**NCHRP Project 13-09 Implementation Guide: Maximizing Proceeds from the Fleet Asset Disposal Sales Process**

The National Cooperative Highway Research Program (NCHRP) is sponsored by the individual state departments of transportation of the American Association of State Highway and Transportation Officials. NCHRP is administered by the Transportation Research Board (TRB), part of the National Academies of Sciences, Engineering, and Medicine, under a cooperative agreement with the Federal Highway Administration (FHWA).  Any opinions and conclusions expressed or implied in resulting research products are those of the individuals and organizations who performed the research and are not necessarily those of TRB; the National Academies of Sciences, Engineering, and Medicine; the FHWA; or NCHRP sponsors.

Henry Canipe

Steve Varnedoe

Mott MacDonald

Raleigh, NC

Geoff Morrison

Daniel Harrison

The Cadmus Group LLC

Arlington, VA

John Hildreth

Western Carolina University

Cullowhee, NC

Lisa Kunzman

Fair Oaks, CA

Dennis Halachoff

Pine, AZ

Lew Brown

Chapel Hill, NC

June 2023

Table of Contents

[Introduction 1](#_Toc137407847)

[Overview 1](#_Toc137407848)

[Organization 1](#_Toc137407849)

[Chapter 1: Implementation Pathways 2](#_Toc137407850)

[NCHRP Funding 2](#_Toc137407851)

[Other Group Funding Support 3](#_Toc137407852)

[Single DOT Implementations 3](#_Toc137407853)

[Other Comments 3](#_Toc137407854)

[Chapter 2: Suggested Approach 3](#_Toc137407855)

[Chapter 3: Readiness Assessment 5](#_Toc137407856)

[Chapter 4: Sample Work Plan 7](#_Toc137407857)

[Anticipated Scope of Work 7](#_Toc137407858)

[Task Plan Overview 7](#_Toc137407859)

[Chapter 5: Key Assumptions and Estimated Research Requirements 12](#_Toc137407860)

[Key Assumptions 12](#_Toc137407861)

[Estimated Labor Hour Requirements 13](#_Toc137407862)

[Hourly Breakdown by Project Role 13](#_Toc137407863)

# Introduction

National Cooperative Highway Research Program (NCHRP) Project 13-09 “Maximizing Proceeds from the Fleet Asset Disposal Sales Process” targets the development of resources for state transportation agency fleet managers and others that (a) assist fleet managers to evaluate and determine the advantages and disadvantages of different sales channels available for fleet-asset disposal based upon equipment type, condition, and remaining life, and (b) provide an understanding of the relative costs and benefits of utilizing different sales channels for asset disposal.

In response to the identified objectives, the Research Team produced the following work products:

* *Research Report*
* *Executive Summary* (contained within the Research Report)
* *User Guide for the Asset Sales Decision Support Tool* (contained within the Research Report)
* *Asset Sales Decision Support Tool*
* *Project Presentation*
* *Fact Sheets*
* *Implementation Guide* (this document).

# Overview

The purpose of this Implementation Guide is to provide DOT fleet managers with a general roadmap and suggested approaches for implementing the results and tools developed in NCHRP Project 13-09. This includes identifying key steps for conducting a realistic assessment of the impediments to successful implementation of the recommendations from this project. While this project was focused on DOT fleets, this information is perceived to be applicable to many public fleets, especially other state agencies that dispose of fleet assets.

# Organization

This document contains the following five (5) chapters:

**Chapter 1: Implementation Pathways**

**Chapter 2: Suggested Approach**

**Chapter 3: Readiness Assessment**

**Chapter 4: Sample Work Plan**

**Chapter 5: Key Assumptions and Estimated Research Requirements**

The order in which the described efforts are performed is not critical; in fact, it is likely that some combination of these efforts will need to be conducted simultaneously. To that point, some benefit likely would be achieved by using a collaborative approach, where the described efforts are performed in parallel by different people or teams. This parallel approach supports using a consensus-based, team approach, which could serve as an additional means of evaluating agency readiness and creating support for pursuing such an implementation.

# Chapter 1: Implementation Pathways

Essentially, there are three (3) potential implementation pathways for this project, with some degree of overlap:

1. Apply for NCHRP funding of a pilot implementation project.
2. Pursue other sources of group funding for a pilot project.
3. Have DOTs self-fund implementations.

## NCHRP Funding

As indicated on the Transportation Research Board website, the NCHRP 20-44 program exists to facilitate the implementation of NCHRP research results. Applications are reviewed by the 20-44 Project Panel, with successful applications following the standard NCHRP approach of establishing a project oversight panel and procuring a contractor.

The stated evaluation criteria for the 20-44 program are as follows:

**Impact:**  The expected benefits of implementing the research results to transportation agencies.

**Feasibility:**  The planned implementation activities and an appropriate budget.

**Partnerships:**  Lead state and other participating organizations or agencies, and what they would potentially contribute.

**Scalability:**  How the proposed activities will facilitate the implementation of the research results.

With respect to the *Impact* and *Feasibility* criteria, the enclosed sample work plan should provide a good starting point for developing a successful 20-44 application. Additionally, by inserting appropriate values from a representative, hypothetical DOT, the Disposal Method Calculator Module of the Asset Sales Decision Support Tool could be used to create a “back-of-the envelope” estimation of the typical, potential DOT benefit, from which an overall estimate could be extrapolated.

The *Partnerships* evaluation criteria suggests that the potential approval of a 20-44 application on this project would be increased by securing a DOT lead state of sufficient size and scale, with a reputation as a leading-edge/thought leader DOT, to serve as the Pilot implementor. Similarly, the willingness for the pilot state to provide some significant contribution to the pilot project funding also should be a strong factor in encouraging the selection of a 20-44 project application.

## Other Group Funding Support

Options for soliciting some level of joint pilot project funding support include the AASHTO Equipment Management Technical Services Program (EMTSP) or any single or combination of the four (4) regional equipment management partnerships that comprise the EMTSP. Other potential public-sector organizations that might be interested in supporting a joint implementation effort include the various University Transportation Research Centers, the American Public Works Association (APWA) and National Conference of State Fleet Administrators (NCSFA), among others. Of note, the APWA and the NCFSA both participated in the data gathering efforts of this project.

## Single DOT Implementations

Regardless of whether selected as a pilot state, any DOT seeking to implement the results of this project likely would need to follow some version of the steps described in the following chapters.

Of note, the Project Research Report and Chapter 3 of this document (*Readiness Assessment*) assert the desirability of conducting some level of local market research. This information should better inform the estimates of the potential net impact of pursuing additional sales channels for a specific DOT.

## Other Comments

The Research Team will engage with the target implementation entities by pursuing opportunities to present on this project at upcoming TRB, AASHTO, EMTSP and EMTSP regional equipment management meetings. We also will pursue opportunities to present this project to other professional organizations mentioned above. We welcome any opportunity to assist in related implementations.

# Chapter 2: Suggested Approach

Like most endeavors, planning significantly improves the likelihood of success when trying to implement the recommendations of this project. This includes performing some level of “homework”, which includes (but is not limited to) the following steps:

1. *Identify the goals of this project, to include identifying how this project aligns with the agency/unit’s mission.*

An important part of any implementation plan is identifying and building support. Typically, this involves a combination of informing/educating and persuading (making a “winning case” of the need for an initiative). A major success factor is recruiting a “project champion(s)” to help build support for the project.

Winning support or creating a project champion typically requires creating a convincing business case/argument for the need of implementation. The various deliverables of this project (Technical Report, Presentation, Fact Sheets, Asset Sales Decision Support Tool, and this document) are designed to support this effort.

While varying by situation, enlisting senior management support often involves starting with the most basic information (e.g., Fact Sheet), and progressing up the hierarchy of project information (e.g., Presentation, Executive Summary, Research Report and/or demonstration of the Asset Sales Decision Support Tool). However, the first step typically involves winning the support of the fleet manager’s direct manager.

1. *Determine the personnel resources needed, in what roles, and at what level of involvement/responsibility.*

This stage involves identifying specific personnel needed to support this effort. Importantly, this step helps identify where additional, external resources may be needed to support this project.

1. *Identify tasks.*

This involves determining the key implementation steps. With these steps identified, the status and progress of tasks can be tracked.

1. *Create an implementation schedule.*

A key factor in the success of many/most projects is keeping the project moving forward. A basic strategy for this is to create a schedule that identifies the target dates for accomplishing the identified tasks. While such a schedule is subject to change, having this schedule allows project team members to work towards target dates, which is a success factor for most projects.

1. *Identify Resource Needs and Budget*

A sample scope of work and budget are included in this document. This information should provide a solid template for updating and identifying the specific resource needs of a given implementation.

1. *Additional Documentation*

This step provides an opportunity to include any additional supporting information to help bolster the case for this implementation. Examples include reference to the fleet unit’s strategic plan, the agency’s asset management plan, or records of past, successful implementation projects.

1. *Identify Performance Metrics*

This step takes the information gathered during steps 3 and 4 above and identifies the basis for measuring project progress and defining how to measure project success.

1. *Project Approval*

This step denotes that the required approvals to initiate the project have been received and that the project implementation can proceed.

# Chapter 3: Readiness Assessment

The objective of this section is to allow users interested in implementing the recommendations from this project to self-assess their organization’s readiness to do so. These recommendations have been identified as supporting the ability to improve the net returns from their organization’s fleet disposal processes.

Each DOT/fleet operates within a unique environment. The specifics of each situation impact the range of fleet asset disposal sales options available; these variables also have an associated effect on the state DOT and DOT fleet manager’s motivation and constraints on implementing the recommendations of this project. Within this context those factors (motivation and implementation constraints) are considered the key elements of this “Readiness Assessment”.

In Table 1, the Research Team has created a basic framework for creating a “Implementation Readiness Self-Assessment”. The underlying concept is that the financial motivation and ability to implement the recommendations of this project can be estimated by asking the user to provide a ”yes” or “no” responses to a series of statements. The more “yes” responses the better in terms of the project potential to increase fleet asset disposal financial returns by implementing project recommendations.

Because the factors associated with these questions vary in terms of impact, a weighting value/score has been identified for each. In short, for each “yes” answer, the user would add the weighting value to the “Score” column. Once complete, the “Score” values would be totaled for a final score.

An evaluation score of 100 would indicate that the user’s response of all the questions was positive (i.e., “yes”). In practice, a “100” score is unlikely but the higher total score, the more likely that organization’s potential financial rewards would be high and/or multiple sales channel options are viable.

Table 1: Implementation Readiness Self-Assessment (example)

| Situation/Practice | Reason | Weighting | Yes/No | Score |
| --- | --- | --- | --- | --- |
| 1. Sufficient fleet replacement funding is available to support the target equipment class replacement.
 | The widest range of potential returns from fleet asset disposal sales tends to be when there is still a significant amount of remaining asset life. | 20 | Yes | 20 |
| 1. State DOT directly controls how some/all of its fleet assets are disposed\*?

\*Subject to state/agency rules and regulations.  | When equipment disposal is handled by another state agency, the DOT has limited/no direct ability to control the sales channel used. | 20 | Yes | 20 |
| 1. State DOT receive some/most of the proceeds from fleet asset sale disposal
 | If the DOT does not receive the proceeds from asset sale, little financial incentive exists to focus resources on this area. | 10 | Yes | 10 |
| 1. State DOT fleet unit receives the proceeds of fleet asset disposal sales
 | If the DOT fleet unit does not receive the proceeds from asset sale, little financial incentive exists for the DOT fleet manager to focus resources on this area. | 25 | Yes | 25 |
| 1. DOT is NOT required to offer equipment to other public agencies at less than fair market value before offering to other buyers.
 | If the DOT is forced to offer equipment to other public entities at below “Fair Market Values”, these sales reduce the DOT’s financial incentive for pursuing implementation. | 10 | No | 0 |
| 1. DOT has prior sales data (equipment type, sales price, and buyer name)
 | The more the DOT knows about its buyers, the better it can tailor its sales efforts to expand the number and type of buyers. | 15 | No | 0 |
| Totals | **100** |  | **75** |

As part of any readiness assessment, the DOT/fleet manager should consult with the appropriate procurement and legal entities in their agency/state prior to implementing any new equipment disposal method or alternative procurement method. That said, project research indicates that many DOTs have been successful in employing strategies that can mitigate some constraints, including the use of buy-back and trade-in approaches. Additionally, even laws and policies can change, especially when a strong case can be made that change is needed and serves the public good.

# Chapter 4: Sample Work Plan

## Anticipated Scope of Work

The Research Team has included a Task Plan Outline that can be used to develop a Scope of Work (SOW) and Level of Effort (LOE) (see Chapter 5) estimate for implementing the findings and tools provided by NCHRP Project 13-09. The resulting SOW is intended for possible use in a NCHRP 20-44 program application, for internal (DOT) planning purposes, or for modification and integration into a potential Request for Proposal (RFP) or other procurement method. The associated LOE estimate is intended for similar support purposes, potentially to include assisting in the development of a project budget estimate.

Table 2 identifies and summarizes the tasks that are detailed in the pages that follow. The Research Team notes that some of these tasks may have been fully or partially performed as part of initial NCHRP 13-09 education effort. If so, they may not need to be performed as part of the implementation plan. According, the implementing entity should modify this work plan as appropriate for its situation.

Table 2: Task Plan Summary

| TASK | DESCRIPTION |
| --- | --- |
| 1 | Project Review and Initial Evaluation |
| 2 | Develop Project Business Case, Preliminary Project Plan, Project Roles, and Potential Implementation Team |
| 3 | Coordinate with Agency Management for Approval and Sponsorship |
| 4 | Secure Project Approval and Create and Implementation Plan |
| 5 | Execute Implementation Plan |

## Task Plan Overview

The task plan generally follows the steps identified in Chapter 2, *Suggested Approach*. For potential implementors of this project, some of these steps may have been performed as part of an informal review of Project 13-09 and not be needed or perceived as necessary. In such cases, the reviewing entity should feel free to make the appropriate adjustments to both the task plan and the budget estimate.

### Task 1: Project Review and Initial Evaluation

Task 1 involves two efforts:

1. Reviewing the final work products on NCHRP 13-09 (identified above).
2. Making an initial assessment of if whether the target fleet could potentially increase its net returns from fleet asset disposal sales to warrant moving forward with the subsequent tasks.

*Subtask 1.1. Examine NCHRP 13-09 work products to support initial assessment effort*

The Evaluation Team (whether consisting of inhouse personnel, consultants, or some combination) will perform a review of all NCHRP 13-09 project final deliverables. The information gleaned through this effort will be used in Subtask 1.2.

S*ubtask 1.2. Make a preliminary assessment of the viability and probability of a successful implementation*

This subtask is focused on applying the information learned from Subtask 1.1 to some of the tools developed by NCHRP project 13-09 and described in this document. The emphasis of this effort will be on understanding the project findings and recommendations to support performing an initial assessment of the viability and probability of a successful implementation.

Within this context “viability” would be evaluated by the extent to which the target client has enough of the key qualifying conditions in place to suggest it is a likely candidate for a successful implementation. Table 1 contains an initial list of conditions that are perceived to be significant evaluation conditions. Answering these questions should require only nominal client research to answer. As indicated previously, a “100” score is unlikely but the higher total score, the more likely that that a potential implementation effort would be successful. However, because this tool has not been used before, there is no objective basis to identify a score that below which, a financially successful implementation is not likely to be viable.

Evaluating “probability” is somewhat more difficult but it is supported by the Asset Sales Decision Support Tool’s supporting modules: 1) the Asset Disposal Matrix, and 2) the Disposal Method Calculator. By following the instructions found within the EXCEL-based tool itself (and detailed in Part II of the project Technical Report), the Evaluation Team should be able to generate module outputs that can help inform this effort.

*Deliverables:*

* Report and/or presentation containing a recommendation and supporting analysis on whether to advance the project to Task 2.

### Task 2: Develop Project Business Case, Preliminary Project Plan, Project Roles, and Potential Implementation Team

This task assumes that the results of Task 1 suggest moving forward with the potential project. It also assumes that additional project support with be needed from agency senior management and/or other stakeholder entities.

As suggested by the Task 2 title, this effort involves creating a business case and plan for implementing this project. It also involves identifying the roles and potential personnel resources to serve as the Implementation Team.

The Task 1 deliverable (recommendation and supporting analysis) should provide a solid basis for developing a business case. The key points from such an effort are to show that implementing this project would make economic sense for the agency and support the agency’s need to be a good steward of public resources. The Asset Sales Decision Support Tool discussed in Task 1 is designed to provide both qualitative and quantitative information to support this effort.

This Task Plan is intended to provide an initial template for developing an implementation plan. Implementing agencies can adjust these tasks and add/delete/revise as necessary to reflect the operating and regulatory environment of that agency.

The described steps include a need to identify roles and potential candidates for a Project Implementation Team. This effort should include a realistic assessment of the agency’s ability to self-perform this work and/or the extent to which external assistance (consultants or otherwise) may be needed or preferred.

*Deliverables:*

* Business case for implementing Project 13-09 recommendations.
* Preliminary plan for delivering project.
* Implementation team roles, potential candidates, and evaluation of the needs for external resources to provide support.

### Task 3: Coordinate with Agency Management for Approval and Sponsorship

For most projects of significance, securing senior management support is extremely important. This is particularly true to the extent that other agencies/entities are involved.

Typically, recruiting a Project Champion(s) to support and advocate for the project/initiative is a key, early step. Ideally, this person(s) is well-placed organizationally to support this role and has ready access to the key stakeholders.

With respect to seeking approval to implement NCHRP 13-09, it certainly is possible for the Fleet Manager to serve in this role. This particularly is true in organizations where the fleet operates in an “Enterprise Role”, owning all fleet assets, or when the fleet manager is not significantly constrained in terms of allowable equipment disposal options or processes.

Obviously, it behooves the Fleet Manager to discuss this project with his/her manager and win their support, which could include having that manager serve as Project Champion. Regardless of the choice, the Project Champion’s role is to help educate senior management and any other project stakeholders that have significant involvement in the fleet equipment disposal process. If not serving directly in the Champion role, the Fleet Manager (and/or staff) certainly should be prepared to support the Project Champion in this education and persuasion process.

Fortunately, the various project deliverables of Project 13-09, identified in the project overview, are intended to support this process. These tools offer a range of project information, from the most basic (the Fact Sheets), to the most detailed (Research Report). The Presentation slidedeck and Executive Summary (embedded in the Research Report) serve in intermediate education and communication roles, with the Asset Sales Decision Support Tool serving as a tool for evaluating sale channel options.

*Deliverables:*

* Recruit Project Champion
* Identify primary targets of education and persuasion activities

### Task 4: Secure Project Approval and Create an Implementation Plan

Task 4 and the remaining tasks depend on the approval of the NCHRP 13-09 Implementation Project. According, this task involves securing that approval and developing an Implementation Plan.

*Subtask 4.1 Secure Project Approval*

The Project Champion, with the support the Fleet Unit, will execute the educational and persuasion efforts described in Task 3. The time required to secure this approval is anticipated to vary in proportion to the number of internal and external stakeholders involved and the influence/persuasive ability of the Project Champion and the Fleet support team. Depending on complexity of the agency and state governing regulations related to fleet asset disposal, this effort may require some level of research to determine all the stakeholders involved.

*Subtask 4.2 Create Implementation Plan*

Subtask 4.2 involves the creation of the project Implementation Plan. This plan needs to include the following elements:

* Identify specific work steps needed to accomplish this project.
* Include a resource plan that details project roles, recommended personnel, and estimated time required for each position.
* Include a preliminary project schedule
* Provide an estimated budget.

Depending on the situation, this plan may need to be developed and submitted as part of a project approval package and can wait until the project is approved.

Likely steps for an Implementation Plan would include some combination of the following:

* Identify progress reporting requirements (type and frequency).
* Research applicable asset disposal rules and regulations.
* Consider having local fleet market research performed, to potentially include the following:
	+ Conduct outreach on previous fleet asset buyers (see Chapter III, Marketing Basics, from the Technical Report).
	+ Consider how additional buyer types could be attracted.
* Evaluate sales channel options and additional support requirements (e.g., solicitation development and procurement of additional vendor support to support the additional disposal channel).
* Identify how “best practices” and other recommendations from NCHRP 13-09 could be implemented (to include identifying potential practice “blockers”). Potential examples include the following:
	+ Providing maintenance history.
	+ Demonstrating (via video recording or live) the ability of the unit to operate.
	+ Performing minor repairs, etc.
* Perform the necessary steps for creating additional asset disposal sales channels, such as:
	+ Create asset condition evaluation guidelines to determine the appropriate sales channel to use for a given asset type and condition.
	+ Communicate the revised asset disposal process to agency field personnel.
	+ Identify new marketing efforts needed that target additional buyer types and promote new sales channel(s).

An important step in developing the Implementation Plan is to identify any external resources (e.g., consulting assistance) that may be needed for to support a success implementation. If such resources are needed, the project schedule, personnel time requirements, and associated budget will need to reflect the roles targeted for consultant support.

*Deliverables:*

* Secure project approval
* Develop implementation plan

### Task 5: Execute Implementation Plan

This task involves having the Implementation Team (to include any consulting support desired) execute the plan developed in Task 4. This involves performing the work identified in the prior task as well as providing progress reports of the type and frequency identified.

Significant decisions for this task may include some of the following:

* Determine if additional, local marketing research will be performed.
* Make final decisions on use/choice of and additional sales channel(s) and appliable equipment types.

Finally, change is a reality for many projects and how effectively the Implementation Team implements those changes can affect the project's outcomes. The Implementation Team is encouraged to contact agency personnel that have experience/expertise in change management to assist in the implementation process. Successful use of change management techniques can be a critical success factor any project.

*Deliverables:*

* Successful project execution.
* Successful change management techniques applied.

# Chapter 5: Key Assumptions and Estimated Research Requirements

## Key Assumptions

The project resourcing estimates work provided in this section includes the following assumptions:

* No budget, staffing, or regulatory constraints (e.g., fleet asset disposal rules or regulations) preclude a successful project implementation.
* The State hourly rate applied to this analysis is $60.00 per hour.

## Estimated Labor Hour Requirements

| TASK | DESCRIPTION | Task Hours |
| --- | --- | --- |
| 1 | Project Review and Initial Evaluation | 80 |
| 2 | Develop Project Business Case, Preliminary Project Plan, Project Roles, and Potential Implementation Team | 120 |
| 3 | Coordinate with Agency Management for Approval and Sponsorship | 40 |
| 4 | Secure Project Approval and Create an Implementation Plan | 80 |
| 5 | Task 5: Execute Implementation Plan | 280 |
|  | *Total Projected Hours* | 600 |
|  | Direct In-house Labor Hours Estimated at $60.00/hour |  |
|  | **Total Estimated Cost**  | **$36,000** |

## Hourly Breakdown by Project Role

| TASK | DESCRIPTION | Task Hours | Fleet Manager | Fleet Analyst | Other Team Members |
| --- | --- | --- | --- | --- | --- |
| 1 | Project Review and Initial Evaluation | 80 | 24 | 40 | 16 |
| 2 | Develop Project Business Case, Preliminary Project Plan, Project Roles, and Potential Implementation Team | 120 | 40 | 80 |  |
| 3 | Coordinate with Agency Management for Approval and Sponsorship | 40 | 24 | 8 | 8 |
| 4 | Secure Project Approval and Create an Implementation Plan | 80 | 16 | 40 | 24 |
| 5 | Task 5: Execute Implementation Plan | 280 | 80 | 100 | 100 |
|  | **Hour Totals** | **600** | **184** | **268** | **148** |