



Texas Department of Transportation **Digital Delivery Program**

Project Execution Plan

Rev. March 2026

District:
Highway:
Project Number (CSJ):



Table of Contents

List of Revisions	iv
INTRODUCTION	1
Purpose	1
Project Description	3
Project Goals	3
PROJECT TEAM, SCHEDULE, & DELIVERABLES	6
Project Team	6
Team Directory	6
Roles and Responsibilities	7
Communication Plan	8
District Coordination Plan	9
Meetings/Workshops	10
Project Schedule	10
Project Deliverables	11
TECHNOLOGY	12
System Requirements	12
Software Requirements	12
Information Exchanges	12
MODEL MANAGEMENT PLAN	13
Workspace	13
Folder Structure	13
File Naming Convention	13
Template Library	13
Level of Development	14
Digital Signing and Sealing	14
ASSET MANAGEMENT PLAN	15
Goals and Objectives	15
QUALITY MANAGEMENT PLAN	16
Model Quality Control Process	16
CONSTRUCTION ADMINISTRATION PHASE	17
Letting	17



Construction Phase Process	17
APPENDIX A – Project LOD Specifications	18
APPENDIX B – Asset Inventory	21
APPENDIX C – Pilot Project Schedule	23

List of Tables

Table 1 - Project Information	3
Table 2 – Digital Delivery Pilot Elements	4
Table 3 - Project Team Contacts	6
Table 4 - Project Roles and Responsibilities	7
Table 5 - Project Communication.....	8
Table 6 - Project Milestones	10
Table 7 – Key Project Dates, Meetings, Workshops.....	11
Table 8 – Project Software	12
Table 9 – Quality Control Checks	16
Table 10 – Project Level of Development Specifications.....	19
Table 11 – Project Asset Inventory	22



List of Acronyms

AE	Area Engineer
AGC	Association of General Contractors
DES	Design Division
DDP	Digital Delivery Program
FIO	For-Information-Only
LOD	Level of Development
MMP	Model Management Plan
PEP	Project Execution Plan
PM	Project Manager
PS&E	Plans, Specs, and Estimate
QA	Quality Assurance
QC	Quality Control
ROW	Right-of-Way
TPP	Transportation Planning and Programming Division
TxDOT	Texas Department of Transportation

DISTRICT:

REV:

HWY:

Digital Delivery Program | iii

CSJ:





LIST OF REVISIONS

The latest revisions to this document consist of:

-

DISTRICT:

REV:

HWY:

Digital Delivery Program | iv

CSJ:



INTRODUCTION

Purpose

The purpose of the Project Execution Plan (PEP) is to facilitate efficient and effective progress, while maintaining quality in preparation for the Texas Department of Transportation's (TxDOT's) Pilot Projects. The PEP provides a consistent means to review the approach to project implementation and digital delivery methods being proposed by TxDOT. This plan will be used as the basis of assessing progress throughout the course of project execution. The PEP will address the following:

- Project Background and Description
- Digital Delivery Goals
- Team Organization
- Project Schedule
- Software Requirements
- Model Management
- Quality Management
- Construction Administration



As the project progresses through the detailed design phase, it is the expectation of TxDOT's Design Division (DES) to update the PEP and document such updates on Pg. iii. Updates include project schedule, pilot goals, project software, roles and responsibilities, etc. If there is a change in any standardized PEP language, guidance or best practices, a Regional DES Pilot Support team member will ensure the Project Manager (PM) is notified and project PEP is updated accordingly.

NOTE: All text in RED is for instructional purposes only. Text should be deleted/replaced with relevant project information.

DISTRICT:

REV:

HWY:

Digital Delivery Program | 2

CSJ:



Project Description

The following table gives a summary of information for the project. All information should align with all project details listed in TxDOTConnect.

Table 1 - Project Information

Field	Value
Project Owner	
CCSJ	
Highway	
Letting Date	
District	
County	
Current ADT (Year)	
Future ADT (Year)	
Functional Classification	
Prop Design Criteria	
From Limit	
To Limit	

Describe the project background and proposed improvements below:

Project Goals

For TxDOT's Digital Delivery Program, pilot projects across all 25 districts have been identified and will be let by the end of 2027. As with previous piloting efforts, DES DDP is looking to gather more information and assess Model as Legal Deliverable (MALD) deliverables & processes, software functionality, and use cases during design, construction and asset management phases. Table 2 consists of typical piloting elements that DES DDP has identified as critical to DD success.

Identify which piloting elements your project will explore in Table 2. It is recommended to fill this out with your regional DES Pilot Support team member listed in Table 3.

DISTRICT:

REV:

HWY:

Digital Delivery Program | 3

CSJ:



Table 2 – Digital Delivery Pilot Elements

DESIGN ELEMENTS

Pilot Elements	Included in Project?	Comments
File Management – Folder Structure	☒	Bentley CONNECT Edition data
File Management – Naming Convention	☒	<i>Link to File Naming Convention Guidance Document to be provided once available</i>
Template Point Naming Convention	☒	Template Point Naming Convention
Model Development Standards	☒	Model Development Standards (MDS) Guidance
Item Types	☒	<i>Link to Item Type Guidance Document to be provided once available</i>
Model Based Design Quantities	☒	
Clash Detection	☒	
Bridge Modeling	☒	Resources and Training – 3D Bridge Modeling
Drainage and Utilities (DU) Modeling	☒	Resources and Training – ORD for Drainage Utility (DES752)
TCP Phased Modeling	☒	
Digital Design Review	☒	Using Bentley Infrastructure Cloud Platform (ICP) for Design Review

DELIVERABLES

Pilot Elements	Included in Project?	Comments
Model as Legal Deliverable (MALD)	☒	
Reduced Plan set	☒	
Roll plots (FIO)	☒	
Digital Signing and Sealing	☒	<i>Link to Digital Signing and Sealing tool to be provided once available</i>



MODEL USE

Pilot Elements	Included in Project?	Comments
Automated Machine Guidance (AMG)	☒	Design: 3D Model Breakline Creation Process Construction: <i>information to be filled out during 100% submittal</i>
Digital Construction Inspection	☐	<i>To be filled out during 100% submittal</i>
Construction Simulation (4D Modeling)	☐	<i>To be filled out during 100% submittal</i>
As-built Recording	☐	<i>To be filled out during 100% submittal</i>
Asset Inventory	☐	<i>See Asset Management Plan for more information</i>

For piloting elements or specific goals not listed in Table 2, list out other detailed project goals in a bullet format. Goals need to be defined and aligned with [TxDOT's Digital Delivery Strategic Plan](#). For assistance identifying piloting goals aligned with project scope, contact Regional DES Pilot Support team members listed in Table 3.

-



PROJECT TEAM, SCHEDULE, & DELIVERABLES

Project Team

Briefly describe all parties involved in the project.

Team Directory

The following table includes contact information for project management/design team.

Table 3 - Project Team Contacts

Org	Role	Name	Email	Phone
District	PM*			
	Design			
	AE			
	QC			
DES	PM*			
	QC			
BRG	PM*			
TPP				
CST				
Consultant (if necessary)	PM *			

* Primary contact

DISTRICT:

REV:

HWY:

Digital Delivery Program | 6

CSJ:



Roles and Responsibilities

The following table includes tasks and responsibilities for the project.

Table 4 - Project Roles and Responsibilities

Team Lead/SME	Name	Organization
Survey Lead		
Geotech Lead		
Roadway Design		
Drainage Design		
TCP Design		
Bridge Design		
Signing & Pavement Marking Design		
Signals, ITS, Illumination Design		
Pavement Design		
Landscape Design		
Railroad Design/Coordination		
Environmental Document		
Right of Way		
Utilities Design/Coordination		
QC Manager		

Organization is name of employer that the person represents, i.e. a TxDOT Division or District, consultant firm, utility company, etc.



Communication Plan

The following table includes communication types and responsible parties.

Table 5 - Project Communication

Type of Communication	TO:	CC:
Project Specific		
Design Division & DDP		
Bridge Division		
Construction Division		
TPP Division		
DES Consultant		

Describe Project Management Application to be used to communicate project details.

Describe frequency of project progress meetings with the District as well as other design teams (e.g., DES Division or consultant)

DISTRICT:

REV:

HWY:

Digital Delivery Program | 8

CSJ:



District Coordination Plan

Describe the process for coordinating project activities with the District. This could include coordination for specific discipline, stakeholders, review periods, etc.

DISTRICT:

REV:

HWY:

Digital Delivery Program | 9

CSJ:



Meetings/Workshops

The following meetings/workshops have been incorporated in the project:

- Project Management Meetings
- Monthly Progress Meetings
- Bi-Weekly Discipline Coordination Meetings
- Milestone Review Meetings

The following basic protocols will be followed for project meetings/workshops:

- Determine who should be present at the meeting/workshop
- Schedule a time, location, and duration of the meeting/workshop
- Prepare and distribute agendas for the meeting/workshop ahead of time
- Designate a responsible party to conduct the meeting/workshop
- Prepare and distribute meeting/workshop minutes
- Follow-up on action items

Project Schedule

Attached project schedule in Appendix C, and list project milestones in Table 6 including associated dates.

Table 6 - Project Milestones

Project Phase/Milestone	Date
Notice-to-Proceed	
Initial – 30%	
Detailed – 60%	
Final – 90/95%	
Sealed – 100%	
Ready-to-Let	

* Subject to change



In Table 7, list key project dates including project meetings, workshops and associated dates.

Table 7 – Key Project Dates, Meetings, Workshops

Project Meeting, Workshop, Event	Date

Project Deliverables

For TxDOT Digital Delivery Pilot Projects, the list of project deliverables will vary compared to a traditional project. A comprehensive list of deliverables per project milestone, along with QC guidelines and model deliverable plans, can be found on TxDOT's Digital Delivery website using the following link: [Digital Delivery PS&E QC Checklist](#).

For additional guidance, use the following link to access the [Digital Delivery PS&E QC Checklist Overview & Instructions](#).



TECHNOLOGY

System Requirements

For general information, software compatibility, system requirements, workspace configuration, services and support information, and security release notes for each project software, refer to the “ReadMe” on the [Bentley Software Documentation](#) page.

Software Requirements

The following table describes minimum software requirements to be used for this project for compatibility with the TxDOT workspace.

For consultants, fill this section out with information that aligns with project scope.

Table 8 – Project Software

Discipline	Software	Version	Comments
Roadway, Traffic Control, Traffic (Design), and Environmental			
Drainage (Analysis)			
Drainage (Design)			
Traffic (Analysis)			
Utilities			
Bridge			
Asset Management			
Project Management			
Document Management			
Quality Management			

Note: the software version may be subject to change as the duration of the project may require it and official communication will be sent accordingly to document the change.

Information Exchanges

All project files should be stored and organized in ProjectWise Explorer. Project files should conform to the File Naming Convention outlined later in the PEP. File delivery will be conducted through Box.com.

The project folder can be accessed using the following link: *(insert ProjectWise project folder link here)*

DISTRICT:

HWY:

CSJ:

REV:

Digital Delivery Program | 12



MODEL MANAGEMENT PLAN

Workspace

Refer to the most current guidance for TxDOT workspaces and project configuration files. [TxDOT Bentley CONNECT Edition applications](#) can be found by clicking the hyperlink.

The latest TxDOT workspace in the provided link is to be utilized for all Digital Delivery pilot projects. If utilizing a different workspace, please describe the version being used: *(Example: the TxDOT 10.12 workspace will be used for this project).*

Folder Structure

A reduced folder structure is a key component of TxDOT's Digital Delivery program, shifting the focus from manual directory navigation to a more effective, attribute-driven system. All TxDOT Digital Delivery pilot projects will utilize a reduced folder structure within Design Division's ProjectWise environment. This structure will support a more stable common data environment and improve data integrity across the project lifecycle.

For inquiries or recommendations on the current state of the reduced folder structure, please contact Javier Nava (Javier.Nava@txdot.gov), Rob Allen (Robert.Allen2@txdot.gov), or a DES point of contact.

File Naming Convention

All file naming for this project shall adhere to the TxDOT DDP File Naming Convention process. This process includes guidance for file versioning and naming convention structure, and can be found using the following link: *(insert link to document on DDP website when available)*

If the project commenced before being identified for the pilot program, then a different file naming convention may be adhered to. If so, please describe the naming convention below.

Template Library

OpenRoads Designer utilizes template libraries (.ITL files) to store roadway design templates. All templates must be saved within the project ITL in the project folder. It is recommended for pilot project designers to take Design Division provided trainings (DES 750, DES 752, etc.) to better understand the expectations and workflows of the template library.

Refer to the [Model Development Standards \(MDS\) Guidance](#) for more modeling guidance.



Level of Development

Refer to the general model development characteristics table in the [Model Development Standards \(MDS\) Guidance](#) for deliverable expectations of common model elements. This table includes target Level of Development (LOD) and how the element should be represented geometrically (2D lines or geometry, 3D model breaklines, 3D cell, etc.).

Pilot teams are required to fill out all design elements with desired LOD definitions. This table can be located in **Appendix A**.

Digital Signing and Sealing

At the final design milestone when the project is in the Ready-to-Let phase, MALD files will be signed and sealed using TxDOT's SHA 256 Hash Code Generator. To ensure file integrity during letting and construction, a unique digital fingerprint will be created to each MALD file at the bit level. This fingerprint, or hash code, can then be checked with a hash code validator which allows users to confirm that nothing was modified.

The generator and validator can be found on TxDOT's website using the following link: *(link to be included in PEP once available)*



ASSET MANAGEMENT PLAN

Goals and Objectives

TxDOT's Digital Delivery Program is evolving asset management by establishing a digital twin that transitions 3D design into construction and as-built data. A primary objective is the integration of GIS for an as-built repository, utilizing attributed BIM objects and item types to ensure geospatial precision for maintainable assets. While an enterprise solution for digital as-builts is currently under development, the program is actively defining the processes required to migrate construction data into downstream maintenance systems. With the expectation to continue moving TxDOT projects towards MALD, this will provide the data for a digital twin framework, enable data-driven lifecycle management and enhance spatial analytics across the state's infrastructure.

Pilot teams are required to list all assets this project will track throughout the project lifecycle. This table can be located in **Appendix B**.

As digital as-built processes and guidelines continue to be developed, pilot teams will be informed of best practices and procedures to carry out as-built documentation from their Design Division point-of-contact.

List out the project asset management goals and objectives.

-



QUALITY MANAGEMENT PLAN

Model Quality Control Process

All team members shall follow TxDOT's quality control & quality assurance checking prior to each submittal. Refer to the [QC Process PS&E Submittals](#) documentation for more information.

The following table describes the quality control process for project models:

Table 9 – Quality Control Checks

Description	Definition	Stakeholders	Application	Frequency
Visual Check	Verify there are no unintended model components and design intent has been followed.	All	OpenRoads, Bentley Infrastructure Cloud	Continuous, Quality Control Periods
Model Integrity Checks	Resolve model Errors, purge unused files, verify workspace elements (feature definitions, item types, etc.)	All	OpenRoads, ProjectWise, Bentley Infrastructure Cloud	Continuous, Quality Control Periods
Synchronize iTwin Files	Update Design Files in iTwin model	Model Manager	Bentley Infrastructure Cloud	Quality Control Periods, Submittal Period, Design Updates



CONSTRUCTION ADMINISTRATION PHASE

Letting

Prior to the letting phase commencing, coordination with local AGC stakeholders is encouraged to establish project expectations and gather feedback from local contractors. It is recommended to hold mandatory pre-bid meetings to ensure prospective bidders understand the technical requirements of navigating a model-based environment and the software tools required for estimation, construction and inspection.

Triple-zero (000) Special Provisions are also recommended to be included in the letting package, as this document will establish MALD expectations. These provisions specifically outline the hierarchy of data, defining which digital files take precedence in the event of a discrepancy. Examples from previous projects can be provided to the pilot project team per request.

As letting requirements for TxDOT digital delivery projects continue to evolve, pilot teams will be informed of best practices and procedures to prepare.

Construction Phase Process

Information pertaining to project specific construction processes and timelines will be included closer to letting.



APPENDIX A – Project LOD Specifications

DISTRICT:

REV:

HWY:

Digital Delivery Program | 18

CSJ:



Table 10 – Project Level of Development Specifications

TRAFFIC CONTROL

Item/Element	Spec #	LOD #	Description

ROADWAY

Item/Element	Spec #	LOD #	Description

DRAINAGE

Item/Element	Spec #	LOD #	Description

BRIDGE

Item/Element	Spec #	LOD #	Description

TRAFFIC

Item/Element	Spec #	LOD #	Description

DISTRICT:

REV:

HWY:

Digital Delivery Program | 19

CSJ:



ENVIRONMENTAL

Item/Element	Spec #	LOD #	Description

DISTRICT:

REV:

HWY:

Digital Delivery Program | 20

CSJ:



APPENDIX B – Asset Inventory

DISTRICT:

REV:

HWY:

Digital Delivery Program | 21

CSJ:



Table 11 – Project Asset Inventory

TRAFFIC CONTROL

Item/Element	Bid Item	Description

ROADWAY

Item/Element	Bid Item	Description

DRAINAGE

Item/Element	Bid Item	Description

BRIDGE

Item/Element	Bid Item	Description

TRAFFIC

Item/Element	Bid Item	Description

DISTRICT:

REV:

HWY:

Digital Delivery Program | 22

CSJ:



APPENDIX C – Pilot Project Schedule

DISTRICT:

REV:

HWY:

Digital Delivery Program | 23

CSJ: