

INDOT Digital Delivery Roadmap





10-Year Strategic Timeline for State DOT

Introduction

Phase 1: Planning & Foundation (2025–2026)

Phase 2: Pilot Development (2026–2027)

Phase 3: Evaluation & Scaling (2028–2029)

Phase 4: Statewide Rollout (2030–2032)

Phase 5: Optimization & Sustainability (2033–2035)

Strategic Anchors

Conclusion

Phase 1: Planning & Foundation (2025–2026)

Focus Areas

- Organizational readiness
- Stakeholder engagement
- Asset prioritization

Key Activities

- Conduct business architecture and data governance assessments
- Identify priority assets (e.g., bridges, culverts)
- Form cross-functional working groups
- Secure funding and leadership buy-in

INDOT Pain Points



Isolated and Transactional Workflows

Many teams function within **separate systems**, leading to inefficient transitions, duplicated work, and limited visibility throughout project stages.

The current approach is "**swim lane oriented**," with tasks moving between groups with minimal collaboration.



Lack of System Integration

Tools like **SPMS, ERMS, ProjectWise, and PeopleSoft** are not fully integrated, resulting in **manual data entry, version control problems, and data fragmentation**.

This disconnect impairs real-time updates and complicates project tracking.



Ineffective Submittal and Review Processes

Submittals are often **manual, slow, and inconsistent**, lacking automation or validation rules.

Review comments may not be preserved, and **external permissions** in ProjectWise hinder collaboration.



Limited Visibility

Project managers do not have **real-time dashboards** or centralized tools for tracking project status, schedules, and deliverables.

This leads to **reactive management** and delays in addressing issues.

INDOT Pain Points



Stakeholder Engagement Gaps

Engagement in planning and tool adoption is inconsistent among departments and consultants, causing **misalignment** and **resistance**.

Cross-functional working groups are needed for inclusive input and ownership.



Tool Underutilization and Training Deficits

Existing tools are underused due to **insufficient training**, **unclear roles**, and **inconsistent standards**.

There is a demand for **scalable training programs** and **on-demand resources** for staff and consultants.



Document and Data Management Challenges

Issues include **inconsistent naming**, **lack of standardized deliverables**, and **difficulty in tracking changes**.

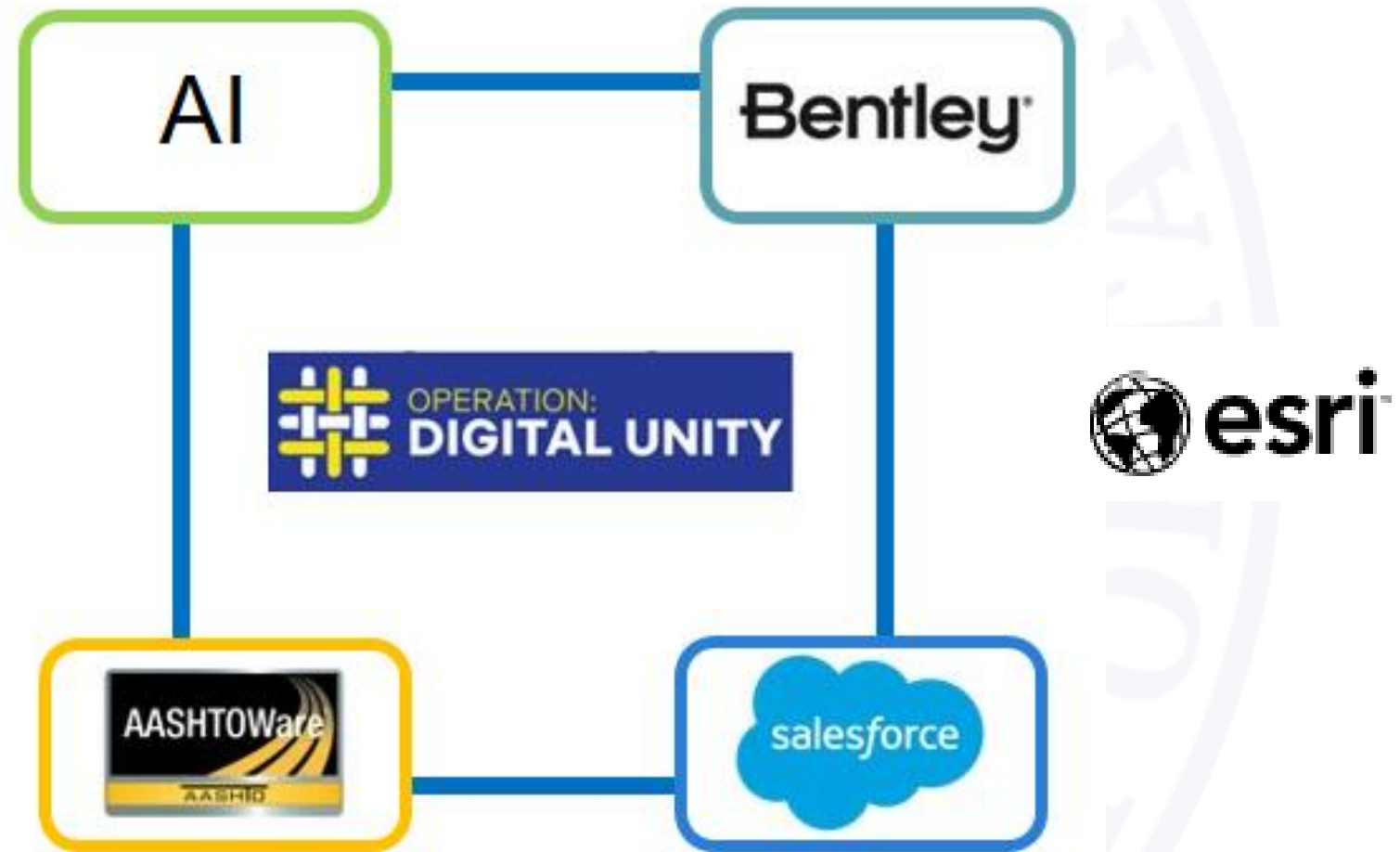


Construction and Field Process Inefficiencies

Manual processes for **document submission** and **change order management** are slow and prone to errors.

A call for **automated workflows**, **mobile access**, and **real-time data integration** exists.

Digital Unity

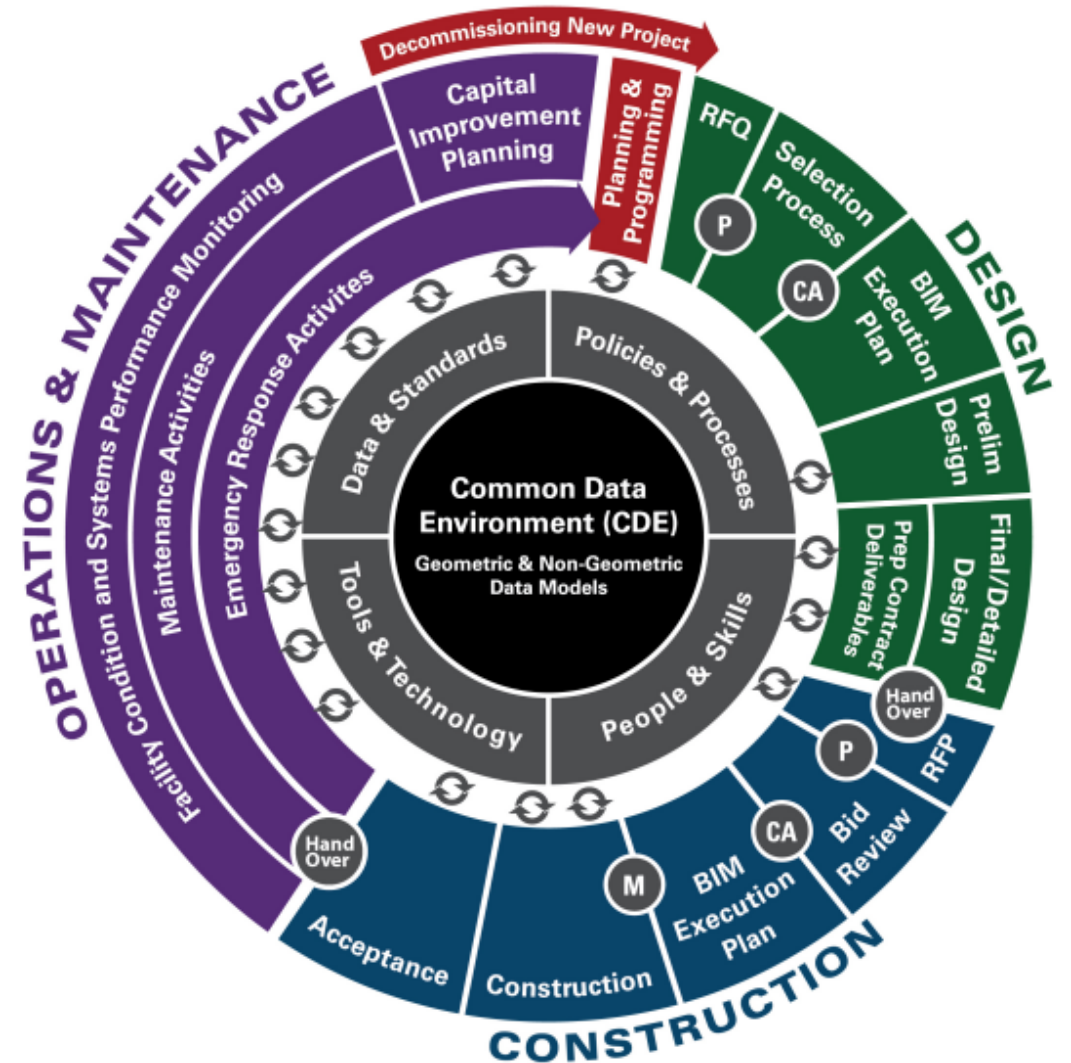


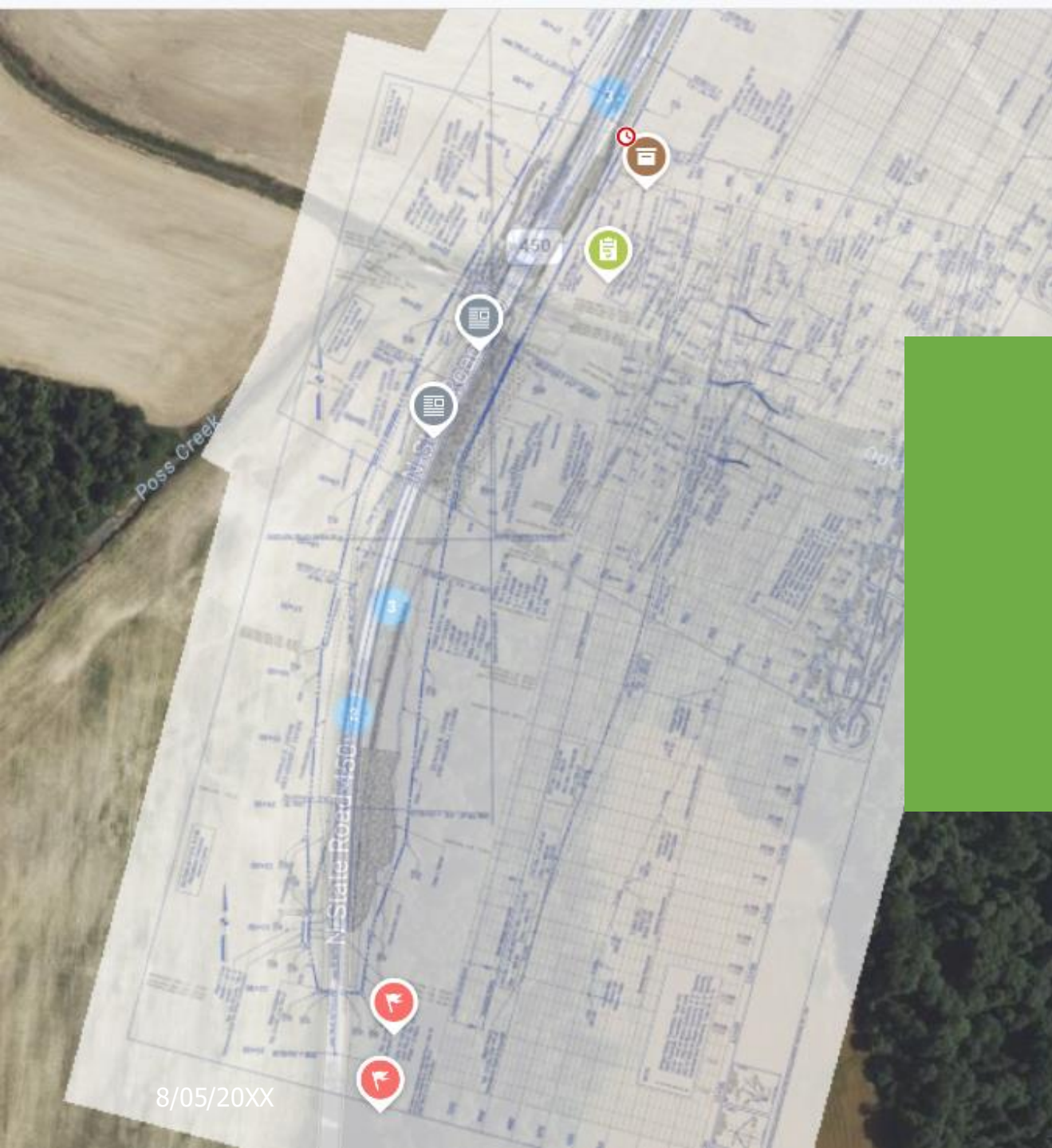
RFP Digital Delivery

ID: 21239

Digital Delivery
Implementation
Plan and Data
Requirements
Development
Plan

- Target RFP: 03/10/26
- Modernize Bentley Workspace
 - Bridge Workspace
 - Drainage Workspace
- Future-State Data Dictionary





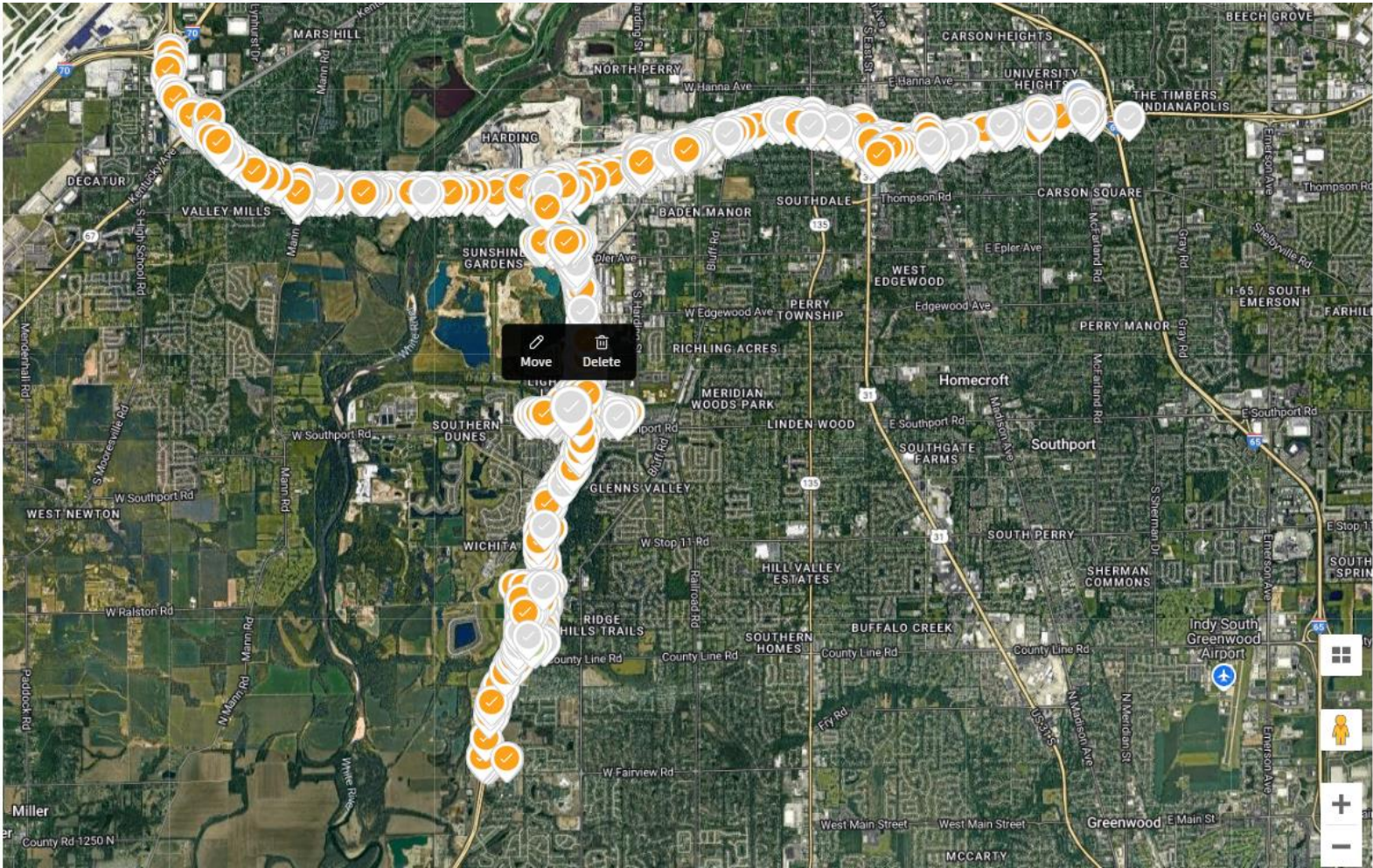
Field Checks

Issues Review

Roll Plots

Workflows/Process/Communication

#156 - Deficiency List	
Open • Deficiency List	
Deficiency List - Milestone	No due date
#155 - Deficiency List	
Open • Deficiency List	
Deficiency List - Milestone	No due date
#154 - Deficiency List	
Open • Deficiency List	
Deficiency List - Milestone	No due date
#153 - Deficiency List	
Closed • Deficiency List	
Deficiency List - Milestone	No due date
#152 - Deficiency List	
Open • Deficiency List	
Deficiency List - Milestone	No due date
#151 - Deficiency List	
Open • Deficiency List	
Deficiency List - Milestone	No due date
#150 - Deficiency List	
Open • Deficiency List	
Deficiency List - Milestone	No due date
#149 - Deficiency List	



39.66366350620304,
-86.19813775263934

Google

Map data ©2025

Terms

Report a map error

Description *

Clean sediment from curb and road.
Repair inlet protection as needed.

Priority

Unspecified

Placement

Unspecified

References (2)

Add references

Photos (2)

IMG_5431
May 28, 2024 10:17 AM

image000000
May 30, 2024 12:49 PM

Attachments

Phase 2: Pilot Development (2026–2027)

Focus Areas

- Prototype digital twins
- Digital delivery pilots

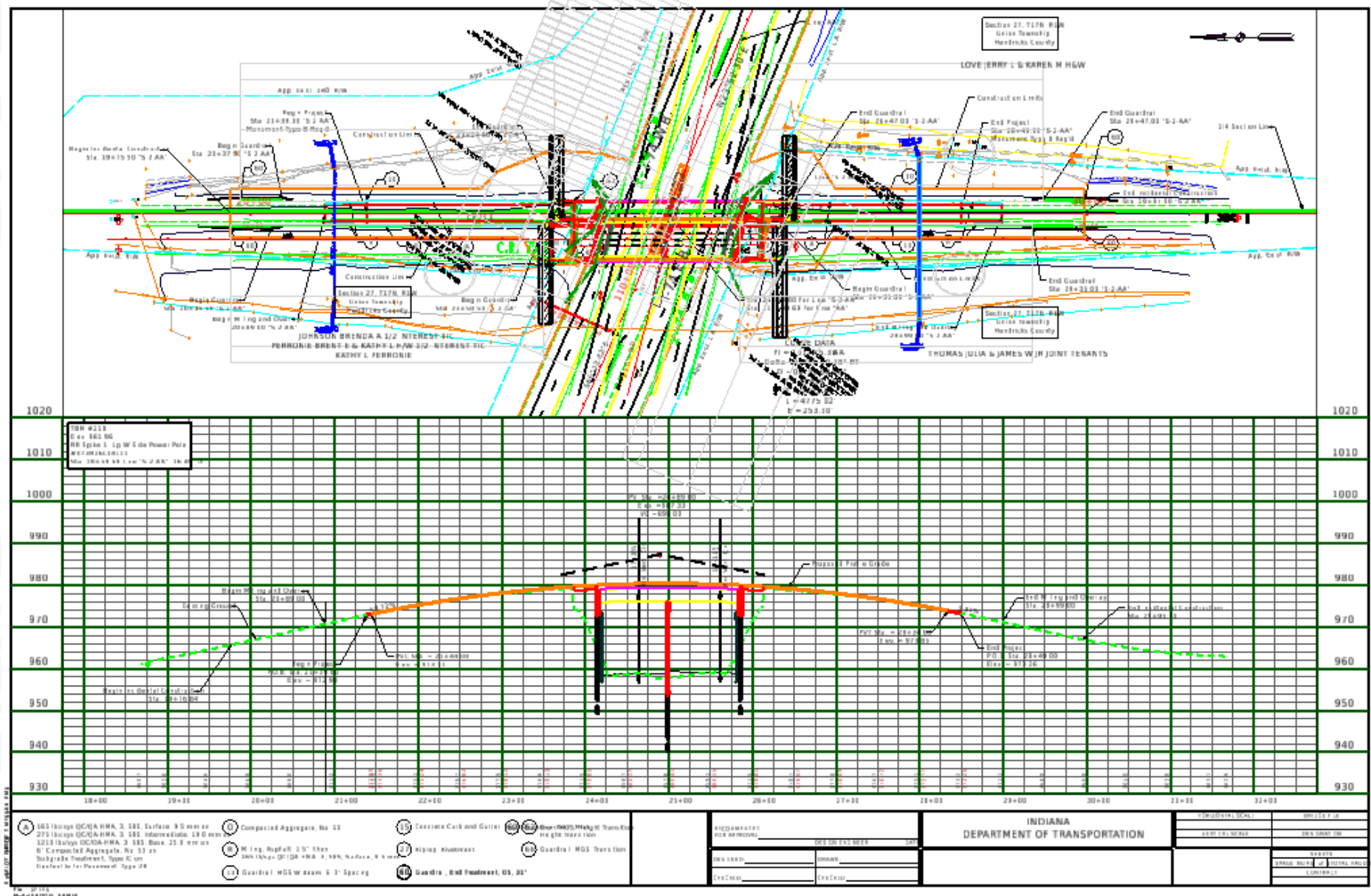
Key Activities

- Select 2–3 asset types for the pilot
- Develop metadata and attribute sets
- Test CAD-to-GIS workflows
- Launch pilot projects in selected districts

SR 32 PDB Pilot Demonstration



6/29/2026



Phase 3: Evaluation & Scaling (2028–2029)

Focus Areas

- Feedback integration
- Tool and process refinement

Key Activities

- Evaluate pilot outcomes
- Refine modeling standards and data exchange formats
- Expand pilots to additional regions and asset types
- Begin training programs for field and design staff

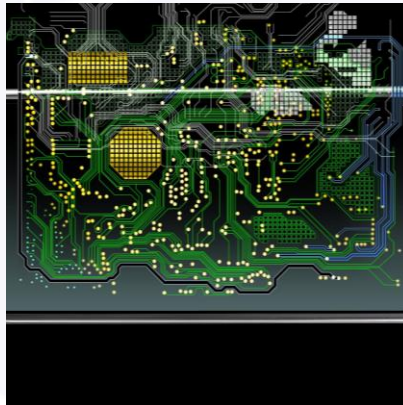
Digital Construction and As-Builts



Digital Construction Implementation



Inspection and Quality Control

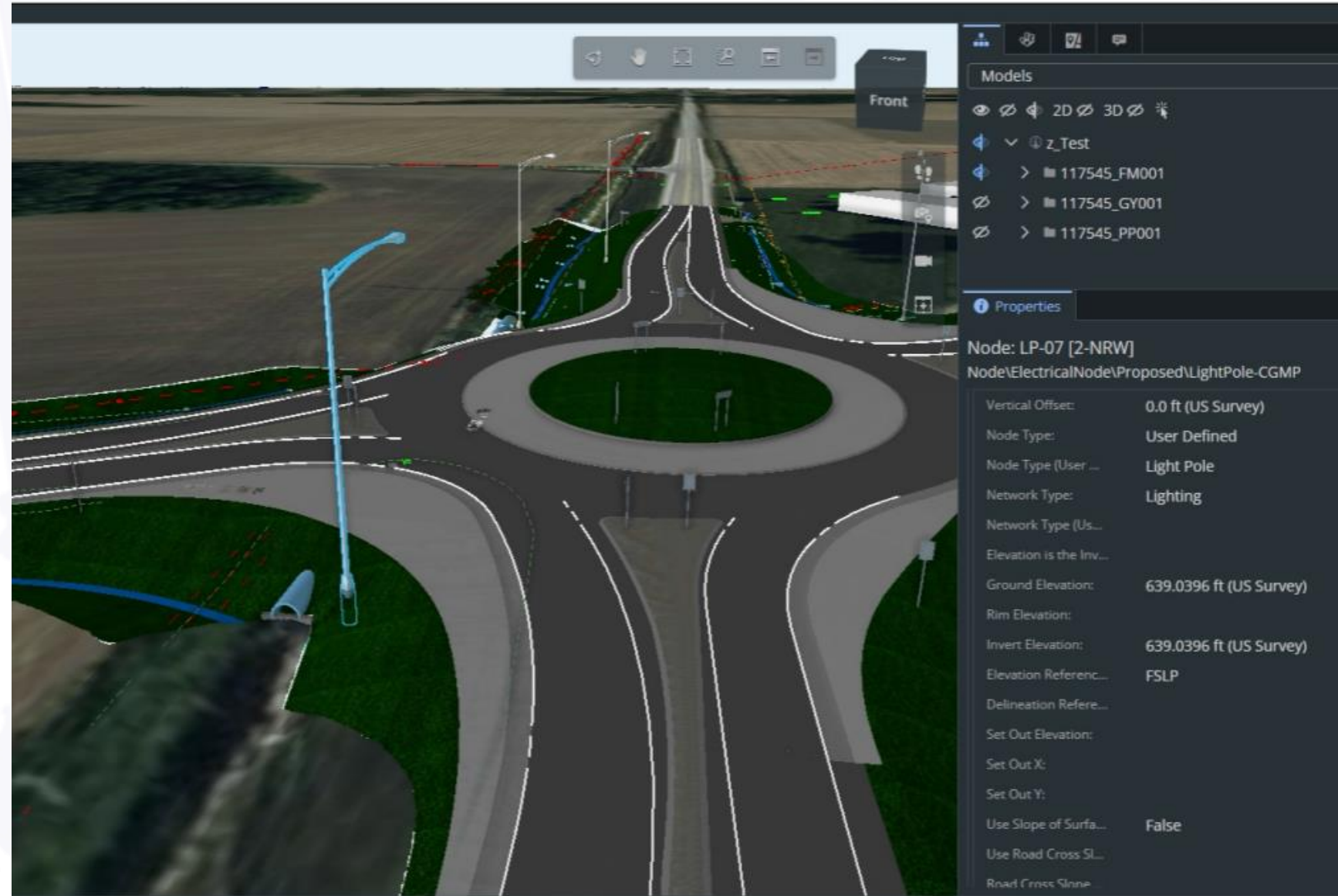


Integration with Asset Management

Digital Twin Environment

Scalable
Implementation
Strategies

Data Lifecycle
Management



Phase 4: Statewide Rollout (2030–2032)

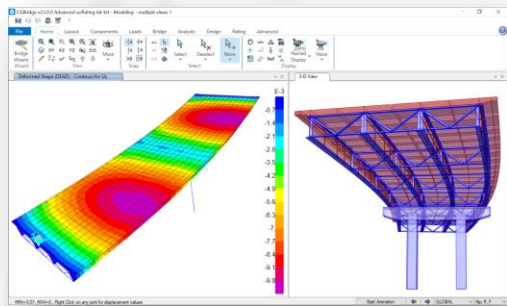
Focus Areas

- Full lifecycle integration
- Workforce transformation

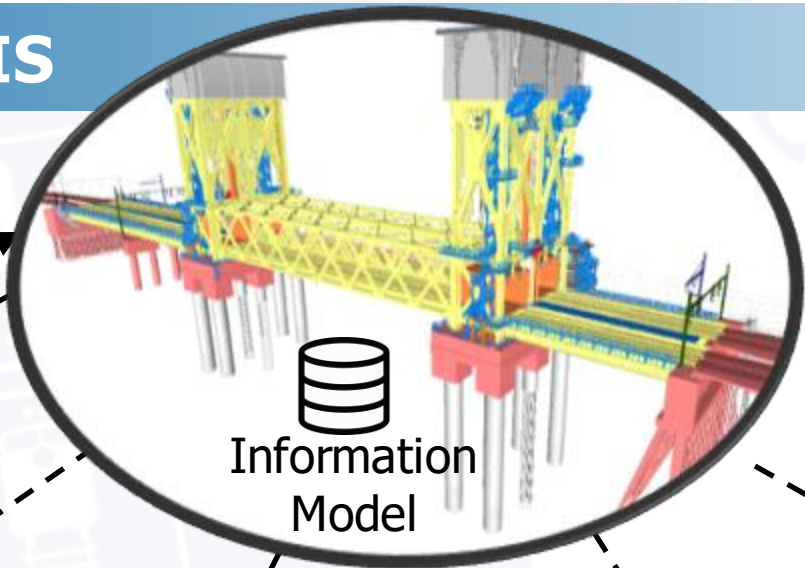
Key Activities

- Implement digital delivery across all new projects
- Integrate digital as-builts into asset management systems
- Replace legacy systems

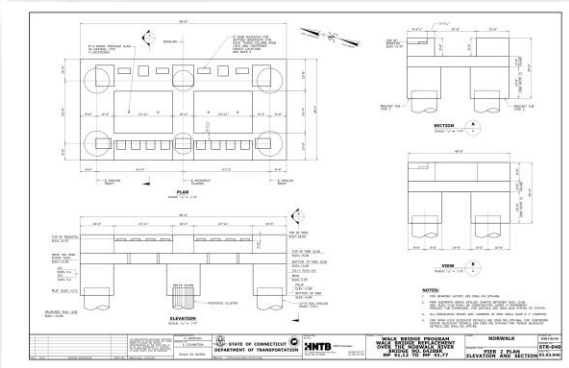
WHAT DIGITAL DELIVERY IS



Analysis



Visualization



Traditional 2D Plans

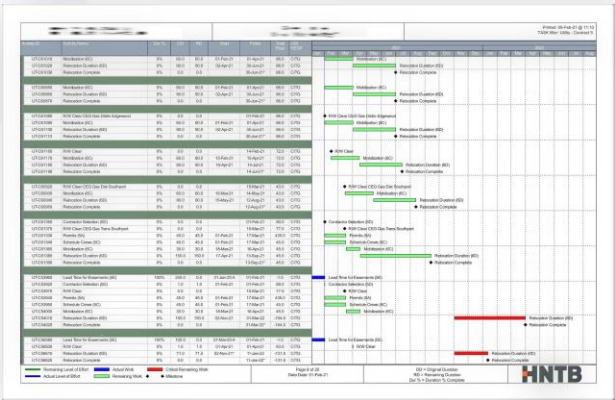
PRISM #: 10-1595 PROJECT NAME: The Yakima River Project

This template is meant only as a guide to assist users in developing budgets for the evaluation process. The owner will be responsible for entering final budget in PRISM.

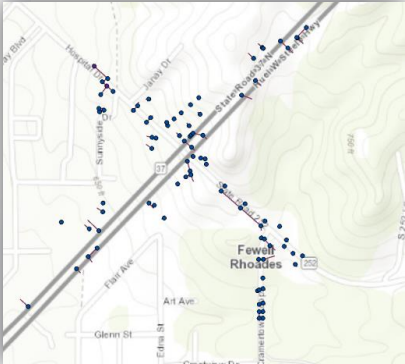
Review projected costs under each of the following categories:

	A	B	C	D	E	F	G	H
	Unit	Unit	In-Kind	Cash Match	Match Source	SRF R	Funds	Total Costs
	Number	Cost	Match	Funds				(G, D, G)
		(e.g., \$/hr)	(e.g., \$/hr)					
CONSTRUCTION COSTS: specific costs directly related to the execution and construction/implementation of the project, including permits (detailed description on back)								
Heavy Building Facility(3 years work/5000sqm)	1.00	\$6,000.00	\$15,000	\$0	Private Station	\$1,500	\$1,500	\$18,000
Purchase of signs	4.00	\$375.00	\$0	\$0	SRF R	\$0	\$0	\$1,500
GR Services	1.00	\$3,000.00	\$3,000	\$0	SRF R	\$0	\$0	\$3,000
Crack	1.00	\$3,000.00	\$3,000	\$0	SRF R	\$0	\$0	\$3,000
Paint Clear (thru, gloves, ringon etc)	3.00	\$150.00	\$0	\$0	SRF R	\$0	\$0	\$450
Paintwork	2.00	\$337.50	\$0	\$0	SRF R	\$0	\$0	\$675
GR Signs	100.00	\$2.50	\$0	\$0	SRF R	\$0	\$0	\$250
Transport costs	4.00	\$75.00	\$0	\$0	SRF R	\$0	\$0	\$300
GR Signs	2.00	\$350.00	\$0	\$0	SRF R	\$0	\$0	\$700
Permitting/Environmental Review	1.00	\$0.00	\$3,000	\$0	SRF R	\$0	\$0	\$3,000
Biological Techniques (for 3 years)	3.00	\$20,000.00	\$0	\$0	SRF R	\$0	\$0	\$18,000
SUBTOTAL								\$18,000
LAB AND ADMINISTRATIVE COSTS: direct costs (including staff time, but support construction/implementation of the project) (detailed description on back)								
Supervision	1.00	\$0.00	\$0.00	\$0	SRF R	\$0	\$0	\$0.00
	0.00	\$0.00	\$0	\$0	SRF R	\$0	\$0	\$0
	0.00	\$0.00	\$0	\$0	SRF R	\$0	\$0	\$0
	0.00	\$0.00	\$0	\$0	SRF R	\$0	\$0	\$0
	0.00	\$0.00	\$0	\$0	SRF R	\$0	\$0	\$0
SUBTOTAL								\$0.00
STATE & LOCAL SALES TAX								\$0.00
PRISM BUDGET TOTAL								\$18,000
MATCH NOT INCLUDED IN PRISM BUDGET: Any match over 15% not included in the PRISM budget for master bookkeeping and reimbursement								
	0.00	\$0.00	\$0	\$0	SRF R	\$0	\$0	\$0
	0.00	\$0.00	\$0	\$0	SRF R	\$0	\$0	\$0
	0.00	\$0.00	\$0	\$0	SRF R	\$0	\$0	\$0
	0.00	\$0.00	\$0	\$0	SRF R	\$0	\$0	\$0
SUBTOTAL								\$0.00
TOTAL PROJECT BUDGET								\$18,000

Quantities / Cost Estimate



Construction Sequencing



GIS

Phase 5: Optimization & Sustainability (2033–2035)

Focus Areas

- Continuous improvement
- National alignment

Key Activities

- Align with national IFC standards
- Refresh hardware/software
- Institutionalize governance and training
- Monitor ROI and system performance

Alignment – Vision to Reality



DATA AND “THE MODEL”



SOFTWARE, HARDWARE, AND
DIGITAL INFRASTRUCTURE



ROLES AND RESPONSIBILITIES

True Digital Workflows



- End of Digital versions of paper processes
- Psychology of change
- Trust issues!



Stakeholder Impacts



Let's take this slow!

- Shocking the system is expensive!
- Every aspect of building, owning, operating and maintaining our transportation infrastructure will be touched

What's Next?



Siloed information



Cumbersome and antiquated workflows



Lack of Transparency

Coming Spring 2026



All Active Des numbers will have an Infrastructure Cloud Project created and connected to the INDOT data source, ie. ProjectWise Explorer



Updated Permissions structure will allow project participants greater access to folders and files throughout the project



No more siloed project data*



Stage Submittals will
transition from ERMS
to Infrastructure Cloud

Goodbye ERMS

Multiple File Upload Tool (MFUT)

Indiana Department of Transportation

Current User : JonathanPauuwe

Enter DES number: [Fill from SPMS](#)

Required Properties

DES Number :

Structure Number :

Current Status :

Document Type :

Road Bridge Indicator :

Designed By :

Contract Number :

Design Type :

District :

Managed By :

Optional Properties

Project Number :

Letting Date :

NBI Number :

Ending Reference Post :

Keywords :

Route Number :

Project Stage :

Stimulus Project Indicator :

Review Due Date :

Provision Type :

Location :

Primary DES Number :

Beginning Reference Post :

Comments :

Revision Date :

County :

Final Tracing Type :

Reviewer :

Review Completed Date :

Culvert Asset ID :

Next

Hello Infrastructure Cloud

ProjectWise

DES 1234567
Future Project Structure Testing

PROJECT

DES 1234567
Future Project Structure Testing
SR 70, 1.15 miles West of SR 66

SR 70, 1.15 miles West of SR 66, Friday Nov 14
Sunny 75°F
Wind: 11 mph, SSW
Humidity: 54%

SAT 75° 46"
SUN 57° 30"
MON 58° 43"
TUE 59° 53"

My recent activity

Design Issue #155-00002
BCM Test Issue
October 2, 2025
Viewed

Design Issue #155-00001
Design Issue test
October 2, 2025
Viewed

More Submittal Testing #SUB-00005
Contracts Detail
October 2, 2025
Viewed

More Submittal Testing #TRA-00004
Management
October 2, 2025
Viewed

More Submittal Testing #TRA-00005
Specification Ambiguity
October 2, 2025
Viewed

My work

Pay Item
ID: SUB-00008
Assigned to: Engineer
Status: Unresolved - draft

test
ID: TRA-00002
Assigned to: Jonathan Pauuwe
Status: Unresolved

Fix date, not current
ID: TRA-00001
Assigned to: Jonathan Pauuwe
Due: Jul 16, 2024 - 486 days Over - Status: Issue rejected - ...

Utility Coordination
ID: T45-00009
Assigned to: Jonathan Pauuwe
Due: Mar 28, 2025 - 231 days Overdue - Status: Draft

Create

Bridge Replacement Stage 2 Checklist

Design Document Review

Design Issue

Design Task

Development Milestone

Level 1 Checklist

iModels

I-69

No content

Summary

My work

Project

17
All open items
New: 0
Overdue: 14
Close deadline: 0
Upcoming: 1

0
Open Clash

3
Open Submittals

0
Open Design Issue

13
Open Deliverable Issues

1
Open Design Task

0
Open Deliverable RFI

0
Open Reviews

Getting Ready for Infrastructure Cloud

Register with Bentley IMS to create a user account and ID

- Registration is free but required to access projects
- Instructions: [SYNCHRO Construction Solution - Using Bentley IMS to log into SYNCHRO Perform \(Web\) – Communities](#)
- Link: <https://ims.bentley.com/>
- Costs associated with access and usage of Infrastructures Cloud are included in INDOT's contract with Bentley and are not passed on to external users.

Training – In Development



LIVE WORKSHOPS WITH
REVIEWERS



RECORDED WEBINARS



PROCESS
DOCUMENTATION

Continuous Improvement and Commitment to Collaboration

Version 1.0

Feedback will be highly valuable

Website coming