



Form FM-SE-02



**Configuration and Data Management Plan
*TEMPLATE***

TEMPLATE Version: 2.0

TEMPLATE Approval Date: July 23, 2024

Procedure for Using this Template to Create a Deliverable:

1. Enter your name, firm, and date in the Author Field Document control panel.
2. Replace [*bracketed text*] and empty sections with your project information and/or document content.

Note that bracketed text in blue italics is surrounded by brackets, using the document's font, with the instructions on the content with which to replace the instructions. When you remove or highlight the entire bracketed portion and replace with text, the text should appear in the desired text format of the document. Also, the Document Title is a property/field of the document visible from the file system and will appear differently than with blue italics and can utilize the "Update Field" functionality.
3. Each section contains *instructions preceded with a checkbox for that section in blue italics.* Additional helpful information and description of the required content for that section will be indicated as well, next to the lightbulb icon .
4. Some sections also contain boilerplate text to use as a starting point. Review and modify the boilerplate content, if it exists, and add additional content as necessary to fulfill the requirement of each section. Use the Styles *H1 – H5* for section headers, *Figure Caption* for captions below figures, and *Table Caption* for captions above tables so that the Table of Contents, List of Figures, and List of Tables can be automatically updated.
5. Define acronyms at the first usage in parenthesis after the expanded term and add to the "List of Acronyms" section.
6. Delete the template title page, these instructions pages, all blue instructions, and the detailed instruction notes and examples that are identified with the lightbulb  throughout the document.
7. Update the file name and file location in the document control panel by right-clicking the field, then select "Update Field."
8. Update the Headers and Footers to have the appropriate document title and version.
9. Delete the List of Tables or List of Figures if they do not contain any items.
10. Update the Table of Contents, List of Tables, and List of Figures by right-clicking and selecting "Update Field," and then select "Update entire table."
11. Have the document modified and reviewed as appropriate, and have each reviewer and modifier enter their name, organization, and date in the document control panel.
12. Submit the document for approval and go through the review/revision needed to obtain approval to finalize the document.
13. Repeat the review cycle and resubmit for approval as needed to obtain approval to finalize the document.
14. Enter the approver's name, organization, and date in the "Approved By" section of the document control panel.
15. Enter the approval date on the title page and in the footer throughout the document and update the revision history at the end of the document.
16. Remove the DRAFT watermark on the title page and the content pages by entering the Edit Header and Footer mode of the document and deleting the DRAFT image.
17. Print the document to PDF and review it outside of the Microsoft Word application.

- 18. Submit the Word and PDF versions of the document as the final documents.
- 19. Provide tables and graphics to display information, as needed:
 - 📍 *Table styles may use the following example format, or others as needed*
 - 📍 *Placement of table captions above the table and left justified is recommended.*
- 20. Provide figures when need to convey information to augment written descriptions:
 - 📍 *Placement of figure captions below and center justified is recommended.*

Template Revision History

Version	Date	Name	Description
1.0	6/14/2018	Unknown	
2.0	5/24/2024	Steve Bahler	Update form with additional CM guidance and new guidance about DM.
2.0	6/05/2024	Victor Blue	Review changes made to Version 2.0
2.0	6/6/2024	Steve Bahler	Updating per comments from Victor
2.0	6/26/2024	Amber Greene	Finalize edits and visual check



Configuration and Data Management Plan

[Change name if plan only addresses either configuration or data management]

for: **insert project or program name**

Version: **insert version number**

Approval date: **insert approval date**

DOCUMENT CONTROL PANEL		
File Name:		
File Location:		
Version Number:		
	Name	Date
Created By:		
Reviewed By:		
Modified By:		
Approved By:		

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List of Acronyms and Abbreviations

- [Include all acronyms that are used in the document.](#)

CDMP	Configuration and Data Management Plan
CI	Configuration Items
CM	Configuration Management
CSA	Configuration Status Accounting
DM	Data Management
DMP	Data Management Plan
ID	Identification
IT	Information Technology
ITS	Intelligent Transportation System
NIST	National Institute of Standards and Technology
PII	Personally Identifiable Information
SFCS	State of Florida Cybersecurity Standards
V2X DEP	Vehicle to Everything Data Exchange Platform

- 📍 *A configuration and data management plan (CDMP) should be structured to allow for discrete sections that address the configuration management (CM) topics identified in Sections 1 through 6 below, which also give guidance on content.*
- 📍 *A CDMP is important as Intelligent Transportation Systems (ITS) and technologies are implemented, expanded, operated, and maintained since persons responsible for performing CM activities will change over the life cycle of the technologies and systems.*
- 📍 *A CDMP developed for a specific contract should reflect the overall CDMP of the organization that owns and uses systems that are subject to CM.*
- 📍 *Even though FDOT manages data in SunGuide® software, FL511, the Vehicle to Everything Data Exchange Platform (V2X DEP), et. al., a data management plan (DMP) within the CDMP is often essential for projects that collect data for use by others such as for verification testing or validation.*

1. Introduction

- ☐ *Include this paragraph: The CDMP addresses *[select term(s) that apply: configuration and/or data]* management. *[Delete CMP sentences if they do not apply]* The configuration management plan (CMP) is the set of activities focused on establishing and maintaining the integrity of *[name of ITS project or program]* products and systems, including hardware, software, applications, infrastructure, and documentation. These activities control the processes for initializing, changing, and monitoring the configurations of products and systems throughout the ITS life cycle. *[Delete DMP sentences if they do not apply]* The data management plan (DMP) outlines how ITS data will be collected, organized, stored, preserved, and shared for *[name of ITS project or program]*. The DMP serves as a roadmap for managing data effectively, ensuring its quality, security, and accessibility.*
- ☐ *Using the preparer’s best judgement as to what information to include, the CDMP introduction should provide additional general information, such as the following:*
 - 📍 *Provide an overview of the project, system, or program to which the CDMP (CMP and/or DMP) applies*
 - 📍 *Describe the scope of the CDMP, e.g., CM, DM, or both*
 - 📍 *Identify how the CDMP interfaces with the Systems Engineering Analysis (SEA) and its documents (e.g., ConOps)*
 - 📍 *Describe the scope of CM, if applicable, e.g., system initialization, change, and/or monitoring*
 - 📍 *Describe the scope of DM, if applicable, e.g., data descriptions, collection, storage, backup, network technology, information security, access control, preservation, retention, licensing, roles, and responsibilities, and/or resource requirements*

2. Policies

The following policies apply to this CDMP *[delete a section if it does not apply]*:

2.1 CM Policies

- ☐ *Detail the applicable owner agency or contract policies that provide the basis for CM activities, such as:*
 - 📍 *Policies on the practice of CM and related management activities*
 - 📍 *The organization, responsibilities, and authorities of relevant interested parties*

- 🔗 Qualification and training
- 🔗 Selection criteria for configuration items (CI)
- 🔗 Report frequency, distribution, and control, both internal and external, and terminology

2.2 DM Policies

- Detail the applicable owner agency or contract policies that provide the basis for DM activities, such as:

- 🔗 Policies on the practice of DM and related management activities
- 🔗 Policies for data storage, retention, and access
- 🔗 Policies for third-party use of digital data
- 🔗 Policies for protecting Personally Identifiable Information (PII) and participant identities in CAV pilot projects
- 🔗 Policies related to network engineering and information security risks are to be addressed to meet [State of Florida Cybersecurity Standards \(SFCS\)](#)
- 🔗 Policies related to DM and National Institute of Standards and Technology (NIST) standards and practices for procurement of Information Technology (IT) commodities and services

3. Configuration Management *[delete this section if not applicable]*

3.1 Configuration Management Procedures

- The CDMP should include the following details, as necessary:

- 🔗 Describe the scope of the CM effort
- 🔗 Consider adding a diagram showing the Software and Interfaces to Hardware (the project ITS architecture is an initial source of interfaces)
- 🔗 Identify CM stakeholders, their roles, and responsibilities
- 🔗 Describe procedures for obtaining existing configuration information
- 🔗 List important CM activities
- 🔗 Schedule or timelines for important CM activities
- 🔗 Describe CM tools approved for use (e.g., information technology)
- 🔗 Identify related documents (e.g., CM plans from suppliers, etc.)
- 🔗 List the relevant CM documents and their interrelationships

3.2 Configuration Identification (CI)

- The CDMP should include the following details, as necessary:

- 🔗 Describe the product and CIs to which the plan applies
- 🔗 Family trees of CIs, specifications, and other documentation
- 🔗 Numbering conventions used for specifications, drawings, concessions, and changes
- 🔗 Identification method for revision status
- 🔗 Establish configuration baselines, schedules, and product configuration information
- 🔗 Use and allocation of serial numbers or other traceable identification
- 🔗 Release procedures for product configuration information
- 🔗 Provide a schedule for guidance on timelines of important CM activities

- 📍 Describe CM tools (e.g., information technology)
- 📍 Identify related documents (e.g., CM plans from suppliers, etc.)
- 📍 List the relevant documents and their interrelationships

3.3 Configuration Change Control

The CDMP should include the following details, as necessary:

- 📍 Describe the relationship of the dispositioning authority (i.e., configuration control board, responsible position, etc.) of the organization with that of other parties
- 📍 Describe procedures for the control of changes prior to the establishment of a contractual configuration baseline
- 📍 Describe methods for processing changes, including customer- or supplier-initiated changes, and concessions

3.4 Configuration Status Accounting

The CDMP should include the following details, as necessary:

- 📍 Detail methods for collecting, recording, processing, and maintaining the data that are necessary for producing configuration status accounting (CSA) records
- 📍 Summarize content and format definitions for all CSA reports

3.5 Configuration Audits

The CDMP should include the following details, as necessary:

- 📍 Audits to be conducted and their occurrence within project schedules
- 📍 Configuration audit procedures to be used
- 📍 Authorities of relevant parties, both internal and external, and an audit report format definition

4. Data Management *[delete this section if not applicable]*



4.1 Data Inventory and Description

DM should include the following details, as necessary:

- 📍 Define the types of data managed (e.g., data collected from roadside detectors, cameras, and/or others)
- 📍 Specify data formats, metadata, and naming conventions
- 📍 Describe the structure of the data (e.g., tables, files, folders)
- 📍 Identify data ownership
- 📍 Consider adding a system diagram showing all the system elements and the data flows between them (data flows may be numbered for easy reference) (the project ITS architecture is an initial source for data flows)




4.2 Data Collection and Acquisition

[The DM discussion should include the following details, as necessary:](#)

-  Explain how data will be collected (e.g., surveys, experiments, sensors)
-  Address ethical considerations and consent (e.g., how will PII be addressed, rights of any identified participants?)




4.3 Data Storage and Backup

[The CDMP should include the following details, as necessary:](#)

-  Detail where data will be stored (e.g., local servers, cloud services)
-  Discuss backup strategies to prevent data loss
-  Discuss data deletion policy with respect to storage and backup




4.4 Data Security and Access Control

[The CDMP should include the following details, as necessary:](#)

-  Describe measures to protect data (e.g., encryption, access controls)
-  Specify who can access the data and under what conditions
-  Explain the network engineering and information security approach







4.5 Data Preservation and Retention

[The CDMP should include the following details, as necessary:](#)

-  Outline how long data will be retained including any statutory retention policies
-  Consider long-term preservation (archiving, repositories)
-  Consider the timeframe to delete data

4.6 Data Sharing and Reuse

[The CDMP should include the following details, as necessary:](#)

-  Identify data ownership
-  Explain how data will be shared (e.g., open access, restricted access)
-  Address intellectual property rights and licensing requirements
-  Discuss data preparation, storage and uses for project evaluation
-  Discuss third-party use and access of the data, as applicable (e.g., project evaluation, academic research)
-  Refer to current online sources for creating DMPs for federally funded projects (e.g., [Creating Data Management Plans for Extramural Research | Bureau of Transportation Statistics \(bts.gov\)](#))

4.7 DM Roles and Responsibilities

The CDMP should include the following details, as necessary:

- 📍 Identify team members responsible for data management tasks and their roles and responsibilities
- 📍 Add a table to summarize the information in the DM section to include:
 - Dataset ID
 - Data flow ID from system diagram (in Section 4.1)
 - Dataset Name
 - Dataset Description
 - Collection Method
 - Format/Specifications
 - Data Ownership
 - Users
 - Access Policy

5. References

Cite the documentation that is relevant to the project.

- 📍 Use a table as shown below (Table 1), as needed.

Table 1: Referenced Documentation

Document Name	ID, Revision, Date, etc.	Link, or Contact Info to Obtain

Optionally, establish a centralized project repository to house and archive all project documentation and provide the location here (Show file path in the document control panel).

6. User Definitions *[delete this section if not applicable]*

The CDMP should define terms and processes that are unique to the CMP and/or DMP

7. Notes

Replace the boilerplate below with notes if applicable:

This section will be annotated, as needed, with changes to the approved CDMP document made over the course of the project. There are no notes currently.

📍 *This section should contain any additional information that will aid in understanding the CDMP document. If there are no notes, this section should still be included with the notation that there are no notes at this time. Subsequent revisions of the CDMP document usually require that notes be added to date and explain the revisions.*

8. Appendices

□ *Add appendices of larger, related content or leave a note to state there are no Appendices at this time.*

📍 *To facilitate the CDMP document’s ease of use and maintenance, some information may be placed in appendices to the document. Each appendix should be referenced in the main body of the document where that information would normally have been provided. Appendices may be bound as separate documents for easier handling.*

📍 *In addition, for managed lanes projects, appendices may include operational analysis identifying tolling strategies and rates; business rules; administrative rules and regulations for toll exemptions; system planning bulletins and directives; toll calculation procedures in the event of closures, closure recovery, or other specific incidents; incident management plan; and/or, enforcement plan, among others.*

Table 1: Title

Header	Header

Figure 1: Title

DOCUMENT REVISION HISTORY			
Version Number	Approved Date	Description of Change(s)	Created/ Modified By