e-Construction Innovation Matrix by State Departments of Transportation

NOTE: Information in this table was obtained from publicly available sources (e.g. internet search and presentations). Information was last updated 10/31/2022. Any corrections or updates may be sent to Kathryn. Weisner@dot.gov

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	Bid History Analysis  ASHTO BAMS/DSS  ASHTO BAMS/DSS	AASHTO Preconstruction	Bid Preparation and Analysis  AASHTO Expedite  AASHTO Bids		Construction Management System  Custom Program (1)			lining)	Electronic Bidding and Bid Bonds  Bid Express	e-Ticketing  Earthwave Technology FleetWatcher (3)	Lab Inventory and Materials Management System  Custom Program (1)		Partnering NPA	System	Project References (e.g. plans; standards; manuals)	Quantity Measurements (real- time verification)	Fleet Management	Queries and Reports	Virtual Meetings	Auto-Material Tracking (RFID/Bar- Coding)	Comments  (1) Construction Administration Management System (CAMMS) is a custom developed program that is replacing SiteManager.
Alabama AA	ASHTO BAMS/DSS	AASHTO  AASHTO  AASHTO  AASHTO  AASHTO	Analysis  AASHTO Expedite		Management System		Management System	lining)	Bid Bonds	e-Ticketing  Earthwave Technology	Management System	Inspection		System	manuals)	time verification)	Fleet Management	Queries and Reports	Virtual Meetings	Coding)	(1) Construction Administration Management System (CAMMS) is a custom developed program that is
		Preconstruction and Estimator  AASHTO		Investigating Solutions	Custom Program (1)	Paper-based Methods	Investigating Solutions for Construction (2)	ArcGIS Collector; Unmanned Aircraft Systems	Bid Express	Earthwave Technology FleetWatcher (3)	Custom Program (1)	iPads	NDA								(CAMMS) is a custom developed program that is
Alaska AA	ASHTO BAMS/DSS		AASHTO Bids	NPA									NPA	Oracle P6	Falcon DMS	Unmanned Aircraft Systems (4)	Equipment Watch	NPA	NPA	EPI	Exploring solutions. Falcon DMS is only used for design and archival system.     If the system of the system
					AASHTO CRLMS and SiteManager (1)	NPA	Custom EDMS (2)	NPA	Bid Express	NPA	NPA	Microsoff Surface Pro	ACM; CPP	NPA	NPA	NPA	NPA	NPA	NPA	EPI (3)	(1) Alaska is in the process of implementing AASHTOWare Project Suite as follows: Phase 1: Preconstruction: CRLMS; Bids and Bid Express by July 2018: 1: Preconstruction: CRLMS; Bids and Bid Express by July 2018-July 2018. Phase 2: Const. & Materials by July 2019-July 2020. Phase 4: Estimation by July 2019-July 2020. Phase 4: EstMS/JOSS by July 2020-January 2021. (2) Custom EDMS for storm water documents and permits. (3) Evaluating RFID/bar code technology to track materials.
Arizona NP.	РА	NPA	AASHTO Expedite	Custom Program (1): eBuilder (2)	Custom Program (1): eBuilder (2)	NPA	Custom Program (1)	NPA	Bid Express; SurePath	NPA	Custom Program (1)	Citric: Windows Tablets	ACM; CPP	NPA	NPA	NPA	NPA	NPA	NPA	EPI	[1] Custom CMS with multiple modules called FAST used for electronic contracting management; partnering evaluation; estimated engineering construction costs; project fracking; repository for archived documents; system to track compliance for DBE certification and poyroll reporting; etc. Lastly; the PEM module is used for entering daily diaries.  (2) eBuilder and a custom program called ELVIS (short for Engineering and Laboratory Vital Information System) on atternative delivery projects as a project colaboration portal and construction management system. Evaluating RFID/bar code technology to track materials.  (3) SurePath is used to verify bid bonds.
Arkansas AA:	ashto bams/dss	AASHTOWare Project Estimation, Preconstruction, and Bids	AASHTOWare Project Bids, Preconstruction	eBuilder	AASHTO SiteManager [1] ; eBuilder (2)	Doc Express	Doc Express; eBuilder (2)	NPA	Bid Express; SurePath (3)	EPI (6)	Custom Program	Windows Tablets and Laptops	NPA	P6. SmartPM	eBuilder	NPA	NPA	Custom Program (4)	Cisco Webex, MS Teams	EPI (5)	(1) ABOOT plans to implement the AASHTOWare Project CRIS, but have not done so yet.  [2) eBuilder is being used for the alternative delivery projects; but ABOOT uses Doc Express as the official filing cabinet for design-bid-build construction projects.  [3] SurePath to verify electronic bid bonds.  [4] State also has two custom applications; one is called SARS to run queries and reports directly from SileManager; and the second one is called COGS to manage change order documentation and approvals. Their SileManager program is heavily customized to accommodate reporting needs.
California AA	ASHTO BAMS/DSS	Evaluating Products (1)	AASHTO Expedite	NPA.	Evaluating Products (1)	NPA.	Falcon DMS (2)	NPA	Bid Express; SurePath (3): Surety 2000 (3)	NPA	NPA	Headlight (4); PlanGrid (4) and iPads	ACM; CPP	NPA	NPA.	NPA.	NPA	NPA	NPA.	NPA.	(I) Evaluating AASHTOWere Project Pre-Construction, Construction & Materials, and Civil Rights and Labor. [2] Facion DNS is used for managing active structures documents: specifically engineering drowings: emails. Microsoft Officer: craster images and other types of documents. State also uses if for document relieved system (e.g. roadwary as-built plans; right-of-way; survey field notes; as-built structure plans; accident incident reports; etc.).  [3] SurePath and Surety 2000 for verifying electronic bid bonds. [4] State is also piloting Headlight and PlanGrid on some alternative delivery projects.
Colorado AA:	ASHTO BAMS/DSS	AASHTO Preconstruction(1)	AASHTO Bids	ProjectWise; SharePoint	AASHTO SiteManager (2)	Adobe Digital Signatures	ProjectWise; OnBase	Bluebeam Revu (3)	Bid Express; SurePath	NPA	AASHTO SiteManager (2)	ESRI Survey 123 (4)	ACM; CPP	PMWeb	NPA	NPA	NPA	Power BI	Google	NPA	(1) AASHTOWare Estimation has been released to production - August 2022 (2) SiteManager is in the process of being replaced. (3) Bluebeam is being used for PDF red-fining and collaboration. (4) Survey 123 for Construction inspection is being replaced.
Connecticut AA	ASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Expedite	Bluebeam Revu	AASHTO SiteManager	DocuSign (change orders) and GlobalSign (internal documents)	ProjectWise	Bluebeam Revu	Bid Express	NPA	NPA	Mobile Inspector andDell Tablets	NPA	NPA	NPA	GPS Rovers with Trimble Business Cente	NPA	NPA	NPA	NPA	None
Delaware AA	ASHTO BAMS/DSS	AASHTO Cost Estimation and PES/LAS	AASHTO Expedite	SharePoint	Primavera Unifier	M-1-0-0	Unifier (Construction documentation) and ProjectWise (mainly for design files)		Bid Express	Haulhub		iPads, Dell 2 in 1, Laptop	ACM; CPP	Oracle P6, but migrating to Unifier in May/June 2022	Paper-based Methods	Paper-based Methods	Paper-based Methods	Oracle BI Publisher, COGNOS, MS Power BI	MS Teams, Zoom, Webex	Paper-based Methods	Is None
Florida AA	ashto Bams/dss	ANSUFO	AASHTO Bids	ProjectSolve; Bluebeam Revu	AASUTO Sibalagnagor		design files) Hummingbird (2); ProjectSolve (3)	NPA		Earthwave Technology ReefWatcher (5)	NPA	Autodesk BIM 360 Field; Clinix; iPads	ACM; CPP	NPA	Hummingbird: Projectioive (2)	NPA	NPA	NPA	NPA	EPI (6)	(1) FDOT is planning to migrate to AASHTOWare Project Construction and Materials in July 2019. (2) Hummingbird is used for document storage inside of the firewall. (3) Use ProjectSolve as their collaboration platform outside the firewall; but have an electronic document management system for final archival of project files for record retention purposes. (4) SurePath is used for verification of electronic bid bonds. (5) Plioting RIDD/par code technology to automatically track materials.
Georgia AA	ASHTO BAMS/DSS	Cost Estimation	AASHTO Bids	ProjectWise; e-Builder (1), and Custom Program (2)	AASHTOWare Project (June 2022)	DocuSign (3)	ProjectWise: e-Builder (1), and Custom Program (2)	Bluebeam Revu		elicketing for Asphalt on all projects initiated April 2021	NPA	pilones	ACM, CPP (5)		ProjectWise (7); e-Builder (7); Web (7)	SiteManger/ AWP	NPA	Custom Program (6)	Video Conferencing: Microsoft Teams	Paper-based Methods	(1) e-Builder is used for design-build and P3 projects only. (2) Contract Administration tracking System (CATS) is used to manage contract documents signed electronically. (3) DocuSign is used to execute contracts and change orders. The Software is integrated with a custom financial application. (4) SurePath is used for verification of electronic bid stomatics of the state of the state of P3 projects and large design-build. Currently developing a parthering program for design-bid-build. (6) GDO/11 and Geerl. (7) ProjectWise is used for storing plan sets for design-build and P3 projects; and all manuals and specifications are stored online.  None

State or U.S. Territory	Bid History Analysis	Bid Letting Management and Estimates	Bid Preparation an	Collaboration Porta	Construction  Management System	Digital Signatures	Document Management System	Electronic As-Builts (GPS/GIS/PDF red- lining)	Electronic Bidding and	e-Ticketing	Lab Inventory and Materials Management System	Mobile Devices for Inspection	Partnering	Project Management System	Project References (e.g. plans; standards manuals)	Quantity ; Measurements (real- time verification)	Fleet Management	Queries and Reports	Virtual Meetings	Auto-Material Tracking (RFID/Bar- Coding)	Comments
Hawaii	Paper-based Methods	HANDS (1)	Paper-based Methods	Paper-based Methods	Investigating Solutions	Adobe Sign for Bid Documents	Paper-based Methods	Paper-based Method	is Paper-based Methods	Paper-based Methods	Paper-based Method:	Some tablets being used by consultants	NPA	Facsware for Project Management and Microsoft Project for Scheduling	Paper-based Method:	s Paper-based Method:	Paper-based Methods	Paper-based Method	is In-person meetings	Paper-based Method	s (1) Hawaii Awards and Notices Data System (HANDS)
Idaho	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO	Bluebeam Revu (1)	AASHTOWare	NPA	ProjectWise (2)	NPA	Bid Express; SurePath (3)	NPA	NPA	AASHTO Mobile Inspector	ACM; CPP	NPA	ProjectWise	NPA	NPA	NPA	NPA	NPA	(1) Bluebeam Revu is used for preconstruction digital review of plans. (2) ProjectWise is used for all project related documentation. (3) SurePath is used for verification of electronic bid bonds.
Ilinois	NPA	ExeVision	NPA	NPA	Exevision IPB Web	DocuSign	Exevision IPB Web	NPA	Exevision and SurePath (1)	EPI	Exevision	iPads	NPA	NPA	Website	EPI	NPA	Exevision, Power PI	WebEx, MS Teams	QR codes (2)	(1) Exevision is used for electronic submittal of bids and SurePath is used for verifying electronic bid bonds. (2) Will begin using QR codes in summer 2022. (3) Exevision is used for electronic bidding - electronic bidding is encouraged; but not mandatory. (4) SurePath is used for verifying electronic bid bonds. (5) Headlight is being used by consultans providing construction services
Indiana	Tableau, Bid Tabs	AASHTO, Bid Express	AASHTO, Bid Express	s Microsoft Teams	SiteManager current, AASHTOware 2023	DocuSign & Adobe	Bentley Projectwise	PDF red-lining	Bid Express, Surety Wave, Surety2000	Haul Hub DOTportal, DOTslip	Lab Inventory and Materials Management System	Smartphones partial use, more full use future	no software use specified	SPMS	Adobe PDF	none in use	contractor's choice	Thoughtspot, Tableau	Microsoft Teams	not in use	None
lowa	AASHTO BAMS/DSS	AASHTO PES/LAS	AASHTO Expedite	NPA	AASHTO FieldManager, AASHTO SiteXchange (1)	Doc Express	Doc Express (2); ProjectWise	Collector for ArcGIS, Survey 123, GPS Outline (3); PDF Expert (4)	Bid Express; SurePath	Earthwave TechnologyFleetwatcher: Strada (é)		iPads	СРР	NPA	Custom Program (7)	NPA	NPA	NPA	Adobe Connect (8)	EPI	[1] Module that allows contractors to add subcontractor information post-award. [2] Doc Express is used for post-letting document management and digital signatures during the construction administration of a project, while ProjectWise is used for document management of engineering drawings during Preconstruction. [3] implemented ArcGIS collector, Survey 123 and GPS Outline to document as-built location and conditions for culverts and a few other as-built features. [4] PDF expert for plan reading/markup and filiable forms on the iPads. [5] SurePath is used to verify electronic bid bonds. [6] Ploining e-ficketing for HMA and Concrete. [7] PER system is an onnier orom for specifications; manuals; road standards; materials; inventory materials; bridge standards; etc. [8] Adobe Connect is used for virtual meetings. [9] Bar codes are used to track certain field material samples (i.e. hot asphalt boxes).
Kansas	AASHTOWare Project Data Analytics & BAMS/DSS	AASHTOWare Project Preconstruction	AASHTOWare Project Bids & Preconstruction		AASHTOWare Project Construction and Materials	NPA	OnBase	Bluebeam Revu	AASHTOWare Project Bids & BidX	HaulHub Portal DOTslip	Construction and Materials	Mobile Inspector; Field Interviewer; Mobile Tester	NPA	winCPMS & AASHTOWare Project	NPA	NPA	NPA	Crystal Reports, Webi, BI, SQL, Direct Query	Microsoft TEAMS	NPA	None
Kentucky	AASHTO BAMS/DSS	AASHTO Preconstruction; Estimator	AASHTO Bids	ProjectWise	AASHTO CRLMS; AASHTO SIBManager (1): AASHTO SIBEXchange (2)	Paper-based Method	ProjectWise (3); AgilePoint (3)	Varies (4)	Bid Express; SurePath (5)	Earthwaves Fleetwatcher (6)	<sup>*</sup> NPA	Dell Tablets with Citric; iPad wit Mobile Inspector	NPA	NPA	NPA	GPS Rovers and Robotic Total Stations	NPA	NPA	NPA	NPA	(1) In the process of upgrading SteManger to Construction & Naterials.  (2) Module that allows contractors to enter subcontractor information post-award.  (3) Project/Mise is used for document management; but AgilePoint, a Platform as a Service (Pacs), is used to automate the routing and approval process for change orders.  (4) As-built records are documented using a variety of methods; realined PDFs or CAD drawings, or realined on paper. Buebearn is available to seat project office.  Ass. piloting Collector for ArcCisi for ADA asset inventory (5) SurePath is used to verify electronic bid bonds. (5) Equipment is available for construction surveys.  (6) Conducting pilot projects
Lousiana	AASHTO BAMS/DSS	AASHTO Preconstruction: Estimation	AASHTO Bids	Bluebeam Revu; Sharepoint	Daily work reports are entered into Headligh and sync to Silethwanager Headligh in Silethwanager Headligh it is developing. Construction Administration module to replace remaining portions of Silethwanager - Construction Module, Headlight will become datum of record is successful. As	ldenīrust; ePersona, DocuSign	ProjectWise, SharePoint, Falcon DMS (1), FileNet	NPA	Bid Express; SurePath (2)	Piloting several vendors Q4 2022. Looking for POST API portal such that various vendors can submit through one, may be internally developed, ma be vendor such as Haul Hub or Headlight	SiteManager - LIMS is current for sample management and AML. LaPave Online is used for mix design submittable. Working with yell-balling with the control of	Fieldbook is statewide now	NPA	Custom Program (4)	through web paths or	Headlight has a developed a material audit dashboard to give teal time project quantities and sampling requirements	NPA	Custom Program (4)	Zoom, MS Teams, Skype	QR Codes for sample generated through Headlight of DOTD hosted web link. Scanners setup at drop-off points using internally developed application for custody exchange	(1) Falcon DMS is used for accessing legacy documents with some level of integration. It is used to allow contractors to access released project bid-sets through the web. The system is integrated with other enterprise systems, and has been customized to allow interactive communication between project managers and contractors regarding bid set to interface with Size Manager. (2) SurePath is used to verify electronic bid bonds. (3) Headlight is being pilated to interface with Site Manager. (4) State has a custom program and project management system that tracks project time and cost, and produces reports.
Maine	AASHTO BAMS/DSS	AASHTO Estimator	AASHTO Expedite	Bluebeam Revu	AASHTO FieldManager	Doc Express	Custom Program (1); Doc Express	NPA	Bid Express; SurePath (2)	NPA	NPA	Mobile Inspector, iPads and Windows- based tablets	ACM	NPA	NPA	NPA	NPA	NPA	NPA	NPA	(1) Use a custom electronic document organization control system called TEDOCS as their electronic filing system.     (2) SurePath is used to verify electronic bid bonds.
Maryland	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Bids	Custom Program (1)	AASHTO CAS	NPA	ProjectWise	NPA	Bid Express; SurePath (2)	NPA	Custom Program (3)	NPA	ACM	NPA	Custom Program (1)	NPA	NPA	NPA	NPA	EPI (4)	Project websites for sharing information.     SurePath is used to verify electronic bid bonds.     Materials Management System.     SurePath is Williams (A) Evaluating RFID/bar code technology for automatically tracking materials.
Massachusets	NPA	NPA	AASHTO Expedite	NPA	Custom Program (1)	NPA	Custom Program; ProjectWise	NPA	Bid Express; SurePath (2)	NPA	NPA	NPA	СРР	Oracle P6	NPA	NPA	NPA	NPA	NPA	NPA	Mossachusetts uses a custom construction management system that integrates with other existing systems. The state has an environmental management system (EMS).  (2) SurePath is used to verify electronic bid bonds.
Michigan	AASHTO BAMS/DSS	AASHTO Preconstruction	AASHTO Bids	Bluebeam Revu	FieldManager and FieldNet	DocuSign	ProjectWise	NPA	Bid Express	NPA	NPA	iPads, Windows-based tablets, iPhones, and laptops: ProjectWise Edge (1): Mobile Inspector (2): PDF Expert, Bluebeam Vu (3)	ACM	NPA	ProjectWise	GPS Rovers	NPA	NPA	FaceTime	EPI (4)	(1) ProjectWise Edge is a modern interface used to access ProjectWise content for desktop and mobile devices. It allows users to download files before going to the field to work offline until they upload the files back to ProjectWise.  (2) Mobile inspector currently being used and may replace the FieldBook module of the FieldManager CMS.  (3) Bluebeam Vu is the free version of PDF views for ProjectWise.  (4) Using some RFID/bar code technology for automatically tracking materials.

State or U.S. Territory	Bid History Analysis	Bid Letting Management and Estimates	Bid Preparation and	i Collaboration Portal	Construction Management System	Digital Signatures	Document Management System	Electronic As-Builts (GPS/GIS/PDF red-	Electronic Bidding and	d e-Tickeling	Lab Inventory and Materials Management System	Mobile Devices for	Partnerina	Project Management System	Project References (e.g. plans; standards manuals)		Fleet Management	Queries and Reports	Virtual Meetings	Auto-Material Tracking (RFID/Bar-	Comments
Minnesota	AASHTOWare BAMS/DSS	AASHTO Ware Preconstruction, Cost			AASHTOWare	Adobre Pro Digital Signatures	ProjectWise and SharePaint	lining)  Collector for ArcGiS		Started piloting lechnology in 2018 on pilot on appholi and have used on approximately 5 processor of the control of the contr	e 5 5 AASHTOWare Project Construction and Materials (1)	Rovers, Smart Pads, Laptops	Vendors, Material Supplers, Contractors Associations (MAPA, CPA, AGC, ARM), other states via pooled funds	Oracle P6	Custom Program	GPS Rovers (5); Unmanned Aircraft Systems (6)	Included in the MDNS specification. Data to be used by Contractors to assist with production rates, and as upper increased asphall mat temperature/material uniformit as measured using the paver mounted thermal profile method. Data to be used by MnDO1 to assist with estimated limes of arrival of materials, review of designated houl routes, dump locations for correlation with remove and replace limits and connection tother intelligent construction of technology (ICT), additional documentation of delivered loads, review of labor compliance items during project closeouts (e.g., prevailing wage, DOI numbers driver names, civil rights items, etc.).	d y y NPA	Microsoft Teams	No. the RFID code in AASHTOWare Project in for a functional component in the system that has been the system that has been the system that has been thure after further enhancements. Currently tracking samples in AWP using sample numbers.	(1) In the process of upgrading to Construction &
Mississippi	AASHTO BAMS/DSS	AASHTO Preconstruction and	AASHTO Bids	Microsoft Teams	AASHTO CRLMS and SiteManager	NPA	ProjectWise	NPA	Bid Express	NPA	NPA	NPA	ACM	NPA	Agency Website	NPA	NPA	NPA	MS Teams and Zoom	NPA	None
Missouri	AASHTOWare Data Analytics	AASHTO Preconstruction and Estimator	AASHTO Bids	SharePoint	AASHTOWare Construction & Materials	Adobe Digital Signature, DocuSign	ProjectWise and SharePaint	Bluebeam Revu	Bid Express	Evaluating	NPA	Mobile Inspector, Smart Phones, Tablets and Laptops	ACM	ΝΡΑ	SharePoint	GPS Rovers with Topcon MAGNET Field	Evaluating	Cognos	Video Conferencing, Microsoft Teams	NPΑ	I) Using a custom macro enabled spreadsheet system called CRE20 to allow contractors to submit documentation that automatically since with AASHTOWare. Cognosis used to run customized reports from various AASHTOWare products.  (2) DocuSign is used for all contract execution and Adobe is used for any post-award signatures and approvals (e.g., change orders).  (3) SharePoint is the official document management system for documentation related to all construction projects from cradle to grave with the exception of engineering drawings, which are stored in ProjectWise. The e-Project site hosts all internal documents while are extend site was created to allow contractors to submit documentation. Also, MoDOI uses a third partly application called Harmonie I that allows integration between Outlook email client and the e-Project sites. Users can directly save attachments from email to eProject site or open documents directly without ever leaving Outlook.
Montana	AASHTOWare Data Analytics	AASHTOWare Preconstruction, Project Estimation	AASHTOWare Bids	BIM360 (Piloting)	AASHTOWare Civil Rights & Labor , Construction & Materials	Docusign	Doc Express (Piloting) BIM360 (Pilot), PCMS (In-House)	As-Built System (In- House)	Bid Express	NPA	AASHTOWare Construction & Materials	Cellular Enabled HandHelds	ACM / CCP	PPMS (In-House)	plans; standards; manuals	Mobile Inspector / Trimble Access (Piloting)	EVMMS (Agile Assets)	PLSQL, Jasper, End User Designer	Teams, Zoom	NPA	None
Nebraska	AASHTO BAMS/DSS	AASHTO Preconstruction	AASHTO Bids	NPA	AASHTO SiteManager; AASHTO SiteXchange (1)	DocuSign	OnBase; ProjectWise	NPA	Bid Express	NPA	NPA	Windows-based tablets	NPA	NPA	NPA	NPA	Equipment Watch	NPA	NPA	NPA	documentation that automatically syncs with
Nevada	NPA	NPA	NPA	NPA	AASHTO FieldManager	NPA	ProjectWise	NPA	NPA	NPA	NPA	Mobile Inspector	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	AASHTOWare. Cognos is used to run customized reports
New Hampshire	iPD Web	iPD Web	iCX Web	NPA	iPD Web	Bluebeam	implementing Sharepoint	GIS/PDF red-lining	iCX	Haul Hub, Libra, other	iPD Web	iPAD	NPA	iPD Web	Bluebeam, internet with mobile devices	GNSS rovers	NPA	iPD Web	Teams/Zoom	NPA	None
New Jersey	AASHTO BAMS/DSS	AASHTO Preconstruction and Project Estimation	AASHTO Bids	e-Builder	AASHTO CRLMS and SiteManager (1)	Paper-based Methods	Falcon DMS (2); s ProjectWise (3); e- Builder	Paper-based Method:	s Bid Express	Paper-based Methods	AASHTO SiteManager	Dell Tablets (4)	ACM	Custom Program (5)	e-Builder (6)	Paper-based Methods	Paper-based Methods	Custom Program (5)	NPA	Paper-based Methods	(2) DocuSign is used for all contract execution
New Mexico	AASHTO BAMS/DSS	AASHTO Estimator and PES/LAS	AASHTO Expedite	Autodesk BIM 360, FTP and MS Office	AASHTO SiteManager and AASHTOWare Project Construction	Adobe Digital Signature	Autodesk BIM 360 (Docs) (1)	PDFs and CAD Drawings	Bid Express	EPI-Earthwave Technologies Fleetwatcher and Conne Command Alkon (2)	Internal Network	iPads (EPI) and Laptops	The Associated Contractors of America	AASHTOWare Project, SiteManager and Autodesk Build (EPI)	PDFs and paper- based specifications	GPS Rovers with Trimble Business Cente	NPA	PDF	MS Teams and Zoom	NPA	(1) Autodesk BIM 340 modules used for engineering models and plan sheets.
New York	AASHTO BAMS/DSS	AASHTO Estimator and PES/LAS	AASHTO Bids	NPA	AASHTO SiteManager (1)	Paper-based Methods; User-based Authentication for Document Approval	ProjectWise (2); Doc Express (3)	Varies (4)	Bid Express	Paper-based Methods	NPA	HP Laptopos, Dell Tablets; iPhone with Mobile Inspector	ACM	NPA	NPA	GPS Rovers with Leica Geosystems Captivate	NPA	NPA	NPA	NPA	Approvals (e.g. change orders).
North Carolina	AASHTO BAMS/D\$\$	AASHTO Preconstruction	AASHTO Expedite	SharePoint	AASHTO CRLMS	NPA	SharePoint (1)	NPA	Bid Express	NPA	NPA	NPA	ACM	NPA	NPA	NPA	NPA	NPA	NPA	RFID for sample testing, material inspections, and other on-site data collection and tracking	(3) SharePoint is the official document management
North Dakota	Pacer	BidX	AASHTO Bids	NPA	Custom Program	DocuSign	FileNet	Paper-based method: transferred to PDF	Bid Express	EPI	NPA	iPads/iPhones	NPA	NPA	Trimble Business Center; UAS	EPI	EPI	Custom Program; Cognos	Microsoft Teams	NPA	None
Ohio	AASHTO BAMS/DSS	AASHTO Preconstruction, Cost Estimation and Estimator	AASHTO Bids	Bluebeam Revu; Sharepoint	AASHTO CRLMS; AASHTO SiteManager (1); AASHTO SiteXchange (2)	DocuSign	Falcon DMS (3); SharePoint (4)	ArcGIS Collector	Bid Express	NPA	NPA	Custom Program (5); HP 2 in 1 Elite laptops and iPhones	ACM; CPP	Oracle P6	NPA	NPA	Equipment Watch	NPA	NPA	NPA	
Oklahoma	AASHTOWare Project Data Analytics	AASHTOWare Project PreConstruction	AASHTOWare Project Bids	Microsoft TEAMS	AASHTOWare Project SiteManager	Adobe Sign	Document Vault	N/A at this time	Bid Express	Haul Hub	AASHTOWare Project SiteManager	N/A at this time	AASHTOWARE, Bentley	, Custom In-House solution	ProjectWise	N/A at this time	Agile Assets	PL/SQL Crystal, Active Reports, and BI	Microsoft TEAMS / Zoom	N/A at this time	We are in production with AASHTOWare PreConstruction and partially with AASHTOWare Civil Rights and Labor, Moving to AASHTOWare Construction and Materials
Oregon	AASHTO BAMS/DSS	AASHTO Estimator, TRACER and PES/LAS	AASHTO Bids	NPA	Planning implementation of new system (1)	Doc Express	Doc Express (2) and ProjectWise (3)	NPA	Bid Express	NPA	NPA	iPads, dynamic electronic forms, Adobe Acrobat DC	ACM	NPA	NPA	GPS Rovers; MicroSurvey Genius Field Software; Unmanned Aircraft Systems	NPA	NPA	NPA	EPI (4)	The e-Project site hosts all internal documents

		Bid Letting						Electronic As-Builts			Lab Inventory and				Project References	Quantity				Auto-Material	
State or U.S. Territory	Bid History Analysis	Management and Estimates	Bid Preparation and Analysis	d Collaboration Porta	Construction Management System	n Digital Signatures	Document Management System	(GPS/GIS/PDF red-	Electronic Bidding and Bid Bonds	e-Ticketing	Materials Management System	Mobile Devices for	Partnering	Project Managemen System	(e.g. plans; standard: manuals)	s; Measurements (real time verification)	- Fleet Management	Queries and Report	s Virtual Meetings	Tracking (RFID/Bar-	Comments
Pennsylvania	NPA	NPA	Custom Program (2)	Custom Program (1)	Custom Program (2)	DocuSign	Custom Program (1)	Collector for ArcGIS (	3) Custom Program (1)	Earthwave Technology Fleetwatcher; HaulHub; Zonar GPS System; Libra Systems; Custom Program (6)			ACM; CPP	NPA	Custom Program (1) (4)	Custom Program (6)	NPA	NPA	NPA	EPI (7)	(1) SharePoint based system called PennDOT Project Collaboration Center (PPCC) for active construction document management (setternal and internal access), and Engingeering Document Management System for document archive. (2) Engineering Construction Management System (2) Engineering Construction Documentation System version 3 (CDSV3). (3) ArcGIS being used to collect specific assets and update maintenance database. (4) Bectronic Construction and Materials Management System (ECAMMS). (5) Multiple Mobile Computing (MC) applications for iOS. (6) Mobile application for computing regular and irregular shape volumes. (7) Evaluating e-licketing technology and has implemented RRIDDarc acde technology to automatically track materials.
Puerto Rico	Custom Program	Custom Program, PM	IS Custom Program, PA	Sharepoint, PMIS (1)	Custom Program, Oracle Unifier PMIS (1)	Paper based method	ds Oracle UnifierPMIS (1)	Paper based method	ls Oracle Unifier (1)	Evaluating E-ticketing technology (2)	SpectraQEST	lpad's	Paper-based metho	ods Oracle Unifier (1)	Oracle Unifier (1)	Paper-based method	ds Paper-based methods	Custom Program, Oracle Unifier (1)	Teams, Webex, Zoor	m Paper-based method	(1) PRHTA currently piloting PMIS and Oracle Unifier for its Project delivery from planning to closing. (2) Evaluating E- ticketing technology
Rhode Island	NPA	NPA	NPA	NPA	NPA	NPA	Falcon DMS (1) and ProjectWise	NPA	NPA	NPA	NPA	PlanGrid (2)	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	Application called Harmon.ie that allows integration
South Carolina	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Bids	NPA	AASHTO Construction & N	Aat Ariidds am 4 Sijt SM pmager	Falcon DMS; ProjectWise; SharePoint; Bluebean	PDF revisions via Bluebeam/Adobe	Bid Express	Initial Spec in 2022, no specific software	AASHTOware Materio full implementation in 2024	Windows Tablets	ACM; CPP	NPA	NPA	GPS Rovers	NPA	NPA	Teams	NPA	None
South Dakota				SharePoint; Bluebean		Adobe Sign	Custom Program;	None	Custom Program;	Implemented	Custom Program	iPhones; iPads; Windows based	None	Primavera	Website	GPS Rovers; Trimble: EPI (OnStation.	Custom Program	Website	Teams; Zoom		None
SOUTH DOKOID	Custom Program	Custom Program	Custom Program	Revu	Cosioniniogiam	Adobe sign	FileDirector	none	SurePath; Surety 2000	Specification	Cusiom Program	Laptops Laptops	None	rimavera	websile	Procore)	Cusiom Program	websile	reams; zoom	None	NOTE
Tennessee	AASHTO BAMS/DSS	AASHTO Preconstruction	AASHTO Expedite	NPA	AASHTO CRLMS; AASHTO SiteManager, AASHTO SiteXchange (1)	, NPA	NPA	NPA	Bid Express	NPA	NPA	PlanGrid (2)	ACM	NPA	NPA	NPA	NPA	NPA	NPA	NPA	Leaving Outlook.
Texas	AASHTO BAMS/DSS	AASHTO Estimator	NPA	NPA	AASHTO SiteManager	DocuSign	ProjectWise	NPA	Bid Express	NPA	NPA	iPads; Headlight; Mobile Inspector: Citris	ACM; CPP	Oracle P6	NPA	NPA	Equipment Watch	NPA	NPA	NPA	(4) Evaluating Topcon MAGNET Site for office software.
U.S. Virgin Islands	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	(5) Cognos is used to run various reports from
Utah	NPA	NPA	NPA	Bentley OpenRoads Navigator;	Aurigo Masterworks	EPI	ProjectWise and Interchange	Unmanned Aircraft	Bid Express	Discussing technology (1)	NPA	iPads; Aurigo Masterworks Mobile	ACM	NPA	NPA	GPS Rovers; lidar; Unmanned Aircraft	NPA	NPA	NPA	NPA	AASHTOWare and any other ORACLE database system.
Vermont	None	AASHTO Estimator	AASHTO Expedite (1)	Interchange  Doc Express	AASHTO FieldManage and SiteManager (2)	Paper-based Method for Contract Execution; Doc Expres	ds Doc Express	Investigating Technology (3)	Bid Express	Paper-based Methods	AASHTO SiteManager (2)	Inspection App  Mobile Inspector (2)	ACM; CPP	NPA	NPA	Systems (2) NPA	NPA	NPA	NPA	NPA	(1) Transitioning to AASHTOWare Project Bids, but does not have bid analysis software. (2) Transitioning to a new construction management system: ExeVision. (3) Looking at Survey 123.
Virginia	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Expedite	Bluebeam Revu (1)	AASHTO CRLMS and SiteManager	IdenTrust (2), Bluebeam or Adobe Digital Signatures	Falcon DMS (3), CADAC (4); ProjectWise (5); SharePoint	NPA	Bid Express	NPA	NPA	Citrix, PlanGrid (6), Headlight (7), iPads	ACM; CPP	NPA.	NPA	NPA	NPA	NPA	NPA	NPA	(1) Bluebeam Revu and Studio software are used for Preconstruction collaboration, constructability reviews, and/or markup of as-built plans. (2) Stote Construction Engineer has authorized the use of identitus for contractors to sign documents electronically, but it is not used very often because the state does not pay for the icensing, internally, but it is not used very often because the state does not pay for the icensing, internally, and the agency uses Bluebeam or Adobe ID Signatures. (3) Virginia uses Folicon DMS for accessing active project documents, such as: CADD drawings; email: reports: spreadsheets; and rester images. The state is also using roticen DMS for storling and retrieving as-built projects. (4) Agency uses a program called CADAC (SharePoint-Dullar projects. Also, agency building a new document management system similar to ADAC. (b) that of a sophistication. (5) Design is currently upgrading to ProjectWise from Falcon DMS. ProjectWise will be used for document management of design/cad files. (6) Piloting Plancidid.
Washington	NPA	NPA	AASHTO Expedite	SharePoint and Unifie	er Unifier	Adobe Acrobat	Unifier and SharePoint	NPA	Bid Express	NPA	NPA	Unifier	ACM	Unifier	WSDOT Website	NPA	NPA	Cognos	Teams	NPA	Statewide implementation of Oracle's Unifier
Washington D.C.	Agency Contract & Procurement website	Estimator	AASHTO Expedite	Sharepoint	Sharepoint	PDF	Shared drive	NPA	Agency Contract & Procurement website	Yes	Paper-based Method	Phones, Ipad and Tablets iPhones; iPads;	NPA	NPA	Paper-based Method	ds Paper-based Method	ds DC Public Works Dept.	Paper-based Metho	ds Microsoft Teams	NPA	None
West Virginia	Custom Program	Bid Express	AASHTO AWP	none	none	DocuSign	ProjectWise	Bluebeam PDF red-lin	e Bid Express	Implementing e-ticketing. HaulHub portal	AWP	Windows based Laptops	none	AWP, Primavera	ProjectWise, website	Drone Use	ERP	AWP, website	Google Meet	none	None
Wisconsin	AASHTOWare Project BAMS/DSS and Data Analytics	AASHTOWare Project Preconstruction and Estimator		Autodesk BIM 360 (Glue and Docs); Bluebeam Revu; SharePoint	AASHTOWare Project Construction	DocuSign	OnBase and SharePoint	NPA	Bid Express	NPA	NPA	Autodesk BIM 360 Field; iPads; Mobile Inspector; Windows- based tablets (1)	ACM	Oracle P6	NPA	NPA	NPA	NPA	NPA	NPA	None
Wyoming	Oman Systems bid tabs	Exevision iPD	Exevision iPD and iC	X NPA	Exevision iPD and iCX	Adobe sign - in some instances	Falcon DMS (1); ProjectWise (2); Exevision (3)	Adobe pdf	Exevision iPD/iCX for bidding	EPI	NPA; Exevision iPD for materials testing	Laptop w/ Exevision E- fieldbook	- EPI	Primavera	QwestCDN; Falcon DMS;Google drive- manuals	GPS collection	Agile Assets Fleet managemen	nt NPA	Google meets and Zoom	NPA	(1) Uses Falcon DMS for accessing active project documents, such as: reports: spreadsheets; and raster images. The state is also using Falcon DMS for storing and retrieving as-built plans. The state uses this system in numerous departments. (2) Project/Wse is used for design CAD files. (3) Eversion is used for construction documentation.

Legend ACM NPA EPI CPP

Alternative Contracting Methods Information Not Publicly Available Innovation Being Evaluated, Piloted, or Implemented, but no product was specified in the literature. Construction Partnering Program