Digital Delivery Execution Plan

For

[project title]

developed by

[author]

[DATE]

version XX

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# DDEP Revision Table

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Remark | Prepared By | Date |
| 1.0 | Initial DDEP document creation |  |  |
| 2.0 |  |  |  |
| 3.0 |  |  |  |
| 4.0 |  |  |  |
| 5.0 |  |  |  |
| 6.0 |  |  |  |

**Digital Delivery Execution Plan for [enter project name here]**

# Introduction

The purpose of a Digital Delivery Execution Plan (DDEP) is to describe the effort necessary to create and deliver discipline specific design models, including compliance with model development requirements and how the data will be exchanged throughout the life of the project for the intended model uses. This plan is a living document that will be updated throughout the life of the project.

## Project Details and Requirements

Table . Project Reference Information

|  |  |
| --- | --- |
| District |  |
| Project ECMS Number |  |
| Project Description |  |
| Project Location |  |
| Project Letting Date |  |

## Project Schedule and Milestones

This project includes the following project milestone submissions and any major events which occur during the project lifecycle that include model deliverables.

Table . Project Milestone Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Milestone Submission** | **Estimated Start Date**  **(XX/XX/XXXX)** | **Estimated Completion Date**  **(XX/XX/XXXX)** | **Current Status** |
| Line, Grade and Typical Section |  |  |  |
| Safety Review |  |  |  |
| H&H Report Submission |  |  |  |
| Type, Size & Location |  |  |  |
| Design Field View |  |  |  |
| Right of Way Submission |  |  |  |
| Permit Submission |  |  |  |
| Utility Submission |  |  |  |
| Constructability Review |  |  |  |
| Final Review of Plans (Bridge) |  |  |  |
| Final Design Office Meeting |  |  |  |
| PS&E |  |  |  |

# Project Digital Delivery Requirements

This project is being advertised as a digital delivery project with specific model uses. This section details the project digital delivery requirements for each discipline at each submittal stage.

## Project Model Uses and Goals

The following model use cases will be utilized on the project and the project goals associated with each use case.

Table . Model Use Case Goals

|  |  |
| --- | --- |
| **Model Use Cases** | **Project Goal(s)** |
| Existing Conditions Model |  |
| Design Authoring |  |
| Design Review |  |
| Design Quantities |  |
| 3D Coordination and Clash Detection |  |
| Digital Delivery Contract Documents (Letting Model) |  |

## Key Digital Delivery Project Staff

In addition to traditional contract staff requirements, the project team will provide qualified staff with specialized skills to develop and manage digital delivery requirements.

Table . Key Digital Delivery Roles

|  |  |  |
| --- | --- | --- |
| **Name** | **Role(s)** | **Organization** |
|  |  |  |
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## Process Maps

Project process maps are identified in Table 5 and customized process maps are attached in **Appendix A: Project Process Maps**.

Table . Project Process Maps

|  |  |  |  |
| --- | --- | --- | --- |
| **Model Use Case** | **In Project** | **PennDOT Process Map** | **Project Specific Process Map** |
| Existing Conditions Modeling |  |  |  |
| Design Authoring |  |  |  |
| Design Review |  |  |  |
| Design Quantities |  |  |  |
| 3D Coordination and Clash Detection |  |  |  |
| Digital Delivery Contract Documents |  |  |  |
| Digital As-builts (Record Model) |  |  |  |

# Model Development Details

This section tracks the creation and updates of the project model element breakdown structure. A Model Element Breakdown Structure (MEBS) workbook will be developed in conjunction with this DDEP.

## Project Model Element Breakdown

Each Discipline Model is required to meet the PennDOT MEBS. Table 6 documents the reviewers for each milestone and MEBS discipline. **Appendix B: Project Model Element Breakdown Structure** contains the current project MEBS document.

Table . MEBS Reviewers

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Reviewer Name** | **Milestone** | **Discipline Tabs** | | | | | | | | | | | |
| Geometry | Roadway | Earthwork | Drainage | Structures | ESPC & PCSM | Traffic | Utilities | Landscaping | Survey | Right of Way | Rail |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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# Technology Requirements

The project team should adhere to the project software and versioning documented in Table 7.

Table . Project Software Requirements

|  |  |  |
| --- | --- | --- |
| **Model Use Case or Application** | **Software Name** | **Version** |
| Common Data Environment (Storage of files) |  |  |
| Design Authoring - Roadway |  |  |
| Design Authoring - Bridge |  |  |
| Design Authoring - Other |  |  |

## Data Migration and Software Version updates

Table . Project Technology Updates

|  |  |  |
| --- | --- | --- |
| **Process Type** | **Document Process** | **Date Conducted** |
| Data Migration |  |  |
| Software Update |  |  |
| Software Upgrade |  |  |

# Data Management

The project model organization, management, and documentation are outlined below by file naming structure, project coordinate system/location and its metadata, and the project digital file structure.

## Common Data Environment

If a customized project folder structure is used, create a pdf for documentation in **Appendix C: Common Data Environment Folder Structure**.

Table . Project Common Data Environment

|  |  |
| --- | --- |
| **Data Management** | **Documentation** |
| Project File Location |  |
| Project Folder Structure |  |
| File Security Measures |  |

## Project Coordinate System

Table . Project Coordinate System

|  |  |
| --- | --- |
| **Project Location** | **Coordinate System** |
|  | NAD 83 State Plane Pennsylvania North FIPS 3701 (US Feet) |
|  | NAD 83 State Plane Pennsylvania South FIPS 3702 (US Feet) |

## Project Digital File Index

Attach a pdf for documentation in **Appendix D: Project Digital File Index**.

Table . Project Digital File Index

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Reviewer** | **Date Completed** |
| Line, Grade and Typical Section |  |  |
| H&H Report |  |  |
| Type, Size, and Location |  |  |
| Design Field View |  |  |
| Foundation Report |  |  |
| Constructability Review |  |  |
| Final Review of Plans (Structures) |  |  |
| FDOM |  |  |
| PS&E |  |  |

# Collaboration Strategy

## Collaboration Procedures and Schedule

Table . Project Meeting Schedule

|  |  |  |
| --- | --- | --- |
| **Meeting Type** | **Frequency** | **Key Participants** |
| DDEP Kickoff | Once |  |
| DDEP Updates |  |  |
|  |  |  |

## Quality Management Review Procedures

Attach a pdf of the quality management review checklists in **Appendix E: Quality Management Review Checklist**.

Table . Quality Management Reviews

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Milestone** | **Design Compliance** | | | **Model Integrity Review** | | | **Additional Reviews** | |
| Design Criteria | Constructability | Interdisciplinary | Geometric Integrity | Model Development Standards | Modeling Standards | External Stakeholders | Deliverables |
| Line, Grade and Typical Section |  |  |  |  |  |  |  |  |
| Type Size and Location |  |  |  |  |  |  |  |  |
| Safety Review |  |  |  |  |  |  |  |  |
| Design Field View |  |  |  |  |  |  |  |  |
| FDOM / Constructability |  |  |  |  |  |  |  |  |
| PS&E |  |  |  |  |  |  |  |  |

# PS&E Deliverable Requirements

The project team needs to consider what deliverables are required PS&E at the beginning of the project to help understand the processes needed during design. Table 14 documents the project deliverables and identify the format(s) and types in which the information will be delivered at the PS&E milestone.

Table . PS&E Project Deliverables

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Deliverable Item** | **File Format** | | | | **File Type** |
| .PDF | .XLXS | .DGN | .LandXML |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
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# Appendix A: Project Process Maps

# Appendix B: Project Model Element Breakdown Structure

# Appendix C: Common Data Environment Folder Structure

# Appendix D: Project Digital File Index

# Appendix E: Quality Management Review Checklists