## Response to Request for Information (RFI):

## CRFI SEC260000001 – One-Stop-Shop Permitting Program

Vendor Name: West Virginia University Institute for Sustainability and Energy Research (WISER) | WV GIS Technical Center (WVGISTC) | WVU Natural Resource Analysis Center (NRAC) | WV Geological & Economic Survey (WVGES)

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Date: August 29, 2025

FEIN: 55-0665758 (West Virginia University Research Corporation)

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## Executive Summary

West Virginia University, through a strategic collaboration between the Institute for Sustainability & Energy Research (WISER), the WV GIS Technical Center (WVGISTC), the Natural Resource Analysis Center (NRAC), and the WV Geological & Economic Survey (WVGES), is uniquely positioned to lead the development and implementation of the "One-Stop-Shop Permitting Program" for the State of West Virginia. This multidisciplinary team brings together decades of experience in geospatial infrastructure, data systems integration, environmental analysis, energy policy, decision science, and stakeholder engagement, all of which are essential to realizing a unified, scalable, and user-friendly permitting solution.

In alignment with *WV Code §5A-13-1* and *legislative rule 148CSR25*, the proposed platform will modernize how permits are applied for, reviewed, approved, and tracked across state agencies. It will consolidate existing permitting systems into a centralized digital portal that supports secure application submission, real-time status tracking, interagency workflow automation, and actionable analytics for policymakers. The system will be designed with a modular architecture, enabling the seamless addition of new permit types, agencies, and regulatory updates as the platform and data evolves.

Our team's approach is grounded in agile, milestone-driven development, stakeholder co-design, and long-term operational sustainability. We propose a two-phase delivery strategy:

> Phase 1 (Oct 2025 – Dec 2026): Focused on delivering a functional MVP with core workflows and integration for high-priority agencies. Explicitly prioritize Commerce, DEP, and DOT as first-phase agencies per Addendum Q6/Q18-Q28, noting their high permit volumes.
>
> Phase 2 (Jan 2027 - Forward): Expansion to additional agencies and permits, along with platform enhancements based on real-world usage and feedback.

WISER will lead project governance, interagency coordination, and compliance alignment. WVGISTC will develop the core digital infrastructure and user interfaces while supporting system integration and data management. NRAC will contribute advanced environmental data modeling and decision analysis tools, and WVGES will ensure access to comprehensive geological data, overlays, and hazard mapping.

Together, these organizations represent a deeply experienced, West Virginia-based consortium capable of delivering a solution tailored to the needs of the state and its citizens. By leveraging the authority granted under *WV Code §5A-3-1*, as amended by House Bill 5594, this team can mobilize rapidly, minimize procurement delays, and ensure the permitting platform is operational by the January 1, 2027 deadline. With a shared commitment to transparency, service equity, and digital transformation, the consortium is ready to build a permitting system that drives efficiency, fosters economic development, and empowers agencies and applicants alike.

## Company Overview

*1. WVU Institute for Sustainability & Energy Research (WISER)*

WISER serves as West Virginia University's coordinating body for interdisciplinary energy and sustainability research. Recently rebranded from the former Energy Institute, it spearheads high-impact initiatives in energy geosciences, carbon utilization, renewables, and environmental stewardship, often in collaboration with federal/state agencies and industry partners. As an R1 research hub, WISER supports research planning, technology transfer, training, and lab services, with specialized analytical capabilities and a strong focus on driving economic development across Appalachia.

*2. WV GIS Technical Center (WVGISTC)*

Hosted within WVU's Department of Geology & Geography, the WV GIS Technical Center (WVGISTC) is the state's central resource for geospatial coordination, mapping, and data services. Established as a state agency by executive order in 1993, the center manages the state's Geospatial Data Clearinghouse, GIS People Directory, and the public MapWV.gov portal. Its team supports statewide initiatives—from building-footprint extraction to trail and voting map deployments—providing the data infrastructure and training essential for modernized permitting systems. Staff consists of a faculty directory, project manager, two developers/programmers, three analysts, graduate research assistants, hourly student workers, and contractors. On-staff developers have expertise and experience generating web-based apps and dashboards.

*3. WVU Natural Resource Analysis Center (NRAC)*

Operating under WVU's Davis College of Agriculture and Natural Resources, NRAC delivers geospatial research, modeling, and decision-support services on environmental and natural resource challenges. Founded in 1990, the center leverages LiDAR, drone-mounted sensors, remote sensing techniques, and watershed and landscape analysis to assist state agencies and regional stakeholders. Notably, NRAC's drone-based invasive species detection initiative and its longstanding partnerships position it to enhance permitting by integrating smart environmental data and analytics.

*4. WV Geological & Economic Survey (WVGES) & WV Office for GIS Coordination*

One of the nation's oldest state surveys, founded in 1897 and housed within WVU's Mont Chateau Research Center, the Survey delivers authoritative geoscience data and mapping to support energy, environmental planning, infrastructure development, and economic policy. Its mission centers on unbiased long-term analysis of coal, oil, gas, groundwater, and geologic hazards, powered by comprehensive GIS databases and interactive mapping services, including support for federal programs and geological education.

Together, these organizations present a unified powerhouse for the permitting initiative:

- WISER brings leadership in energy and sustainability, alongside advanced research infrastructure.
- WVGISTC offers critical GIS architecture, public-facing web portals, and training capacity.
- NRAC contributes environmental and natural resource modeling, drone/aerial data capture, and decision-support analysis.
- WVGES provides deep geological content, hazard data, and trusted state mapping services.

This project team enables a seamless One-Stop system—from geospatial infrastructure, environmental analytics, and geological data to sustainable energy policy and stakeholder engagement—aligned with WV legislative mandates for efficient and data-driven permitting. Having this as a geospatial platform will allow dashboards to be generated in real time for state agencies to analyze workflows and produce statistics for WV decision makers.

## Responses to Specific Questions

### 3.2.1 Please describe your ability and methodology to establish the One-Stop-Shop permitting solution.

To establish a One-Stop-Shop Permitting Program, the collaboration between the WVU Institute for Sustainability & Energy Research (WISER), the WV GIS Technical Center (WVGISTC), the Natural Resource Analysis Center (NRAC), the WV Geological & Economic Survey (WVGES), and The Office of GIS Coordination would enable a uniquely comprehensive and data-driven methodology. Below is a detailed plan outlining the development and ongoing maintenance phases of the proposed web-based permitting solution.

#### *Phase 1: Planning & Requirements Gathering*

Stakeholder Workshops: Facilitate structured interviews and workshops with permitting agencies, state IT representatives, county/city partners, and industry users to gather functional requirements. Include a help section for public users, modeled after the WV Flood Tool, a product of the WVGISTC, with definitions, and basic tools instructions.

Process Mapping: Document existing permitting processes across agencies, identifying redundancies, integration needs, and regulatory checkpoints.

Regulatory Compliance Alignment: Align all workflows with WV Code §5A-13-1 and legislative rule 148CSR25.

*Lead Organizations:*

- WISER (strategic planning, agency liaison coordination)
- NRAC (workflow modeling and inter-agency integration feasibility)

### *Phase 2: System Architecture & Design*

Modular Platform Design: Architect a centralized web application with modular components for:

- Front-end, web-based user interface design: Develop an easy-to-use and navigate UI/UX with views for permit submitters, reviewers, and administrators. Key functionality will include:
    - Application intake
    - Interagency workflow routing
    - Document upload/management
    - Tracking and status updates
    - Payment processing (optional): E-Pay through the WV Treasury Office Explicitly confirm integration with WV Treasurer's Office ePay/eGov systems, with capability to handle partial refunds, duplicate payments, and pro-rated fees (Q22, Q54-Q55).
    - Single Sign-On (SSO) for secure user authentication using WV state credentials and creating public access accounts
- Permit Tracking Dashboard: Develop a dynamic dashboard for applicants and administrators to track application progress in real-time and submit status requests.
- Back-end components and system design, including:
    - Request handling
    - Data query
    - Geospatial databases
    - Links to existing services and data
    - Cybersecurity and secure data management
    - Data backup and redundancy
- Lead Organizations:
    - WVGISTC (portal framework, UI/UX design, GIS data integration, data schema, web development, database design)
    - WVGES & The WV Office of GIS Coordination (mapping tools, geologic permitting overlays)

### *Phase 3: Data Integration & API Development*

GIS & Environmental Layers: Integrate real-time spatial data layers including land use, topography, hydrology, parcel ownership, and zoning. Generate geoprocessing and data summarization scripts to aid in permit review, which is key to system longevity and reducing permit processing time and cost.

Permitting APIs: Build APIs for connecting with existing agency databases, enabling real-time data sharing, auto-population of applicant forms, and permitting status syncing.

Analytics & Reporting: Design customizable reporting tools for internal agency oversight and legislative reporting.

Lead Organizations:

- NRAC (data ingestion pipelines, environmental overlays)
- WVGISTC (geoprocessing scripts, statewide GIS service layers, parcel/geofence mapping, report generation)
- WVGES & The WV Office of GIS Coordination (geologic constraints, natural hazard zones)

### *Phase 4: Development & Implementation*

Agile Development Cycles: Deliver the system in iterative sprints with monthly demos to stakeholders.

Prototyping & Testing: Deploy alpha and beta versions with test data and mock applications.

Training & Documentation: Provide technical documentation and training modules for agency users, municipal staff, and the public. Link all training and documentation materials to the portal for ease of access.

Lead Organizations:

- WISER (project management, stakeholder reviews)
- WVGISTC (software development, testing, documentation development)
- All (user training in respective domains)

### *Ongoing Maintenance & Support Strategy*

1. Help Desk and Technical Support

- Provide Tier 1–3 support channels for agencies and users via email, phone, and ticket system.
- Publish a detailed knowledge base with tutorials, troubleshooting guides, and FAQs.

*Lead Organizations:*

- WVGISTC (platform support)
- NRAC/WVGES for data-specific queries.

2. System Updates and Enhancements

- Implement quarterly system updates to support:
- New agency onboarding
- Updated forms and regulations
- Improved workflow automation
- Continuously review user feedback and legislative changes to guide future enhancements.
- Integration of input data layer changes.

*Lead Organizations:*

- WISER (program oversight)
- WVGISTC (development)
- NRAC (regulatory change tracking)

3. Data Maintenance and QA/QC

- Schedule periodic validation of GIS layers, environmental datasets, and geological overlays.
- Update permit condition datasets and base layers using aerial surveys, LiDAR, and public input.

*Lead Organizations:*

- WVGES (geologic and mineral rights data)
- NRAC (remote sensing validation, hydrology)
- WVGISTC (parcel boundaries, infrastructure, aerial orthophotography, digital elevation data)

4. Security & Compliance Monitoring

Annual audits for:

- Cybersecurity protocols (e.g., encryption, multi-factor authentication)
- Disaster recovery plan updates and backups
- Legal compliance (e.g., FOIA handling, data privacy)

*Lead Organizations:*

- WISER (policy),
- WVGISTC (technical implementation), in coordination with WV state IT.

5. User Community Engagement

- Host quarterly webinars, Q\&A forums, and training refreshers.
- Maintain an open feedback loop via user surveys and agency reviews.
- Showcase usage metrics and permit processing improvements.

*Lead Organizations:*

- WISER
- All partner organizations

### 3.2.2 Provide examples of previous similar work products

The West Virginia GIS Technical Center, NRAC, WISER and the WV Geological Survey have generated and maintained several apps in collaboration with state agencies.

- *Former Mine Lands to Sustainable Mine Lands*
  https://wvu.maps.arcgis.com/apps/dashboards/ebaa2de7ddc0416c8de74c6c2b1b2fd1
  Completed for Appalachian Climate Technology coalition, Build Back Better regional challenge project. This is a series of dashboards designed to identify development opportunities on former mine lands throughout the southern coalfields region of West Virginia. The dashboards offer spatial screening tools for site selection, featuring six different themes: General, Recreation, Solar, Geothermal, Carbon Capture/Biomass, and Wind.
- *West Virginia Local Foods Finder Map*
  https://arcg.is/1KmS5j
  Completed for WV Extension this web map was designed to help producers throughout WV promote their businesses and inform the public on the availability of local produce, locally raised meats, and other agricultural and specialty products.
- *USDA RD Rural Investment/Extension NET Dashboard*
  https://www.arcgis.com/apps/dashboards/5be3112d72134295b2bd5c493b9eb786
  Completed for WV Extension, the purpose of this project is to assess locations of national forest gateway communities and federal agency offices and service centers to help identify future collaboration opportunities in the recreation economy. The online dashboard developed for this project is designed to summarize USDA Rural Development investments by county for FY 2020-2024. Users may filter the dashboard and map by state and/or county type. Counties of interest for this project include those counties that intersect a National Forest.
- *Upper Valley Tourism and Recreation Asset Dashboard*
  https://wvu.maps.arcgis.com/apps/dashboards/873a3c7cef4f4c61bb890c89fd19adb3
  This work was completed as part of a larger project funded by USDA AFRI (Department of Agriculture, National Institute of Food and Agriculture). The dashboard allows users to view and interact with business assets and recreation features for this region by zooming in/out on the map, clicking on features of interest, and filtering features using various attribute values. Dashboard documentation is also provided, including user instructions and data source information.
- *Land and Stream App*
  https://mapwv.gov/DNRLandsStreams/editor/
  This app was created on behalf of the West Virginia Division of Natural Resources (DNR) Office of Lands and Streams. It is not publicly available since data are sensitive. This app relates to permitting and rite-of-entry.
- *West Virginia Property Viewer*
  https://www.mapwv.gov/parcel/

Created for the West Virginia Tax Department. Provides information for all individual land parcels across the entire state. The WVGISTC coordinates with the county assessors and WV State Tax Department to maintain the ~1.4 million parcels required for this app.

- *West Virginia Property Assessment*
  https://www.mapwv.gov/assessment/Default#page-top
  This tool provides property assessment functionality for real estate and tax purposes.
- *West Virginia Flood Tool*
  https://www.mapwv.gov/flood/
  Created with support from the Federal Emergency Management Agency (FEMA) and West Virginia Emergency Management. Provides property-level flood risk information for both the general public and flood mitigation professionals for the entire state.
- *West Virginia Cultura Resources*
  https://mapwv.gov/shpo/viewer/index.html
  Information about historic preservation sites across the state completed and maintained on behalf of the West Virginia State Historic Preservation Office (WVSHPO). This project requires handling sensitive data and updating the app as new sites are added.
- *West Virginia DNR Hunting and Fishing Interactive Map*
  https://mapwv.gov/huntfish/
  This app was created for the West Virginia Division of Natural Resources and aids users in finding hunting, trapping, and fishing locations across the state.
- *West Virginia Flood Resiliency Framework (WVFRF)*
  https://wvfrf.org/
  Created with funding from the National Science Foundation (NSF) and with a variety of partners including the West Virginia State Resiliency Office (WVSRO). The West Virginia Risk Explorer, a component of the WVFRF, provides aggregated information about flood risk, vulnerabilities, and resilience at a variety of scales (incorporated areas, unincorporated areas, counties, economic development regions, and drainage basins)
- *West Virginia Trail Inventory*
  https://www.mapwv.gov/trails/
  Created with the West Virginia Department of Transportation (WVDOT). Provides information about trails, motorized trails, and water trails across the entire state for use by the general public and for planning excursions.
- *West Virginia Elevation and LiDAR Download Tool*
  https://data.wvgis.wvu.edu/elevation/
  Provides access to digital elevation data in the form of light detection and ranging (lidar) point clouds and derived products. This is a free source of high spatial resolution elevation data for the entire state.

### 3.2.3 Identify your company name, primary contact person, phone, and email.

Company Name: West Virginia University Institute for Sustainability and Energy Research (WISER) | WV GIS Technical Center (WVGISTC) | WVU Natural Resource Analysis Center (NRAC) | WV Geological & Economic Survey (WVGES)

*Vendor Address:* PO Box 6024, Morgantown WV 26504

*Contact Person:* J. Brady Gutta (WISER)

*Phone Number:* 304-293-6197

*Email:* brady.gutta@mail.wvu.edu

### 3.2.4 Describe how your solution would address adding additional permits and licenses for the participating agencies, when necessary, as well as adding additional agencies and their permitting requirements that may come online after the fact.

To ensure long-term sustainability and adaptability, our team's approach will emphasize modularity, scalability, and governance. Below is a detailed breakdown of how our collaborative platform, developed by WISER, WVGISTC, NRAC, and WVGES, will handle the addition of new permits, licenses, and participating agencies after initial deployment.

#### *Scalable Integration of New Permits, Licenses, and Agencies*

1. Modular Platform Architecture

Plug-and-Play Modules: Each agency's permitting process is implemented as a self-contained module with clearly defined data structures, workflows, and business rules.

Schema Templates for Permits/Licenses: New permit types are created using standardized templates that define:

- Required forms and data fields
- Review routing logic
- Fee structures and payment triggers
- Agency-specific validation rules

Advantage: This allows the project team to add or modify permits without requiring a full system overhaul. This system is also diverse in usage, allowing users to interface over the internet through computer, tablet, or phone as an app.

2. Agency Onboarding Toolkit

Digital Playbook: A documented onboarding framework will walk new agencies through:

- Mapping their current permit workflows

- Identifying existing systems/APIs for data exchange
- Aligning their process with system-wide user interface patterns

Low-Code Admin Interface: Empower designated agency staff to:

- Configure new permit forms
- Define approval stages
- Assign internal reviewers and permissions
- Monitor their own analytics dashboards

*Lead Organizations:*

- WISER: governance and interagency coordination
- WVGISTC: onboarding support and interface customization
- NRAC: integration of spatial/environmental considerations
- WVGES: addition of geologic compliance requirements (if applicable)

3. API and Middleware Strategy

RESTful API Layer: A flexible set of APIs allows secure data sharing between the One-Stop system and existing agency databases.

Integration Middleware: A lightweight middleware component handles:

- Field mapping between disparate systems
- Data transformation and normalization
- Error handling and retry mechanisms

Use Case: A new agency using a legacy database can sync permit approvals or inspection statuses directly with the One-Stop platform in near real time.

4. Governance and Change Management

- Governance Board: Establish an interagency governance council (led by WISER) to:
    - Review and prioritize requests for new permits or agency onboarding
    - Validate legal/regulatory changes
    - Approve updates to system logic and security requirements
    - Change Request Pipeline: Formalized process for requesting and tracking new permit types or system enhancements using a shared project management platform (e.g., JIRA, Trello).

5. Testing and Validation Environment

Sandbox Environment: All new permits and agency modules are first deployed in a staging environment with test data to:

- Validate form logic and workflows
- Conduct user acceptance testing (UAT)
- Identify cross-agency impacts

Stakeholders Involved: New agency reps, platform engineers (WVGISTC), QA support (WISER/NRAC)

6. Documentation and Training

Versioned Documentation: All changes to permits and agency modules are documented and version-controlled for audit and rollback if necessary.

Training Webinars & Self-Service Resources: Regularly offered training is provided to new agency users, including:

- Role-based system tutorials
- FAQ repositories
- User certification pathways (optional)

7. Monitoring & Feedback

Real-Time Analytics: New permit modules are monitored via dashboards to track adoption, completion times, and user satisfaction.

Feedback Loop: Agencies and users submit enhancement requests through a built-in feedback widget, reviewed during bi-monthly governance board meetings.

### 3.2.5 How would you address permitting portals currently in use by state agencies?

To ensure the success of the One-Stop-Shop Permitting Program, addressing the existing permitting portals used by the State of West Virginia is critical. The goal is not only to centralize and streamline access, but also to respect prior investments, avoid service disruptions, and improve efficiency across agencies. Below is a comprehensive solution path that our team will follow to integrate or phase-in these legacy systems.

#### *Solution Path to Address Current Permitting Portals*

1. Statewide Permitting System Audit

Objective:

Build a complete inventory of existing permitting portals and tools across all participating state agencies and jurisdictions.

Steps:

- Catalog all active digital and non-digital permitting systems (e.g., custom agency apps, off-the-shelf software, SharePoint forms).
- Identify portal owners, system vendors, support contacts, and contract terms.
- Assess technical stack (e.g., .NET, Java, Salesforce), APIs, documentation availability, and security/compliance status.

*Lead Organizations:*

- WISER (project coordination)
- WVGISTC (technical assessment templates)

2. Evaluation & Categorization

Objective:

Prioritize systems for integration, migration, or retirement.

Criteria:

- High usage or permitting volume (e.g., DEP, DHHR, DOT)
- Systems with open APIs or interoperability
- Systems nearing end-of-life or with maintenance challenges
- Compliance gaps with 148CSR25 and HB2002

Output:

A categorized list:

- To Integrate
- To Sunset and migrate
- To maintain external linkage

3. Integration Strategy

Objective:

Enable seamless interaction between the One-Stop-Shop platform and valuable existing portals.

Options:

- API Integration: Use REST or SOAP APIs to pull and push permit status, application data, and user actions in near real time.
    - *Use case: Syncing data from an active DEP application system.*
- Data Federation / Unified Front-End: Maintain legacy systems in the background while presenting a unified front-end for applicants.

    - *Use case: The user applies via One-Stop, but back-end processing occurs in the agency's existing portal.*
- Iframe/Deep Linking: When APIs are unavailable, integrate via deep links with prefilled user metadata or permit ID references.
    - *Use case: Older portals not ready for sunset but used by specific regulated industries.*

*Lead Organizations:*

- WVGISTC (API design)
- NRAC (middleware/data flow modeling)
- WISER (agency engagement)

4. Migration & Retirement

Objective:

Decommission redundant or outdated systems over time, migrating data into the One-Stop-Shop.

Steps:

- Export existing permit datasets
- Validate data formats and structure
- Migrate into standardized schema on the new platform
- Retire or archive legacy tools per records retention schedules

Considerations:

- Historical data preservation
- Change management for agency staff
- Legal sign-off for shutdown

5. System Governance & Compatibility Layer

Objective:

Support long-term coexistence of legacy and modern systems.

Actions:

- Establish a permitting API gateway to standardize access to new and legacy systems
- Document "connector" modules for each integrated system
- Build reusable middleware components for form logic, workflow triggers, and status updates

Tools:

- Low-code orchestration (e.g., Microsoft Power Platform, Apache Camel)
- Secure message brokers (e.g., RabbitMQ, Kafka) for event-based triggers

6. User Interface Harmonization

Objective:

Create a consistent user experience for applicants, regardless of back-end system.

Techniques:

- Apply a unified design system and branding
- Normalize terminology (e.g., "permit application", "review in progress", "approval issued")
- Provide a consolidated dashboard for applicants to see all permit activities—even from legacy-linked systems

7. Support, Training & Transition Planning

Objective:

Minimize disruption and build capacity in state agencies.

Deliverables:

- Transition roadmap for each system/agency
- Help desk support as legacy systems are retired
- Training sessions and user guides for staff moving to the One-Stop system
- Public communication strategy for industry partners and permit seekers

*Summary: A Phased, Strategic Approach*

Our team's approach to existing portals balances pragmatism and modernization:

| **Step** | **Purpose** | **Outcome** |
|---|---|---|
| Audit & Categorize | Understand the landscape | Integration/migration roadmap |
| API & Middleware Design | Enable real-time interoperability | Unified backend and workflows |
| UI Harmonization | Ensure usability and familiarity | Seamless user experience |
| Phased Retirement | Avoid disruption | Cost-effective modernization |

| | | |
|---|---|---|
| Governance & Flexibility | Future-proof the system | Sustainable multi-agency architecture |

By respecting current systems while offering a path forward, this plan builds consensus, delivers early wins, and aligns with the legislative mandate to simplify and unify permitting across West Virginia.

### 3.2.6 Describe how you handle security and privacy/cybersecurity as well as backups and disaster recovery within your solution.

The app and all required data will be hosted on the West Virginia GIS Technical Center servers. These physical servers are housed at the WVGISTC facility on the 4th floor of Brooks Hall on the West Virginia University downtown campus in Morgantown, West Virginia. The center undertakes weekly backups of their most critical and used directories using the Veeam software (https://www.veeam.com/). Backups are stored on a separate server cluster, also located on-site. SQL databases are backed up every four months. Large datasets, such as aerial imagery, digital elevation models, and lidar point clouds, are backed up to external hard drives. If additional backups were necessary for this project, the team could implement cloud storage or set up an off-site physical backup.

WVU's Information Security department does weekly cybersecurity scans of our connected devices for network vulnerabilities via Nessus. Eberly College of Arts and Sciences IT receives the results from these reports and then relays the findings to affected areas and assists with remediation when necessary. Thus, we have cybersecurity support from both WVU and Eberly IT.

Since the Tech Center is housed at WVU, we must adhere to their established security policies. These policies are documented here: https://it.wvu.edu/policies-and-procedures/security.

All WVU employees are required to complete Cyber Security training, including Tech Center employees.

For additional cybersecurity concerns or protocols, we will consult with Dr. Chris Ramezan, Assistant Professor of Cybersecurity at the John Chambers College of Business and Economics at West Virginia University.

### 3.2.7 How would you ensure the solution will be operational by the deadline indicated in the statute and legislative rule?

To meet the January 1, 2027 operational deadline mandated by WV Code §5A-13-1 and legislative rule 148CSR25, with a tentative start date of October 1, 2025, the consortium of WISER, WVGISTC, NRAC, and WVGES would implement a structured, milestone-driven execution plan. This plan emphasizes agile development, risk mitigation, continuous stakeholder engagement, and strong project governance. This timeline assumes full cooperation from the

participating agencies as noted in the framework shown. Delays in data sharing or coordination could impact milestone completion. timeline assumes full cooperation from agencies; statutory deadline remains January 1, 2027, with exclusivity by July 1, 2027 (per Addendum A11)

*Two-Phase Delivery Framework: Overview*

| Phase | Timeline | Goal |
|---|---|---|
| Phase 1: Planning & MVP Buildout | Oct 2025 – Dec 2026 (15 months) | Deliver functional MVP with core workflows |
| Phase 2: Agency Expansion & Optimization | Jan 2027 and Forward | Full deployment, enhancements, and onboarding new agencies |

### *Phase 1: Planning, Build, and MVP Delivery (Oct 2025 – Dec 2026)*

1. Initiation & Mobilization (Q4 2025)

- Kickoff project with project charter, core team onboarding, and agency stakeholder alignment
- Establish the governance structure, communications plan, and shared toolsets
- Conduct a permitting systems audit, agency readiness assessment, and risk matrix

Planned Deliverables:

- One Stop Shop Permitting Program Charter
- Detailed Work Plan (Gantt-style timeline)
- Governance & Compliance Protocols

*Lead Organizations:*

- WISER (project owner)
- WVGISTC (tech mobilization)
- NRAC/WVGES (data requirements)

2. Requirements for gathering & system design (Q1 of 2026)

- Facilitate stakeholder workshops with all participating agencies
- Define:
    - Core permitting workflows
    - Technical architecture (modular, API-enabled)
    - Security and data compliance protocols (per 148CSR25)
    - Establish data integration pipelines for key datasets (e.g., GIS, geology, land use)

Deliverables:

- Functional & Technical Requirements Document
- Integration Plan for Legacy Systems
- Wireframes & User Journey Maps

*Lead Organizations:*

- WVGISTC (tech mobilization)
- NRAC/WVGES (data requirements)

3. Core System Build & First Agency Implementation (Q2–Q3 2026)

- Agile development sprints to build:
    - Application intake engine
    - Workflow engine
    - Permit dashboard
    - Role-based access control
- Integrate first two high-impact agencies (e.g., DEP, DHHR)

Deliverables:

- MVP Platform Release
- Permitting API Gateway
- Integrated GIS and Geologic Mapping Tools

*Lead Organizations:*

- WVGISTC (frontend/backend dev)
- NRAC (workflow mapping)
- WVGES (geo-data integration)

4. Testing, Training & User Feedback (Q4 2026)

- Conduct:
    - System Integration Testing (SIT)
    - User Acceptance Testing (UAT) with pilot agency users
    - Accessibility and performance testing
- Deliver train-the-trainer sessions and digital help resources

Deliverables:

- Finalized Documentation & Training Modules
- Governance Review of Compliance Milestones
- "Go/No-Go" Readiness Assessment

This plan will ensure the system would be operational by January 1, 2027

### *Phase 2: Continuous Expansion & Optimization (Post–Jan 2027)*

1. Additional Agency Onboarding (Q1–Q2 2027)

- Use onboarding toolkit to bring in more agencies
- Customize permitting templates and workflow modules
- Provide continuous training and helpdesk support

2. Enhancement Releases

- Expand features based on user feedback and legislative changes:
  - Permit fee integration
  - Real-time SMS/email alerts
  - Permit analytics dashboards for public transparency

3. Performance Monitoring Recommend KPIs such as processing time reduction, % complete submissions, digital adoption rate, and inspector mobile adoption benchmarks (Q24).

- Run quarterly platform health reviews
- Maintain security audits, backups, and recovery drills

Risk Mitigation & Contingency Planning

| **Risk** | **Mitigation Strategy** |
|---|---|
| Agency delays in data sharing | Early engagement; interagency MOUs and escalation protocols |
| Integration complexity with legacy systems | Use of middleware and phased data integration |
| Technical debt from rapid MVP builds | Built-in refactoring cycles post-MVP |
| Staff turnover | Cross-training, documentation, and knowledge management systems |

Governance & Oversight

- Monthly Steering Committee Meetings led by WISER
- Quarterly Legislative Updates and compliance scorecards
- Public Transparency Portal (if required by 148CSR25)

Key Milestones Timeline:

| Date | Milestone |
|---|---|
| October 1, 2025 | Project Kickoff |
| December 31, 2025 | Requirements, System Design Complete |
| March 2026 | MVP Platform Development Begins |
| October 2026 | UAT + Training with Pilot Agencies |
| December 2026 | Final MVP Deployed & Validated |
| January 1, 2027 | Platform Officially Operational (Statute) |

### 3.3.2 Tool buildout pricing strategy

To deliver the One-Stop-Shop Permitting Platform by the statutory deadline of January 1, 2027, the project team, WISER, WVGISTC, NRAC, and WVGES, proposes a "scalable, phased funding strategy" grounded in fiscal transparency and strategic cost containment. Rather than prescribing fixed costs, this strategy outlines estimated cost ranges for major project components, allowing for flexible budgeting and efficient implementation across agencies.

1. Tool Buildout (Development Phase)

The initial buildout phase includes design, system architecture, permitting engine development, and GIS/geologic data integration. This phase would be executed in agile increments across 2025–2026 and is expected to fall within a moderate-to-high six-figure range depending on permitting complexity, API demands, and agency onboarding volume.

*Cost Categories:*

- Application and workflow engine development
- API gateway and legacy system connectors
- GIS/geospatial visualization and database services
- Role-based access and cybersecurity features
- Initial two-agency integration and testing
- Documentation and training material development

2. Ongoing Maintenance and Operations

After the system goes live in January 2027, annual operating costs will include platform hosting, user support, routine feature updates, and compliance assurance. These expenses are expected to fall within a moderate annual operational range proportional to platform adoption and feature usage.

*Included Services:*

- Cloud/server infrastructure and monitoring
- Helpdesk support (Tier 1–3)
- System updates and minor feature enhancements
- Security reviews and data backups
- GIS/geologic data maintenance

3. Expansion and Enhancement

Costs related to onboarding additional agencies, permitting types, or public-facing features (e.g., dashboards, SMS alerts) will be treated as modular enhancements. These are scalable based on the number of new permits or workflows added, and agencies will be able to join the platform under a transparent and repeatable integration model.

4. User Fee and Cost Recovery Options

To support platform sustainability and reduce dependence on general revenue, several user fee models will be evaluated in consultation with state leadership and participating agencies. These include:

- Per-transaction convenience fees for applicants
- Agency subscription fees** based on usage volume
- Optional premium service fees (e.g., expedited reviews, alerts)
- Equity provisions such as fee waivers for nonprofits or small businesses

These mechanisms can supplement base funding and support long-term platform viability.

*Procurement & Legal Authority: WV Code §5A-3-1 / HB 5594*

The organizations included in this proposal, being part of West Virginia University and state-affiliated research and technical centers, can operate under the provisions of WV Code §5A-3-1, as amended by House Bill 5594 during the 2024 legislative session. This statute affirms the authority of the Division of Purchasing to engage with public institutions to advance state-supported services and digital modernization initiatives.

Use of this legal mechanism enables:

- Streamlined contracting with WVU-affiliated entities
- Elimination of duplicative vendor review processes
- Expedited project mobilization within procurement guidelines

### 3.3.3 Marketing & Stakeholder Engagement Materials

To support the development and deployment of the One-Stop-Shop Permitting Platform, a suite of marketing materials, technical documentation, and strategic assets tailored to different

audiences: agency stakeholders, legislators, end users (applicants), and technical teams. Below is a categorized guide covering what to prepare, how it will be used, and who it's for.

### *Marketing Materials*

1. Executive Overview / Concept Brochure:

Purpose: Introduce the initiative to agencies, funders, and public stakeholders, which would include:

- Project mission and goals
- Participating partners (WISER, WVGISTC, NRAC, WVGES)
- Visual of the proposed permitting flow
- Key benefits (e.g., reduced processing times, improved transparency)

2. Slide Decks for Stakeholder Briefings:

A series of slide decks would be tailored for the various stakeholder groups, which include:

- WV Legislature
- State agencies
- Industry associations

The content for the tailored slide decks would include but not be limited to:

- Timeline for January 1, 2027, launch
- Live demos or screenshots of UI (as developed)
- Integration plans with legacy systems

3. Project Website or Portal

In addition to the above-mentioned engagement materials, a project website could be created that would serve as a central communication hub for:

- Status updates
- Frequently asked questions (FAQ)
- Contact information
- Public transparency about deadlines and progress

4. Press Kit / Media One-Pager

- Short media-ready summary for public communication
- Includes project summary, benefits to the public, contact info, quotes from officials
- Links to the project website

### *Technical Data & Documentation*

The following materials will be critical for the software development lifecycle, onboarding new agencies, and compliance audits.

1. System Architecture Plans, which provide high-level diagrams showing:

- Modular platform design
- Data flow between applicant portals, permitting workflows, and agency systems
- GIS/geologic integration layers

2. API Documentation, which includes Swagger/OpenAPI specs for:

- Permit submission endpoints
- Status update and approval tracking
- User and agency authentication

3. Data Schemas & Standard Templates

- Permit application data model
- Geospatial layer standards (e.g., parcel boundaries, zoning overlays)
- Metadata standards for interoperability

4. DevOps Infrastructure Docs

- Hosting architecture (cloud, hybrid, or on-prem)
- Disaster recovery plan
- Version control and CI/CD process (e.g., GitHub workflows)

5. Security and Compliance Documentation

- Risk assessments aligned with 148CSR25 and WV Code §5A-13-1
- Data privacy policy
- Audit trail and logging strategy
- User access management (RBAC)

### *Training, Support, and User Adoption Materials*

The following material would ensure the platform is "understood, adopted, and used effectively" by both agency staff and the public.

1. Role-Based User Manuals, which would have separate guides for:

- Applicants (general public, contractors)
- Agency reviewers
- Admins/configurations

2. Interactive Tutorials or Demo Videos, which include walk-throughs of:

- How to submit a permit
- How to track application status
- Reviewer dashboard overview

3. Helpdesk & Troubleshooting Knowledge Base

- Structured FAQs with screenshots
- Ticket escalation paths
- "What to do if..." scenarios (e.g., missing attachments, delayed approvals)

4. Train-the-Trainer Materials

- Instructor slide decks, exercises, and certification quizzes
- Internal use by state agencies to onboard new staff

### *Optional Supplemental Materials*

1. Mockups and UI Wireframes

- Show potential user journeys
- Useful for workshops, stakeholder demos, and early buy-in

2. Case Studies or Analogous Success Stories

- From other state permitting systems (e.g., North Carolina, Colorado)
- Highlight savings, processing improvements, public satisfaction

3. Letters of Support or Partner Commitments

- From state agencies or institutional partners (WVU, WVGES)
- Reinforces collaboration and feasibility

4. Cost/Benefit Analysis

- Demonstrates ROI to legislators and budget holders
- Includes modeling of time savings, staff efficiencies, or digital adoption metrics

**ADDENDUM ACKNOWLEDGEMENT FORM**
**SOLICITATION NO.: CRFI SEC26*01**

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**
(Check the box next to each addendum received)

| | | | |
|---|---|---|---|
| [ X ] | Addendum No. 1 | [ ] | Addendum No. 6 |
| [ X ] | Addendum No. 2 | [ ] | Addendum No. 7 |
| [ X ] | Addendum No. 3 | [ ] | Addendum No. 8 |
| [ X ] | Addendum No. 4 | [ ] | Addendum No. 9 |
| [ X ] | Addendum No. 5 | [ ] | Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

West Virginia University Research Corporation
Company

Joshua Whitt
Authorized Signature

08/29/2025
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.