July 28, 2014 | CS |
| 3 | Technical Review and Analysis of Historic, Existing and Future Conditions | Technical Memo on Existing Conditions, Trends and Forecasts | September 30, 2014 | CS |
| | | Publication: Regional Freight Profile | September 30, 2014 | CS |
| 4 | Regional Vision for Freight System | Vision Document for the Regional Freight System | November 30, 2014 | CS |

| | | | | |
|---|--|---|-------------------|---------|
| | and Designated Truck Route Network | Technical Memo on Designated Truck Route Network | November 30, 2014 | CS |
| 5 | Land Use Planning and Urban Design Recommendations | Technical Memo: Freight-Intensive Land Use Zoning and Development Standards Best Practices | January 31, 2015 | Volkert |
| | | Technical Memo: Model Zoning Language and Site Development Standards for Freight Developments | January 31, 2015 | Volkert |
| | | Technical Memorandum: Truck Route Design Standards | January 31, 2015 | Volkert |
| 6 | Develop Recommendations for the 2040 Plan | Preliminary 2040 RTP Freight Element Recommendations | November 21, 2014 | CS |
| | | Technical Memo on 2040 RTP Freight Element Recommendations | February 28, 2015 | CS |
| 7 | Freight-Related Communications and Visualization Tools | Various communications and visualization tools as identified in this task | Ongoing | CS |
| 8 | Prepare Final Documentation and Electronic Files | 25 hard copies of final technical report | March 30, 2015 | CS |
| | | Electronic copies of all documents and data | March 30, 2015 | CS |
| | | PowerPoint presentation(s) | March 30, 2015 | CS |

■ Relevant Planning Efforts and Data

There are several multimodal planning efforts that are underway that will require coordination with the Nashville Area MPO Freight and Goods Movement Study Phase III. These include:

- Nashville Area MPO LRTP Update - need to incorporate freight projects and recommendations
- TDOT Statewide Freight Plan - need to coordinate outreach efforts, data sources, project recommendations and freight story

- TDOT I-65 Corridor Feasibility Study – need to coordinate data sources
- FHWA Freight Performance Measures Rulemaking – need to coordinate with FHWA and TDOT on freight performance measures reporting

The key data items and sources for this study are shown below in the table.

| Data Item | Data Source |
|---|---|
| Vehicle classification data | TDOT |
| Roadside Truck Origin-Destination Survey Data | TDOT |
| Transearch freight flow data (updated to baseyear 2012) | TDOT |
| Truck GPS origin-destination data | TDOT |
| Truck GPS speed data | FHWA NPMRDS database |
| Freight infrastructure data | TDOT previous freight planning tasks |
| Nashville economic data | Bureau of Economic Census |
| Local warehouse information | Industrial real estate brokers |
| Local freight supply chains and freight trends | Interviews with stakeholders and trade journals |
| Data on Freight in Peer Regions | BTS Commodity Flow Survey |
| Land use data | Nashville MPO land use database |
| Existing truck route networks/prohibitions | Local and county planners |

■ Cost and Schedule Management

We have developed a detailed cost estimate as shown in Table 2 that provides costs by task, by person, and by firm. We will conduct ongoing assessments and tracking of costs to support invoicing requirements and ensure project is completed on budget.

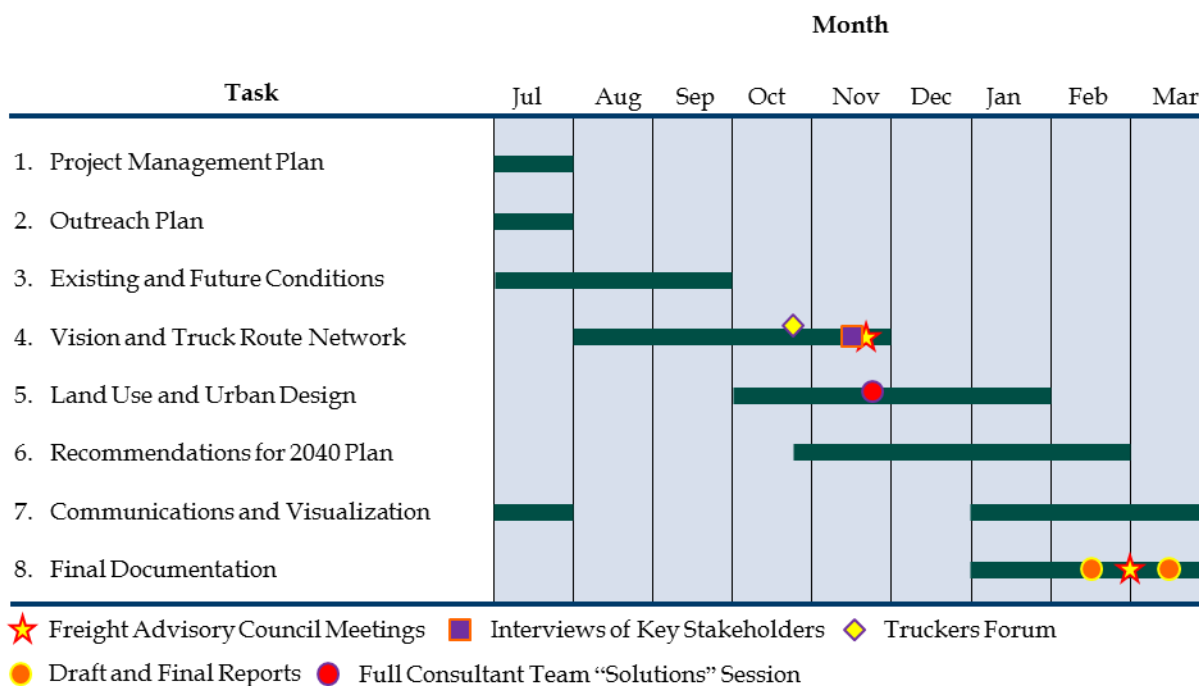
We have developed a detailed schedule as shown in Figure 2. We will review the team’s progress relative to the schedule on a bi-weekly basis to ensure timely completion of the project.

Table 2 Project Costs

| Item | Amount |
|--|-----------|
| Cambridge Systematics Hours | 1,127 |
| Cambridge Systematics Total Labor, Overhead Costs, Fee | \$207,616 |

| | |
|---------------------------------------|-----------|
| Cambridge Systematics Direct Expenses | \$7,912 |
| Subcontractors | |
| Volkert, Inc. | \$60,416 |
| RPM Transportation | \$24,056 |
| Total Project Costs | \$300,000 |

Figure 2 Project Schedule



■ **Quality, Human Resources, Communications and Risk Management**

Quality Assurance / Quality Control (QA/QC) and Human Resources Management

The Cambridge Systematics (CS) team recognizes the importance of on-time delivery of high quality products and services to the Nashville MPO throughout the course of the project. While quality work is expected of all consultant and subcontractor staff, Cambridge Systematics is ultimately responsible for all project deliverables and has therefore developed this QA/QC plan. The plan, described below, identifies the roles, responsibilities, and actions CS staff will take to ensure quality and on-time delivery.

Dike Ahanotu, the CS Project Manager (PM), is the primary point of contact for the Nashville MPO and has the following QA/QC responsibilities:

- Establish overall technical direction of the project;
- Manage day-to-day activities of CS staff and subcontractors;
- Review all project deliverables for consistency with contract requirements and quality standards;
- Provide regular project updates to the Nashville MPO;
- Review invoices and progress reports; and
- Approve subcontractor invoices and progress reports.

Chris Lamm, the CS Deputy Project Manager (DPM), will support the PM in her QA/QC responsibilities by working with internal staff to ensure that project deliverables are completed on time, regular internal briefings are scheduled and held, and progress reports and invoices are submitted in a timely fashion.

Michael Williamson, the CS Principal in Charge (PIC), will hold the PM accountable for meeting CS standards of excellence for client service. He also has the following QA/QC responsibilities:

- Provide the CS staff and resources required to get the job done;
- Ensure QA/QC elements are implemented;
- Periodically review methodologies, assumptions, and findings;
- Review and approve critical deliverables;

- Periodically touch base with the Nashville MPO to evaluate level of satisfaction with the project;
- Assist the PM in resolving issues as they arise; and
- Obtain MPO feedback at the conclusion of the project.

Figure 3 shows the full project team organizational chart.

Communications Management

Following are key communication guidelines for this project:

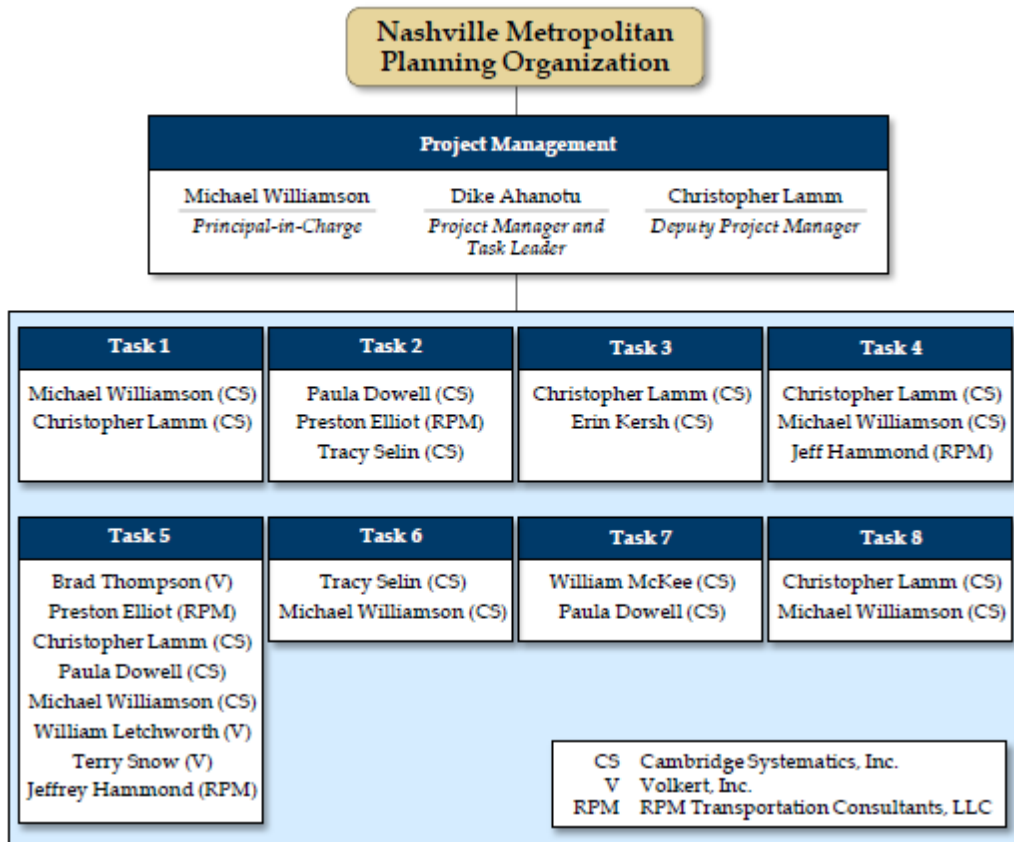
- The CS Project Manager and all relevant staff will have a conference call with the Nashville MPO on a bi-weekly basis to go over work progress, issues, questions, etc.
- The CS Consultant Team will meet internally on a bi-weekly basis to go over work progress, issues, questions, etc.
- CS team members should communicate with CS Project Manager before communicating with the Nashville MPO.
- Deliverables, data and other requests should be communicated to and approved by the Nashville MPO and CS Project Manager prior to submittal to the public.

Through adherence to this QA/QC plan, CS will identify and address problems before they become serious and ensure the Nashville Area MPO receives high-quality deliverables and support.

The table below provides a list of the key contacts with contact information for this project.

| Name | Company | Role | Phone | E-mail |
|--------------------|-----------------------|-------------------------------|--|-------------------------------|
| Dike Ahanotu | Cambridge Systematics | Project Manager | 404-460-2601 (ofc), 404-213-8128 (cell) | dahanotu@camsys.com |
| Michael Williamson | Cambridge Systematics | Principal-In-Charge | 954-331-6113 (ofc), 954-257-7727 (cell) | mwilliamson@camsys.com |
| Brad Thompson | Volkert | Support for Land Use Planning | 615-656-1845 (ofc), 615-957-5980 (cell) | brad.thompson@volkert.com |
| Preston Elliott | RPM Transportation | Local Truck Route Resources | 615-559-0152 (ofc) | prestonelliott@rpmtraffic.net |

Figure 3 Organization Chart



Risk Management

Table 4 shows risks identified by the consultant team has identified the following key risks for the study and will implement appropriate mitigation measures for each risk.

| Category of Risk | Detailed Risk | Mitigation |
|------------------|---|---|
| Data | Data acquisition from local stakeholders regarding routes and zoning | Research data early in process. Communicate existing data gaps quickly with MPO to identify alternative sources as needed |
| Outreach | Participation of appropriate members of community, particularly private sector participants | Work with regional chamber and economic development agencies to maximize participation and |

| | | |
|-----------------------|--|--|
| | | identify substitute sources of information when needed |
| Recommendations | Providing timely recommendations from this plan to support the 2040 Plan | We have revised our scope of work and schedule to be able to provide as much information as possible to support the 2040 Plan by the end of October. We will revisit this issue as the October date gets closer to better assess critical needs for the Plan |
| Benefit-cost analysis | Quantitative data for some projects, particularly smaller projects, may not be available or estimable. | We will consider qualitative scoring techniques and approximation of benefits from similar projects depending on the final set of projects to be evaluated. |