

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

This page summarizes all of the open tasks under the Cambridge Systematics contract with the research bureau.

Task	Project Budget	Budget Expended	% of Budget Expended	% of Work Complete
TO #23 – Steel Erection Out of Plumb	\$75,010.00	\$70,718.00	94%	94%
TO #24 – Criteria for Multimodal Rehabilitation versus Maintenance	\$52,064.00	\$52,064.00	100%	100%
TO #25 – Channel Usage Research and Analysis	\$112,760.00	\$111,227.00	99%	99%
TO #26 – Title VI Agency Policy Examination and Best Practice Review	\$59,620.00	\$8,255.00	14%	14%
TO #27 - Criteria for Multimodal Rehabilitation versus Maintenance (Add-On)	\$12,670.00	\$4,200.00	33%	33%

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

Project Title:	Steel Erection Out of Plumb		
RFP NUMBER: 7830815	NJDOT RESEARCH PROJECT MANAGER: Giri Venkiteela		
TASK ORDER NUMBER: 23	PRINCIPAL INVESTIGATOR: Hugh Louch		
Project Starting Date: 7/26/2013 Project Ending Date: 3/31/2014	Period Starting Date: 4/01/2014 Period Ending Date: 6/30/2014		

Task	% of Total Project Budget	Total Budget	% of Task This Quarter	Cost This Quarter	% of Task to Date	Total Cost to Date
1. Kick-off meeting	5.6%	\$4,220	0%	\$0	100%	\$4,220
2. Literature Review & Subject Matter Expert (SME) Input	37.0%	\$27,780	0%	\$0	100%	\$27,780
3. Evaluation Findings and Recommendations	47.8%	\$35,860	0%	\$0	98%	\$35,143
4. Final Report	9.5%	\$7,150	0%	\$0	50%	\$3,575
TOTAL	100%	\$ 75,010	0%	\$0	94%	\$70,718

Project Objectives:

The purpose of this task will be to develop recommendations for construction engineering guidance based on a focused review of relevant DOT/University research papers, reports, presentations, available DOT Design and Construction guidelines, AASHTO LRFD Specifications, National Guidelines for Steel Girder Bridge Analysis and Design for Constructability, and NCHRP/TRB reports, input from subject matter experts related to constructability and steel erection which would include GPI senior construction engineers, fabricators, erectors and contractors, and review of recent GPI bridge project design plans and submitted shop and erection drawings which involved the design and construction of heavily skewed and/or curved girder bridges.

The final deliverable will be a report which will summarize the literature review, subject matter expert input, methods used and guidance provided on similar bridge construction projects, and recommendations for specific guidelines for NJDOT review and implementation.

Project Abstract:

There is currently no specific or consistent guidance on how designers and contractors are to address out-of-plumb girders associated with curved and skewed steel girder bridges as part of design and during construction.

1. Progress this Quarter by Task

Task 2: Literature Review & Subject Matter Expert (SME) Input

- None this quarter.

Task 3: Evaluation, Findings and Recommendations

- None this quarter.

Task 4: Final Report

- None this quarter.

2. Proposed activities for next quarter by task

Task 1: Kick Off Meeting

- Work completed. No further work expected.

Task 2: Literature Review & Subject Matter Expert (SME) Input

- Work completed. No further work expected.

Task 3: Evaluation, Findings and Recommendations

- Finalize recommendations

Task 4: Final Report

- Update final report
- Draft technical brief
- Respond to NJDOT comments and finalize

3. List of deliverables provided in this quarter by task (product date):

- Revised findings and recommendations

4. Progress on Implementation and Training Activities:

- No work on implementation or training in this period.

5. Problems/Proposed Solutions:

- No problems to report during this period.

Total Project Budget	\$75,010.00
Contract Amount:	\$75,010.00
Total Project Expenditure to date	\$70,718.00
% of Total Project Budget Expended	94%

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

Project Title:	Criteria for Multimodal Rehabilitation versus Maintenance		
RFP NUMBER: 7841209; 7969937	NJDOT RESEARCH PROJECT MANAGER: Daniel LiSanti		
TASK ORDER NUMBER: 24 and 27	PRINCIPAL INVESTIGATOR: Christopher Lamm		
Project Starting Date: 8/16/2013 Project Ending Date: 6/30/2014	Period Starting Date: 04/01/2014 Period Ending Date: 06/30/2014		

Task 24	% of Total Project Budget	Total Budget	% of Task This Quarter	Cost This Quarter	% of Task to Date	Total Cost to Date
1. Literature Review and Interviews	41%	\$21,560	0%	\$ 0	100%	\$ 21,560
2. Recommended Threshold Criteria for Multimodal Grants	39%	\$20,440	0%	\$ 0	100%	\$ 20,440
3. Final Report	20%	\$10,220	0%	\$ 0	100%	\$ 10,220
TOTAL	100%	\$52,220	0%	\$ 0	100%	\$ 52,064

Task 27	% of Total Project Budget	Total Budget	% of Task This Quarter	Cost This Quarter	% of Task to Date	Total Cost to Date
Add-On (Task 27)	100%	\$12,670	33%	\$ 4,200	33%	\$ 4,200
TOTAL	100%	\$12,670	33%	\$ 4,200	33%	\$ 4,200

Project Objectives:

The purpose of this project will be to help the Bureau of Multimodal Grants and Programs to resolve conflicting information regarding the types of projects that qualify for grants supported by the New Jersey Transportation Trust Fund (TTF). Specifically, the threshold between “routine (or scheduled) maintenance,” which the TTF cannot support, and “rehabilitation” project, which can be supported by the TTF, appears to be inconsistent, according to the research problem posed. To resolve this conflict, this project aims to:

- Examine state-of-the-practice definitions for the terms “routine/scheduled maintenance,” “rehabilitation,” and “reconstruction,” based upon the body of transportation planning and engineering literature, laws and statutes of other states and federal agencies.

- Prepare recommended policy definitions of these terms for NJDOT to incorporate into office policy (and into rulemaking and legislation if necessary); and
- Develop recommended criteria for classifying candidate projects (or components of candidate projects) for the NJDOT Multi-Modal Grants program as maintenance, rehabilitation, or reconstruction.

Project Abstract:

For the New Jersey Department of Transportation (DOT), Cambridge Systematics is researching state and Federal requirements, design guidelines, and best practices in order to determine the threshold between rail and aviation projects that are considered routine or scheduled maintenance versus those that are better classified as rehabilitation projects. This effort is developing policy definitions that will be used to classify candidate projects for the New Jersey DOT Bureau of Multimodal Grants and Programs Rail Freight Assistance Program and Aeronautics Grants Program. Cambridge Systematics also is conducting reviews of literature, interviews with rail and aviation officials in Federal and state agencies, and a workshop with DOT staff.

1. Progress this Quarter by Task

All work conducted under Task 27

Task 1:

- CS prepared a Task 1 Technical Memorandum in response to comments received from NJDOT on the Task 1 Draft Technical Memorandum.

Task 2:

- CS convened a meeting with NJDOT on April 23, 2014 to review Task 2 “strawman” definitions and threshold criteria for both rail and aeronautics grants programs.
- CS prepared a revised Excel workbook containing definitions and criteria that incorporated feedback received during the April 23 meeting.
- CS prepared a Task 2 Draft Technical Memorandum.

Task 3:

- None this quarter.

2. Proposed activities for next quarter by task

Task 1:

- No new work expected.

Task 2:

- CS will revise the Task 2 Draft Technical Memorandum incorporating comments to be received from NJDOT, and will submit a final version to NJDOT.

Task 3:

- CS will prepare a Draft Final Report.
- CS will revise the Draft Final Report and submit a Final Report incorporating comments to be received from NJDOT.

3. List of deliverables provided in this quarter by task (product date):

- Task 1 Technical Memorandum (6/30/2014)
- Task 2 Draft Technical Memorandum (6/30/2014)

4. Progress on Implementation and Training Activities:

- No work on implementation or training in this period

5. Problems/Proposed Solutions:

- No problems to report during this period.

Total Project Budget (Task 24)	\$52,220.00
Contract Amount:	\$52,220.00
Total Project Expenditure to date	\$52,220.00
% of Total Project Budget Expended	100%

Total Project Budget (Task 27)	\$12,670.00
Contract Amount:	\$12,670.00
Total Project Expenditure to date	\$4,200.00
% of Total Project Budget Expended	33%

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

Project Title:	Channel Usage Research and Analysis		
RFP NUMBER: 7841174	NJDOT RESEARCH PROJECT MANAGER: Giri Venkiteela		
TASK ORDER NUMBER: 25	PRINCIPAL INVESTIGATOR: Brian ten Siethoff, Christopher Titze, David Wagner		
Project Starting Date: 8/16/2013 Project Ending Date: 2/15/2014	Period Starting Date: 4/1/2014 Period Ending Date: 6/30/2014		

Task	% of Total Project Budget	Total Budget	% of Task This Quarter	Cost This Quarter	% of Task to Date	Total Cost to Date
1. Literature Search	12%	\$14,020	0%	\$0	100%	\$14,020
2. Evaluate and Screen Vessel Count and Classification Methodologies	8%	\$9,120	0%	\$0	100%	\$9,120
3. Data Collection and Pilot Test of Vessel Count and Classification Methodologies	64%	\$72,560	0%	\$0	100%	\$72,560
4. Final Report	15%	\$17,060	21%	\$3,500	91%	\$15,527
TOTAL	100%	\$112,760	3%	\$3,500	99%	\$111,227

Project Objectives:

The purpose of this task is to 1) Develop and implement a reliable, repeatable, and verifiable method or SOP (Standard Operating Procedure) to collect vessel count and classification information by time of day; 2) Test one or more approaches that could be applicable to a broader statewide effort to collect vessel count information utilizing the selected method on approximately 214 state channels within the state's Marine Transportation System; and 3) Collect channel usage and classification data on a representative sample of the 214 state channels using a variety of methodologies so that results can be compared and guidance can be provided for future data collection efforts.

Project Abstract:

New Jersey's state channels are critical to the quality of life and economies of the state's coastal communities. The channels provide access to marinas and docks, and they allow fishing vessels, charter boats, and other commercial traffic to access Federally-maintained waterways like major inlets to the Atlantic Ocean and the Atlantic Intracoastal Waterway. As an initial step in a broader effort to better understand how these channels are used and how the Department of Transportation can best allocate scarce resources to channel dredging and other maintenance activities, this project involves defining a standard operating

procedure for collecting data about the size and number of vessels using each of the 214 state-maintained channels in New Jersey.

1. Progress this Quarter by Task

Task 1:

- None completed this quarter.

Task 2:

- None completed this quarter.

Task 3:

- None completed this quarter.

Task 4:

- The consultant team completed the draft final report and submitted for review and comment.
- The consultant team addressed comments from NJDOT staff and submitted the final report and associated research documentation.

2. Proposed activities for next quarter by task

Task 1:

- None.

Task 2:

- None.

Task 3:

- None.

Task 4:

- Complete technical brief.

3. List of deliverables provided in this quarter by task (product date):

Task 1:

- No deliverables this quarter.

Task 2:

- No deliverables this quarter.

Task 3:

- No deliverables this quarter.

Task 4:

- Draft Final Report (4/3/14)
- Final Report (6/17/14)

4. Progress on Implementation and Training Activities:

- No work on implementation or training in this period

5. Problems/Proposed Solutions:

- No problems to report during this period.

Total Project Budget	\$112,760.00
Contract Amount:	\$112,760.00
Total Project Expenditure to date	\$111,227.00
% of Total Project Budget Expended	99%

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

Project Title:	Title VI Agency Policy Examination and Best Practice Review		
RFP NUMBER: 7935596	NJDOT RESEARCH PROJECT MANAGER: Paul Thomas		
TASK ORDER NUMBER: 26	PRINCIPAL INVESTIGATOR: Christopher Titze and Whitney Faron		
Project Starting Date: 4/4/2014 Project Ending Date: 10/4/2014	Period Starting Date: 4/1/2014 Period Ending Date: 6/30/2014		

Task	% of Total Project Budget	Total Budget	% of Task This Quarter	Cost This Quarter	% of Task to Date	Total Cost to Date
1. Literature Review & Research	25%	\$15,080	48%	\$7,250	48%	\$7,250
2. NJDOT Title VI Practices Review	25%	\$15,080	7%	\$1,005	7%	\$1,005
3. Interviews	25%	\$15,080	0%	\$0	0%	\$0
4. Final Report	25%	\$14,380	0%	\$0	0%	\$0
TOTAL	100%	\$59,620	14%	\$8,255	14%	\$8,255

Project Objectives:

The purpose of this project is to help NJDOT's ADA/Civil Rights Unit remain in compliance with FHWA's Title VI requirements. The research will inform the Civil Rights Unit on how best to achieve compliance, by:

- Examining existing Title VI regulations and best practices for achieving compliance based upon the body of transportation planning literature, policies, and procedures of other states and federal agencies;
- Reviewing NJDOT's current Title VI practices;
- Gathering information on how other DOT's, MPO's, and agencies are achieving Title VI compliance; and
- Summarizing recommendations for Title VI compliance.

Project Abstract:

In order to meet MAP-21 guideline and remain in compliance with FHWA's Title VI requirements, the New Jersey Department of Transportation (DOT) ADA/Civil Rights Bureau was instructed to re-examine their existing Title VI policies and regulations. Through this process they were charged with identifying the strengths and weaknesses of the Department's existing Title VI practices, in addition to the strengths and weakness of Title VI practices when coordinating with sub-recipients. Since each Federal recipient is charged with developing their own plans, policies, and requirements that assist in achieving Title VI compliance; no specific or consistent guidance or best practices are available as a resource.

1. Progress this Quarter by Task

Task 1:

- The consultant team began collecting and examining key literature review documents for discussion and presented initial findings at a kick-off meeting.
- The consultant team began conducting literature review and research of best practices.
- The consultant team began drafting and submitted draft Task 1 – Technical Memorandum for review and comment by NJDOT personnel.
- The consultant team reviewed best practice findings with NJDOT personnel at project management meeting.

Task 2:

- The consultant team received existing NJDOT Title VI documentation for examination.
- The consultant team began cataloging NJDOT Title VI documentation for comparison against Task 1 findings.
- The consultant team began developing performance and comparative review tool for analyses.

Task 3:

- None this quarter.

Task 4:

- None this quarter.

2. Proposed activities for next quarter by task

Task 1:

- The consultant team will complete the literature review and research of best practices.
- The consultant team will address any additional comments and make edits to draft Task 1 – Technical Memorandum
- The consultant team will make additions to the draft Task 1 – Technical Memorandum based on supplementary literature review and research.
- The consultant team will submit final Task 1 – Technical Memorandum as a project deliverable.

Task 2:

- The consultant team will conduct a performance and comparative review of NJDOT's documentation versus best practice findings.
- The consultant team will begin drafting and submit the draft Task 2 – Technical Memorandum for review and comment.
- The consultant team will address and comments to the draft Task 2 – Technical Memorandum and submit the final Task 2 – Technical Memorandum as a project deliverable.

Task 3:

- The consultant team will develop list of stakeholders for interviews and develop interview guidance materials.

- The consultant team will conduct interviews with 8-10 state DOTs, MPOs, or representative agencies' Office of Civil Rights (or equivalent).
- The consultant team will summarize interview findings in a draft technical memorandum and spreadsheet presenting the information captured in the interviews.
- The consultant team will submit draft Task 3 – Technical Memorandum for review and comment.
- The consultant team will address and comments to the draft Task 3 – Technical Memorandum and submit the final Task 3 – Technical Memorandum as a project deliverable.

Task 4:

- The consultant team will begin preparing the draft final report for review and comment.

3. List of deliverables provided in this quarter by task (product date):

Task 1:

- Draft Task 1 – Technical Memorandum: Literature Review Summary (6/5/14)

Task 2:

- No deliverables this quarter.

Task 3:

- No deliverables this quarter.

Task 4:

- No deliverables this quarter.

4. Progress on Implementation and Training Activities:

- No work on implementation or training in this period

5. Problems/Proposed Solutions:

- No problems to report during this period.

Total Project Budget	\$59,620.00
Contract Amount:	\$59,620.00
Total Project Expenditure to date	\$8,255.00
% of Total Project Budget Expended	14%