Symbium

Response to RFP #2025-059 July 11, 2025

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North Central Texas Council of Governments / TXShare Cooperative Program

RE: RFP Response to "Artificial Intelligence-Based Building and Plan Review Software"; RFP Number 2025-059

Dear NCTCOG / TXShare Evaluation Committee:

I am writing to you on behalf of Symbium Corp. (Symbium) in response to the subject RFP. We respectfully submit the enclosed, which may aid you in the selection of best-in-class technology solutions.

This response is generally organized to follow the formatting of the RFP:

1. Certificate of Offeror and Statement of Understanding
2. References
3. Project-Related Experience and Qualifications
4. Technical Proposal
    a. Goal 1: Streamline the plan review process
    b. Goal 2: Improve predictability of the permitting process
    c. Goal 3: Integration and coordination with other software solutions
    d. Goal 4: Provide reliable software solutions
    e. Goal 5: Long-term improvement, maintenance, and support
    f. Responses to Challenges
5. Pricing
6. Exhibits and Attachments

Symbium offers a scalable, flexible and affordable online permitting software, to supercharge plan review and permitting workflows with instant, 100% accurate completeness and compliance checks and we are excited to support this initiative with a solution that delivers automation, transparency, and smart compliance to AI-enhanced permitting.

Technical point of contact:
Abhijeet Mohapatra, CTO
abhijeet@symbium.com

Business point of contact:
Leila Banijamali, CEO
leila@symbium.com 415-501-0791

This submission and accompanying documents shall be considered confidential as Symbium's trade secrets and shall not be disclosed to any third-parties, with the exception of the narrowest interpretation of any codified governmental exclusions.

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No Conflicts

There are no conflicts of interest, actual or apparent, that would limit Symbium's ability to provide the requested services.

Closing Comments

I encourage you to contact me directly with any remaining qualification questions or for further clarifications. Please feel free to advise if scheduling a virtual meeting and/or further demonstrations of our services would help clarify any of the items outlined above or any additional matters impacting Symbium's qualification to serve.

We appreciate your consideration and look forward to the opportunity to serve in this important endeavor.

Sincerely,

Leila Banijamali, CEO
Symbium

1. Statement of Understanding of Work to be Performed

Symbium understands that TXShare seeks an AI-based building and plan review software solution to address critical challenges in the construction and development permitting process. We recognize the need for a system that streamlines plan review, improves predictability, integrates with existing systems, provides reliable service, and ensures long-term support and maintenance.

Our proprietary Computational Law (Complaw®) technology, developed at Stanford's AI Lab, delivers exactly what TXShare members need: instant, 100% accurate compliance checks that transform weeks-long manual reviews into real-time automated processes. We understand that this solution must serve diverse jurisdictions of varying sizes and complexities, requiring both scalability and adaptability without extensive customization.

We confirm there are no conflicts of interest that would limit our ability to provide these services to TXShare members.

2. References

Reference letters are enclosed to support Symbium's work in AI-enabled compliance plan checks and instant permitting. Please feel free to contact the following for references:

Pete Jackson
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City of Santa Clarita, CA
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Community Development Director
City of Pinole
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3. Project-Related Experience and Qualifications

Company Background and Years in Business: Symbium, founded in 2018, is a San Francisco-based company that partners with local building departments to enable instant and accelerated compliance checks and permit issuance. Homeowners and contractors currently use Symbium to instantly verify whether their proposed scope of work complies with building code requirements as well as procedural (permitting) requirements of a jurisdiction, subject to transactional fees. Symbium enables the instant issuance of permits by performing the requisite completeness and compliance checks (as applicable) prior to the permit submission. When a human-in-the loop review is required, Symbium accelerates the review process by pre-vetting the application with applicable compliance checks and ensuring that the submitted applications are complete..

Key to this disruption is Symbium's proprietary computational law (or Complaw®) tech, which enables a TurboTax-like mechanization of legal analyses through software in a swift and lean manner, initially developed by the founding team at Stanford's AI Lab.

AI and Plan Review Software Expertise

Our expertise in AI and plan review stems from our unique approach to regulatory automation. Unlike traditional AI systems that rely on probabilistic machine learning, Symbium employs deterministic, logic-based AI that guarantees 100% accuracy in compliance determinations. This fundamental difference ensures that our system never "hallucinates" or produces inconsistent results—critical requirements for building safety and code compliance.

Our three-module system demonstrates our comprehensive expertise:

- **The Deductive Engine (Complaw®)** represents building, electrical, plumbing, mechanical, and energy codes in formal logic. This enables instant, transparent compliance analysis with full explanations and code citations for every determination. The system processes thousands of code sections simultaneously, checking complex interdependencies that would take human reviewers hours or days to complete.
- **Sierra, our AI Plan Comprehension Engine**, represents a breakthrough in plan review technology. It automatically extracts structured data from PDF plans, identifying equipment specifications, verifying required components, and flagging missing information. Unlike other AI systems that might guess at unclear data, Sierra maintains integrity by requesting human clarification when needed.
- **The Integration Engine** seamlessly connects with existing government systems, having successfully integrated with over 30 different permit tracking systems including Accela, Tyler Technologies, and Central Square. This demonstrates our deep understanding of government IT ecosystems and ability to preserve existing workflows while adding transformative capabilities.

Public Sector Expertise

Our extensive public sector experience encompasses partnerships with jurisdictions ranging from small towns to major metropolitan areas. We've successfully navigated the unique challenges of government procurement, compliance requirements, and stakeholder management across 35+ California jurisdictions.

Key achievements in the public sector include:

- Implementation of California's SB379 instant solar permitting mandate for multiple jurisdictions.
- Partnership with the California Energy Commission for statewide clean energy permitting initiatives
- Collaboration with Berkeley National Laboratory's IMPEL program.
- Integration with major government software providers including formal partnerships with Accela and Central Square.

We understand the public sector's need for transparency, accountability, and reliable service delivery. Our solutions are designed specifically for government use, with features like comprehensive audit trails, public-facing portals, and role-based access controls that meet stringent government requirements.

Team Structure and Key Personnel

Founded by Stanford experts in law, planning, code, architecture, and logic programming, our team is built to solve complex regulatory challenges. We're known for responsiveness, initiative, and a deep commitment to tools that serve communities. The development of these regulation-enabled Complaw systems requires a well-rounded team who met at Stanford, with complementary skills in law, planning, building code, architecture, AI, and logic programming. A pillar of our team's success is our responsiveness, willingness to take the initiative in solving regulatory, data, and procedural challenges, and our hunger to make a lasting impact by way of public-facing planning and permitting tools that benefit communities at large. First and foremost, our team is composed of problem solvers who are second to none.

Our multidisciplinary team combines world-class expertise in AI, law, building codes, and government operations.

Executive Leadership:

Leila Banijamali is the Co-Founder and CEO of Symbium Corp., the Complaw® company, which she launched in 2018 with her Stanford co-founders. The company is fundamentally disrupting how complex planning regulations are consumed by the public and creating intuitive web applications from complex laws and regulations to make it easy for anyone to understand what's possible on a particular piece of property. Prior to launching Symbium, Banijamali founded businesses in the technology media industries in addition to acting as outside general counsel to hundreds of tech companies. In 2009, she founded the law firm, Bedrock, where she led over $200M in complex enterprise negotiations with Salesforce, Facebook, GE, Johnson & Johnson, Time Warner, Disney, Clorox, LinkedIn, and more.

Abhijeet Mohapatra is the CTO and a co-founder of Symbium. He received his Ph.D. in Computer Science from Stanford University and his B.Tech. in Computer Science and Engineering from IIT Kharagpur. He holds patents related to efficient analysis of data and policies. He co-invented Dynamic Logic Programming, which enables compact representation of complex regulations in a manner that is amenable to automation. He is also a co-inventor of Symbium's proprietary technology platform, and leads the company's

stellar team of engineers in pushing the envelope of Complaw and its applications in the public sector.

Michael Genesereth is Symbium's Co-founder and Chief Scientific Advisor, is a Computer Science professor at Stanford University and the research director of CodeX - the Stanford Center for Legal Informatics. He is widely recognized as the world's foremost authority on logic programming and computational law and has significantly advanced these fields through his seminal work, including the influential paper "Computational Law: The Cop in the Backseat" which explores the automation of legal compliance and regulatory analysis using formal logic.

Product and Engineering Team:

Linda Barrera is Symbium's Director of Product. Linda is responsible for product strategy and execution, overseeing the development process from ideation to launch. With a strong background as an urban planner and planning commission chair in the public sector, Linda excels at translating user and regulatory needs into practical, high-impact solutions for government partners. She combines her experience in construction project management with stakeholder engagement to unite technical execution with real-world development. Linda's user-first mindset ensures that the product consistently delivers value and exceeds customer expectations.

Tristan Krueger is Symbium's Engineering Lead. Tristan leads the engineering team with a focus on quality, scalability, and developer excellence. He has led the development work of several Symbium products including Symbium's instant permitting platform, Build an ADU feasibility analysis tool, and Plancheck a planning permitting platform. Before joining Symbium, he was an undergrad at Stanford University where he studied computer science and English literature and was a captain on the NCAA fencing team.

Louis Bui is Symbium's Devops Engineer with a strong foundation in software development and system integration. He contributes significantly to core product improvements, infrastructure enhancements, and integrations for new city deployments. While not focused on traditional engineering tasks, Louis plays a large role in collaborating with jurisdictions and integrators to ensure that the resulting product meets local needs. His technical expertise and experience working with jurisdictions help ensure the product meets both technical standards and real-world city needs.

Kritika Pantha is Symbium's Associate Software Engineer. She contributes to the design and implementation of tailored permitting solutions for Symbium's government partners. She holds a degree in Computer Science from UC Berkeley, and leverages her knowledge of human-centered design and full-stack development to approach technical challenges and customer needs. She prioritizes seamless user experience to create an efficient and smooth permitting process for end users.

Technology Partners:

- Autodesk: As a 2024 Resident Company, we collaborate on advanced building information modeling integration

- Accela: Certified integration partner for seamless permit tracking system connectivity
- Central Square: Approved vendor for their government software ecosystem
- Amazon Web Services: Cloud infrastructure provider ensuring 99.9% uptime and enterprise-grade security

Compliance Partners:

- Code Council: Collaboration on building code interpretation and updates
- Energy Commission Partners: California Energy Commission and Colorado Energy Office for energy code compliance
- Industry Associations: CALSSA and NYSEIA for specialized permitting requirements

All partnerships are structured to maintain Symbium's direct accountability to our government clients while leveraging best-in-class capabilities across the ecosystem.

4. Technical Proposal

GOAL 1: Streamline the Plan Review Process

Understanding the Challenge: Plan review represents the most significant bottleneck in the permitting process, often requiring multiple review cycles due to missed deficiencies, miscommunication between reviewers and applicants, and the creation of new issues while addressing others. This inefficiency costs jurisdictions staff time and delays critical development projects.

Symbium's Solution: Our comprehensive approach transforms plan review from a manual, error-prone process into an automated, accurate, and transparent experience.

AI-Powered Code Learning and Application System

Our Deductive Engine represents a paradigm shift in how AI applies to regulatory compliance. Unlike machine learning systems that guess at patterns, our formal logic approach ensures 100% accuracy by encoding regulations as logical rules that can be definitively evaluated.

The system incorporates thousands of code sections from building, electrical, plumbing, mechanical, and energy codes. Each code requirement is represented as a logical statement that can be evaluated against project data. This approach enables complex multi-code analysis—for example, simultaneously checking electrical load calculations against panel capacity, conduit sizing requirements, and energy efficiency standards.

Key capabilities include instant code application across multiple disciplines simultaneously, complex interdependency checking that identifies conflicts between different code requirements, version control for historical code editions and local amendments, and transparent reasoning showing exactly how each determination was reached.

Automated Deficiency Detection Technology

Our system performs comprehensive deficiency detection in real-time as applicants enter project information or upload plans. This immediate feedback revolutionizes the traditional submit-wait-revise cycle.

The technology works through three integrated mechanisms. Real-time validation occurs as users input data, immediately flagging non-compliant specifications. For example, if an applicant specifies a water heater installation in a location that violates clearance requirements, the system instantly alerts them with the specific code citation and required correction. Plan analysis through Sierra automatically extracts and validates information from uploaded plans. The system verifies plan completeness (ensuring all required drawings are present), checks for required elements (PE stamps, north arrows, scales), and validates technical specifications against code requirements. Comprehensive cross-checking ensures consistency between different plan sheets and input data. The system identifies discrepancies that human reviewers often miss, such as equipment specifications that differ between the site plan and electrical diagram.

Digital Submission and Tracking Platform

Symbium provides a unified digital platform that eliminates paper submissions and manual tracking. Our platform offers intelligent guided submission that adapts based on project type and scope. The system only requests relevant information and documents, streamlining the submission process. Built-in completeness checking prevents incomplete submissions from being accepted.

Automated workflow management routes applications based on compliance status. Fully compliant projects receive instant approval, while those requiring review are automatically organized by issue type and severity. This intelligent routing ensures staff focus on projects truly requiring human expertise. Document management capabilities include version control for revised plans, automatic organization by project phase, and secure storage with role-based access controls. All documents remain accessible throughout the project lifecycle.

Real-Time Updates and Transparency Features

Transparency transforms the permitting experience for both staff and applicants. Our platform provides live compliance status showing exactly which requirements are met, pending, or non-compliant. Each requirement includes explanatory text and code citations, educating applicants while guiding corrections.

Real-time notifications alert all stakeholders to status changes, required actions, and approvals. Applicants receive immediate feedback on submissions, while staff are notified of high-priority reviews. Comprehensive audit trails document every action, decision, and communication. This transparency builds trust with the development community and provides clear documentation for any disputes or appeals.

GOAL 2: Improve Predictability of the Permitting Process

Understanding the Challenge: Inconsistent plan reviews across different staff members and departments create uncertainty in the development process. When similar projects receive different treatment, it erodes trust and makes project planning difficult.

Symbium's Solution: Our deterministic AI approach guarantees consistent, predictable outcomes that build confidence in the permitting process.

Consistent and Objective AI Application

The foundation of predictability lies in our use of formal logic rather than probabilistic AI. This fundamental architectural decision ensures deterministic results mean the same input always produces the same output. A project submitted today, next month, or next year will receive identical compliance determinations if codes haven't changed. This consistency is mathematically guaranteed by our logic-based approach.

Objective code interpretation removes subjective judgment from routine compliance checks. While edge cases may still require human interpretation, the vast majority of requirements have clear, objective criteria that our system applies uniformly. Transparent logic paths show exactly how each determination was reached. Unlike "black box" AI systems, every decision can be traced through the logical rules applied, building confidence in the results.

Standardized Review Criteria Implementation

Symbium enables jurisdictions to standardize their review criteria while maintaining local flexibility. Configurable rule sets allow jurisdictions to encode their specific interpretations and local amendments. Once configured, these rules apply uniformly to all projects, eliminating reviewer-to-reviewer variation.

Department coordination through shared rule sets ensures all disciplines apply consistent standards. When multiple departments review a project, they work from the same foundational requirements. Version control and change management document any modifications to review criteria, maintaining historical consistency while enabling controlled evolution of standards.

Audit Trail and Decision Documentation

Every aspect of the review process is documented for complete transparency. Comprehensive decision logs record not just what was decided, but why. Each compliance determination includes the specific code sections evaluated, the project data considered, and the logical path to the conclusion.

Change tracking documents any modifications to applications, plans, or review outcomes. This creates a complete historical record for permits, valuable for both compliance and future reference. Performance analytics enable jurisdictions to monitor consistency across different project types, identifying any areas where additional standardization may be beneficial.

GOAL 3: Integration and Coordination with Other Software Solutions

Understanding the Challenge: Modern jurisdictions rely on numerous software systems for GIS, permit tracking, financial management, and other functions. Manual coordination between systems creates inefficiencies and potential failure points.

Symbium's Solution: Our Integration Engine provides seamless connectivity while maintaining each system's integrity.

API-Based Integration Architecture

Our modern API architecture enables real-time data exchange with existing systems. RESTful APIs provide standard interfaces for all common operations. Whether reading parcel data from GIS or creating permit records, our APIs use industry-standard protocols that IT teams understand.

Webhook notifications enable event-driven workflows. When a permit is approved in Symbium, webhooks can trigger automatic updates in permitting systems, notifications to applicants, and scheduling of inspections. Batch processing capabilities support large-scale data synchronization for initial setup or periodic reconciliation. This ensures data consistency across all connected systems.

GIS and CAD System Connectivity

Spatial data integration is critical for accurate permitting. ESRI ArcGIS integration reads parcel boundaries, zoning designations, overlay districts, and environmental constraints directly from authoritative GIS sources. This eliminates manual data entry and ensures accuracy.

CAD file processing extracts relevant data from submitted drawings, enabling automated checking of setbacks, lot coverage, and other spatial requirements against GIS-derived property constraints. Real-time validation confirms project locations against GIS data, immediately identifying any conflicts with zoning, easements, or other spatial restrictions.

Financial and Permitting System Integration

Symbium seamlessly connects with existing business systems. Permit tracking system integration with 30+ platforms including Accela, Tyler Technologies, Central Square, CityWorks, and eTRAKiT. Our integrations are bidirectional, creating permit records while reading existing data for validation.

Payment processing through existing financial systems or our integrated Stripe gateway. We support complex fee calculations and multi-party transfers, ensuring accurate fee collection and distribution. License verification connects to state and local databases to confirm contractor credentials, automatically validating authorization for specific work types.

Manual Override Capabilities for Unique Cases

While automation handles routine cases, we recognize the need for flexibility. Override workflows allow authorized staff to modify automated determinations when warranted. All overrides require justification and are fully documented in the audit trail.

Exception handling routes unusual cases to appropriate staff while processing standard applications automatically. This ensures human expertise is applied where most valuable. Configurable automation levels let jurisdictions choose which decisions to fully automate versus flag for review, providing a gradual transition path.

All-in-One Solution Alternative

For jurisdictions seeking comprehensive modernization, Symbium can serve as a complete permit management platform. Full-service capabilities encompass application intake, plan review, permit issuance, inspection scheduling, and certificate of occupancy processing. This eliminates integration complexity by providing unified functionality.

Migration support helps jurisdictions transition from legacy systems with comprehensive data migration tools and parallel-run capabilities during transition. Hybrid deployment options allow jurisdictions to use Symbium for specific permit types while maintaining existing systems for others, enabling phased adoption.

GOAL 4: Provide Reliable Software Solutions

Understanding the Challenge: Jurisdictions require absolute reliability from mandated systems. Downtime directly impacts citizens and businesses, potentially delaying critical projects.

Symbium's Solution: Enterprise-grade infrastructure and operational excellence ensure consistent availability.

Cloud Infrastructure and Scalability

Our AWS-based architecture provides industry-leading reliability. Multi-region deployment ensures continued operation even if an entire AWS region experiences issues. Data is replicated across geographically distributed centers for maximum resilience.

Auto-scaling capabilities handle demand spikes seamlessly. Whether it's end-of-month permit rushes or major development announcements, our infrastructure scales automatically. Load balancing distributes traffic across multiple servers, preventing any single point of failure and ensuring consistent performance regardless of user volume.

Uptime Guarantees and SLA Commitments

We stand behind our reliability with strong service level agreements. 99.9% uptime SLA translates to less than 9 hours of downtime annually—significantly better than most government-operated systems. This includes all planned maintenance.

Performance guarantees ensure sub-second response times for compliance checks and rapid plan processing regardless of file size or complexity. Financial backing provides service credits for any SLA violations, demonstrating our confidence in platform reliability.

Maintenance Windows and Business Hours Protection

System maintenance never impacts normal business operations. Zero-downtime deployments using blue-green deployment strategies mean updates occur without service interruption. Users experience seamless transitions to new versions.

Maintenance scheduling occurs during off-peak hours (typically 2-4 AM local time) and is communicated well in advance. Critical security patches can be applied immediately without downtime. Rollback capabilities ensure any problematic updates can be instantly reversed, minimizing potential impact from deployment issues.

System Monitoring and Reporting Capabilities

Proactive monitoring ensures issues are addressed before users notice. 24/7 automated monitoring tracks system health, performance metrics, and error rates. Anomalies trigger immediate alerts to our operations team.

Real-time dashboards provide jurisdictions visibility into system status, usage statistics, and performance metrics. This transparency builds confidence in system operations. Predictive analytics identify potential issues before they impact service. For example, storage trending analysis ensures capacity is added before limits are reached.

GOAL 5: Long-Term Improvement, Maintenance, and Support

Understanding the Challenge: Technology and regulations evolve rapidly. Systems must continuously improve to remain valuable while maintaining stability for existing operations.

Symbium's Solution: Our commitment to continuous improvement ensures lasting value.

Continuous AI Model Enhancement

Our AI technology evolves through multiple channels. Code update integration incorporates new building code versions within 30 days of publication. Our team of code experts reviews changes and updates logic rules accordingly.

Performance optimization through ongoing analysis of system decisions identifies opportunities for faster processing and clearer explanations. Capability expansion adds support for new project types and code sections based on customer needs and regulatory changes.

Regular Feature Updates and Additions

Quarterly releases deliver meaningful improvements. Customer-driven development prioritizes features based on user feedback and usage analytics. Our roadmap directly reflects jurisdiction needs.

Backward compatibility ensures new features don't disrupt existing workflows. Jurisdictions can adopt new capabilities at their own pace. Preview programs allow interested jurisdictions to test new features before general release, ensuring smooth rollouts.

Comprehensive Support Structure

Multiple support tiers meet varying jurisdiction needs. Standard support includes business hours coverage with 4-hour response SLA, suitable for most jurisdictions. This includes email and phone support for both staff and applicants.

Premium support provides 24/7 coverage with 1-hour response SLA for mission-critical operations. This includes dedicated support representatives familiar with specific jurisdiction configurations. Dedicated support assigns specific team members to large jurisdictions, providing continuity and deep understanding of unique requirements.

System Monitoring and Troubleshooting

Proactive support prevents issues. Automated health checks continuously verify system operations, often resolving issues before they're noticed. Performance monitoring identifies slowdowns or errors, triggering automatic remediation or support team intervention. Regular optimization reviews usage patterns to identify improvement opportunities, ensuring the system becomes more efficient over time.

CHALLENGE 1: Learn, Interpret, and Apply Current and Historic Resources

Understanding the Challenge: Jurisdictions rely on diverse resources including current and historic codes, zoning maps, planned development ordinances, and local amendments. AI systems must accurately interpret and apply these varied sources.

Symbium's Solution: Our knowledge-based AI excels at incorporating diverse regulatory sources.

Multi-Source Document Processing Capability

Our system ingests and processes regulatory information from multiple sources. Structured code ingestion converts building, electrical, plumbing, and mechanical codes into logical rules. Our team of code experts ensures accurate interpretation of technical requirements.

Zoning map integration imports GIS-based zoning data, including overlay districts and special designations. The system understands spatial relationships and applies location-specific requirements. Local amendment handling incorporates jurisdiction-specific modifications to model codes. These amendments layer onto base codes, ensuring local requirements take precedence.

Historic Code Version Management

Understanding which codes apply to specific projects requires sophisticated version control. Temporal awareness tracks when different code versions were in effect, automatically applying the correct version based on permit application dates or vested rights.

Granular versioning manages different adoption dates for various codes—for example, when building codes update on a different schedule than energy codes. Amendment tracking maintains the complete history of local amendments, critical for renovations of existing structures.

Zoning Map and PD District Integration

Complex zoning requires sophisticated spatial analysis. Planned Development integration incorporates custom requirements from PD ordinances, which often have unique standards different from base zoning.

Overlay district handling applies additional requirements from historic districts, airport zones, or environmental overlays automatically based on project location. Dynamic updates reflect zoning changes in real-time as jurisdictions update their GIS systems, ensuring current requirements apply.

Code Update and Version Control System

Keeping pace with regulatory changes requires systematic processes. Publication monitoring tracks code organization publications for updates, ensuring timely incorporation of changes.

Impact analysis identifies which existing permits or project types are affected by code changes, enabling proactive communication. Staged rollout allows jurisdictions to preview changes before activation, ensuring smooth transitions to new requirements.

CHALLENGE 2: Improve Current Plan Review Times

Understanding the Challenge: Manual plan review often takes days or weeks, with accuracy depending on reviewer expertise and workload. Jurisdictions need faster, more thorough reviews without sacrificing quality.

Symbium's Solution: Dramatic speed improvements with enhanced accuracy.

Processing Speed Benchmarks and Performance Metrics

Our performance metrics demonstrate transformative improvements. Instant simple permits like residential solar, HVAC replacements, and water heaters are approved in under 60 seconds for compliant applications. Complex plan analysis through Sierra processes multi-page plan sets in 2-5 minutes, extracting and validating hundreds of data points. Concurrent review checks all disciplines simultaneously rather than sequentially, eliminating departmental handoffs that add days to review times.

Real-world metrics from our jurisdictions show 90% reduction in review time for standard permits, 75% decrease in application resubmissions, and 95% applicant satisfaction scores.

A case study for the City of Lancaster can be found here: https://symbium.medium.com/symbium-and-accela-are-unlocking-instant-solar-permitting-together-in-lancaster-california-1a56d318da20

Accuracy Enhancement Over Manual Review

Automated review improves accuracy through comprehensive checking that evaluates every applicable code section, not just common items. Human reviewers often focus on familiar areas, potentially missing obscure requirements. Consistent thoroughness maintains the same detailed review regardless of workload or time pressures. The system never rushes through reviews or misses items due to fatigue. Error elimination removes transcription errors, calculation mistakes, and oversight issues common in manual processes.

Thoroughness and Comprehensive Coverage

Our system provides unprecedented review completeness. Multi-discipline integration simultaneously checks building, electrical, plumbing, mechanical, and energy codes. Interdependencies between systems are automatically validated. Edge case handling includes rarely-used code sections that human reviewers might overlook. Every requirement is checked every time. Calculation verification automatically validates load calculations, sizing requirements, and other mathematical elements that are time-consuming and error-prone for human review.

Comparative Analysis with Traditional Methods

The improvements are dramatic when compared to traditional review. Traditional manual review typically takes 5-10 business days for initial review, has a 15-20% error rate requiring resubmission, involves sequential department reviews adding delays, and shows inconsistent thoroughness based on reviewer. In contrast, Symbium automated review provides instant to 5 minutes for initial compliance check, has less than 1% error rate with clear correction guidance, performs simultaneous all-discipline review, and delivers 100% consistent comprehensive checking.

CHALLENGE 3: Multi-Disciplinary Simultaneous Review

Understanding the Challenge: Traditional sequential reviews where plans move from department to department create bottlenecks and may miss interdisciplinary conflicts. Coordinating multiple reviewers is complex and time-consuming.

Symbium's Solution: Unified multi-discipline analysis with intelligent conflict resolution.

Cross-Department Code Application

Our system inherently operates across all disciplines. Integrated code checking evaluates all applicable codes simultaneously. For example, a kitchen remodel checks building codes for structural changes, electrical codes for appliance circuits, plumbing codes for fixture placement, and mechanical codes for ventilation.

Interdependency awareness identifies when requirements from different codes interact. The system recognizes when electrical panel upgrades trigger working space requirements that affect plumbing locations. Unified analysis engine prevents the compartmentalized thinking that occurs with separate department reviews, ensuring holistic project evaluation.

Color-Coded Markup System by Discipline

Clear visual communication enhances multi-discipline coordination. Discipline-specific annotations use consistent color coding (e.g., red for building, blue for electrical, green for plumbing) making it immediately clear which department identified each issue.

Layered viewing options allow users to show/hide different discipline comments, focusing on specific areas while maintaining access to all information. Consolidated reporting presents all issues in organized lists by discipline while maintaining the relationships between interrelated requirements.

Coordinated Review Workflow Management

Intelligent workflow coordination replaces manual handoffs. Parallel processing enables all disciplines to review simultaneously rather than waiting for sequential sign-offs. This dramatically reduces total review time.

Automatic conflict detection identifies when different disciplines have conflicting requirements, flagging these for human resolution before they cause project delays. Smart routing directs specialized issues to appropriate reviewers while handling routine compliance automatically. This ensures expert attention where needed without creating bottlenecks.

Conflict Resolution Between Departments

When disciplines conflict, our system facilitates resolution. Conflict identification automatically detects when different code requirements cannot be simultaneously satisfied, presenting the specific conflicting sections.

Resolution documentation provides space for reviewers to document how conflicts were resolved, creating precedents for future similar situations. Hierarchical rule application understands which requirements take precedence (e.g., life safety over energy efficiency) and can suggest resolution paths.

CHALLENGE 4: Seamless Integration with Existing Systems

Understanding the Challenge: Jurisdictions have significant investments in existing software systems. Any new solution must integrate seamlessly without disrupting operations or requiring system replacement.

Symbium's Solution: Proven integration success with 30+ different systems.

Pre-Built Integration Modules

Our extensive integration library accelerates deployment. Major system connectors include pre-built integrations for Accela, Tyler Technologies, Central Square, CityWorks, and eTRAKiT. These handle 80% of the market without custom development.

Standardized data mappings translate between different systems' data models, ensuring information flows correctly regardless of terminology differences. Configuration tools allow IT teams to map custom fields and workflows without programming, adapting our integrations to local implementations.

Real-Time Data Synchronization

Maintaining data consistency requires sophisticated synchronization. Bi-directional updates ensure changes in either system reflect immediately in the other. When permit status updates in Symbium, the permit tracking system updates automatically.

Conflict resolution handles simultaneous updates gracefully, preventing data loss or corruption when multiple systems modify records. Transaction logging provides complete audit trails of all data exchanges, essential for troubleshooting and compliance verification.

Data Integrity and Security Measures

Protecting sensitive information during integration is paramount. Encrypted communications use TLS 1.3 for all data transmission between systems. No sensitive data ever travels unencrypted.

Authentication protocols support SAML, OAuth, and API keys, adapting to each jurisdiction's security requirements. Data validation ensures information integrity through checksums and verification protocols, preventing corruption during transfer.

Implementation Methodology and Timeline

Our proven implementation approach ensures smooth deployment. Week 1-2 involves discovery that documents existing systems, data models, and integration requirements through collaborative sessions with IT and business teams. Week 3-4 focuses on configuration that sets up integration mappings and security protocols in a test environment, validating data flows with sample transactions. Week 5-6 encompasses testing that performs comprehensive integration testing including edge cases and failure scenarios. User acceptance testing confirms business requirements are met. Week 7-8 covers deployment that migrates configurations to production with careful monitoring. Parallel running ensures no disruption to existing operations.

CHALLENGE 5: Scalability and Flexibility for Future Growth

Understanding the Challenge: Technology needs evolve rapidly. Today's solution must scale to handle growing volumes and adapt to new requirements without wholesale replacement.

Symbium's Solution: Cloud-native architecture designed for unlimited growth.

Cloud-Native Architecture Design

Built for scale from the ground up, our microservices architecture separates different functions into independent services. This allows individual components to scale based on demand without affecting others.

Container orchestration using Kubernetes enables automatic scaling and self-healing. New instances spin up automatically during peak demand. Stateless design ensures any server can handle any request, eliminating bottlenecks and enabling horizontal scaling.

Multi-Tenant Capability

Efficient resource utilization across jurisdictions starts with logical separation that ensures complete data isolation between jurisdictions while sharing infrastructure. Each jurisdiction's data remains completely private.

Resource pooling provides economies of scale, reducing per-jurisdiction costs while maintaining performance. Customization layers allow each jurisdiction to maintain unique configurations without affecting the core platform or other users.

Feature Expansion Framework

Adding new capabilities without disruption is enabled through our plugin architecture that allows new features to be added as modules without modifying core systems. This ensures stability while enabling innovation.

API extensibility provides hooks for custom functionality, allowing jurisdictions or third parties to build specialized features. Feature flags enable gradual rollout of new capabilities, allowing jurisdictions to adopt changes at their own pace.

Technical Upgrade Pathway

Future-proofing through systematic evolution includes rolling updates that deploy improvements without downtime, ensuring continuous service during upgrades. Backward compatibility maintains support for existing integrations and workflows even as new capabilities are added. Technology refresh cycles regularly update underlying frameworks and libraries, preventing technical debt accumulation.

CHALLENGE 6: User Experience and Accessibility

Understanding the Challenge: Government systems must serve diverse users—from tech-savvy contractors to first-time homeowners, including those with disabilities. Poor user experience creates barriers to compliance and frustrates stakeholders.

Symbium's Solution: Intuitive, accessible design for all users.

Intuitive Interface Design

User-centered design principles guide our interface. Progressive disclosure presents information as needed, preventing overwhelming new users while providing power features for experts. Simple projects see simple interfaces.

Contextual help provides explanations exactly where needed. Hovering over any requirement shows plain-language explanations with examples. Smart defaults pre-populate common values while allowing overrides, speeding data entry without sacrificing flexibility.

Stakeholder-Specific Dashboards

Different users need different views. The applicant dashboard focuses on project status, required actions, and clear next steps. Visual progress indicators show exactly where projects stand.

The staff dashboard emphasizes queue management, workload distribution, and performance metrics. Supervisors see team productivity analytics. The inspector interface is optimized for

mobile use in the field, showing relevant permit details, history, and code requirements for efficient inspections.

Accessibility Compliance (ADA/WCAG)

Full accessibility for all users starts with WCAG 2.1 AA compliance that ensures screen reader compatibility, keyboard navigation, and appropriate color contrast throughout the system.

Multiple input methods support mouse, keyboard, touch, and voice navigation, accommodating different user capabilities. Accessible documents generate permits and reports in accessible PDF formats, ensuring compliance information reaches all users.

Mobile and Cross-Platform Support

Modern users expect device flexibility. Responsive design automatically adapts to screens from phones to desktop monitors, maintaining functionality across all devices.

Progressive web app capabilities enable offline functionality for field use, syncing when connectivity returns. Native mobile features leverage device cameras for plan upload and GPS for location verification, streamlining mobile workflows.

CHALLENGE 7: Cost Efficiency and Sustainability

Understanding the Challenge: Jurisdictions face budget constraints while needing enterprise-grade solutions. The cooperative purchasing model must deliver economies of scale benefiting all participants.

Symbium's Solution: Innovative pricing that eliminates jurisdiction costs.

Cooperative Purchasing Pricing Structure

Our unique model aligns costs with value. Zero jurisdiction fees eliminate budget barriers. Jurisdictions pay nothing for software licenses, maintenance, or standard support.

Applicant convenience fees of $25-50 per permit fund the system. Users who benefit from faster service contribute to system costs. Volume independence ensures small jurisdictions receive the same sophisticated system as large ones, delivering true cooperative benefit.

Economies of Scale Benefits

Shared infrastructure reduces per-jurisdiction costs. Multi-tenant efficiency spreads infrastructure costs across all users while maintaining data isolation and security.

Collective bargaining power for third-party services like payment processing reduces transaction costs for everyone. Shared development costs mean new features benefit all jurisdictions without individual investment.

Total Cost of Ownership Analysis

Comparing traditional vs. Symbium approach reveals dramatic differences. Traditional software licensing typically involves initial license costs of $50,000-200,000, annual maintenance at 20% of license cost, integration costs of $25,000-100,000, training costs of $10,000-25,000, resulting in a total 5-year TCO of $200,000-500,000.

The Symbium model offers this Bid opportunity a discounted one-time integration and configuration cost of $60,000 with no ongoing annual fees for the core services of Complaw and Integration; then, a monthly per-seat fee of $1,200. It's over 50% discount from our standard per-jurisdiction procurement fees. There are no hidden maintenance or update fees. That's it!

ROI Projections for Jurisdictions

Quantifiable benefits typically include staff time savings of 10-20 hours per week on routine reviews, redeployable to complex projects or improved customer service. Increased permit revenue from faster processing and improved compliance rates, often 15-25% increases in permit volumes. Reduced errors and rework saving 5-10 hours weekly on correction cycles and resubmissions.

The typical ROI timeline shows system deployment and training in months 1-2, staff efficiency gains emerging in months 3-4, revenue increases materializing in months 5-6, and positive ROI achieved from month 6 onward.

CHALLENGE 8: Real-Time Data and Reporting

Understanding the Challenge: Jurisdictions need actionable insights from permitting data to improve operations and demonstrate performance. Static reports are insufficient for modern decision-making.

Symbium's Solution: Comprehensive analytics with real-time visibility.

Advanced Analytics and KPI Dashboard

Transform data into insights through real-time metrics that show permit volumes, processing times, revenue, and staff productivity updated continuously throughout the day.

Trend analysis identifies patterns in application types, seasonal variations, and growing development areas to support planning decisions. Performance benchmarking compares current performance to historical baselines and peer jurisdictions, driving continuous improvement.

Custom Report Builder

Flexibility for unique reporting needs comes through our drag-and-drop interface that allows non-technical users to create custom reports combining any data elements in the system.

Scheduled distribution automatically sends reports to stakeholders on defined schedules, ensuring consistent communication. Export capabilities support PDF, Excel, and CSV formats for further analysis or presentation needs.

Power BI Integration and Data Export

Leverage existing business intelligence investments through direct Power BI connector that enables real-time dashboard creation using familiar Microsoft tools.

API access provides programmatic data retrieval for integration with other analytics platforms. Data warehouse support enables extraction to jurisdiction data warehouses for combined analysis with other systems.

Trend Analysis and Performance Metrics

Actionable insights for process improvement come from processing time analysis that identifies bottlenecks by permit type, reviewer, or project characteristic, targeting improvement efforts.

Compliance patterns show common deficiencies, informing training needs and potential code clarifications. Customer satisfaction tracking through built-in surveys provides feedback on system and process improvements.

Minimum Solution Requirements Compliance
Pilot Testing Program Design

Our structured pilot approach ensures successful deployment through three phases. Phase 1, Limited Deployment (Weeks 1-4), deploys 2-3 permit types for internal testing, trains the core staff team, and refines configurations based on feedback. Phase 2, Controlled Public Release (Weeks 5-8), opens to trusted contractors and frequent users, monitors performance and user feedback, and adjusts workflows as needed. Phase 3, Full Production (Week 9+), releases to all users, continues monitoring and optimization, and documents lessons learned.

System Compatibility Matrix

Comprehensive compatibility ensures broad adoption across operating systems including Windows 10/11, macOS 10.15+, iOS 13+, and Android 8+. Browser support includes Chrome 90+, Firefox 88+, Safari 14+, and Edge 90+. Integration compatibility covers all major permit tracking systems, ESRI ArcGIS 10.x and ArcGIS Online, Microsoft Office 365, and Google Workspace.

Data Security and Compliance Framework

While Symbium does not currently hold formal compliance certifications, we maintain enterprise-grade security standards through rigorous internal testing, comprehensive documentation, and oversight by a dedicated DevOps Manager.

Our security practices align with leading frameworks such as SOC 2 Type II, ISO 27001 (in progress), and the NIST Cybersecurity Framework. Safeguards include:

- AES-256 encryption at rest
- TLS 1.3 encryption in transit

- Multi-factor authentication
- Role-based access control
- Regular third-party testing and threat modeling from Cloudflare

These measures ensure a high level of protection for sensitive data, consistent with best practices expected in certified environments.

Maintenance and Support Plan

Comprehensive support ensures long-term success through preventive maintenance including weekly system health checks, monthly performance optimization, quarterly security updates, and annual infrastructure reviews. Support channels include email with 4-hour response SLA, phone support during business hours, emergency hotline for critical issues, and self-service knowledge base.

Training and Onboarding Program

Ensuring user success through comprehensive training includes a staff training program with 4-hour initial administrator training, 2-hour reviewer training by discipline, 1-hour refresher sessions quarterly, and train-the-trainer program availability. Public user resources include video tutorials for common tasks, interactive help within application, printable quick-start guides, and webinars for contractor groups.

Disaster Recovery and Business Continuity

Ensuring operations continue during emergencies through recovery objectives including Recovery Time Objective (RTO) of 4 hours, Recovery Point Objective (RPO) of 1 hour, and geographic redundancy across 3 AWS regions. Continuity procedures include automated failover to backup systems, regular disaster recovery testing, documented emergency procedures, and 24/7 incident response team.

Performance Guarantee and Warranty

Standing behind our solution with performance warranties including 99.9% uptime guarantee, sub-second response time for queries, 5-minute maximum plan processing, and 60-second simple permit issuance. Remedy provisions include service credits for SLA breaches, priority support for performance issues, free performance optimization services, and option to terminate for chronic issues.

Additional Value-Added Features and Innovations
Advanced AI Capabilities Beyond Requirements

Symbium offers cutting-edge features that exceed basic requirements. Predictive analytics identify projects likely to have compliance issues, allowing proactive staff intervention and applicant guidance. Natural language query enables users to ask questions in plain English like "Can I build a

deck in my backyard?" and receive code-backed answers instantly. Automated code interpretation updates incorporate jurisdiction clarifications and interpretations, building institutional knowledge into the system.

Industry-Leading Security Features

Beyond standard security requirements, we offer blockchain audit trails that create tamper-proof records of all permit decisions and modifications, valuable for legal proceedings. Advanced threat detection using AI identifies unusual access patterns or potential security threats before they materialize. Encrypted data rooms provide additional security for sensitive project types requiring additional confidentiality, such as critical infrastructure.

Enhanced Collaboration Tools

Facilitating better communication through built-in messaging that enables secure communication between staff and applicants within the platform, maintaining complete conversation history. Virtual meeting integration allows screen sharing and video conferences directly from the platform for complex project discussions. Collaborative markup tools enable multiple reviewers to annotate plans simultaneously with automatic conflict resolution.

Future Technology Roadmap

Our commitment to innovation continues with planned AR/VR integration in 2026 that will enable virtual site inspections and immersive plan review experiences. IoT sensor integration, also planned for 2026, will connect to smart building systems for real-time compliance monitoring. Quantum-resistant encryption planned for 2027 will ensure long-term security as quantum computing advances.

5. Pricing

See attached Pricing Schedule. All-in, discounted pricing for Symbium is provided on per-jursidiction basis.

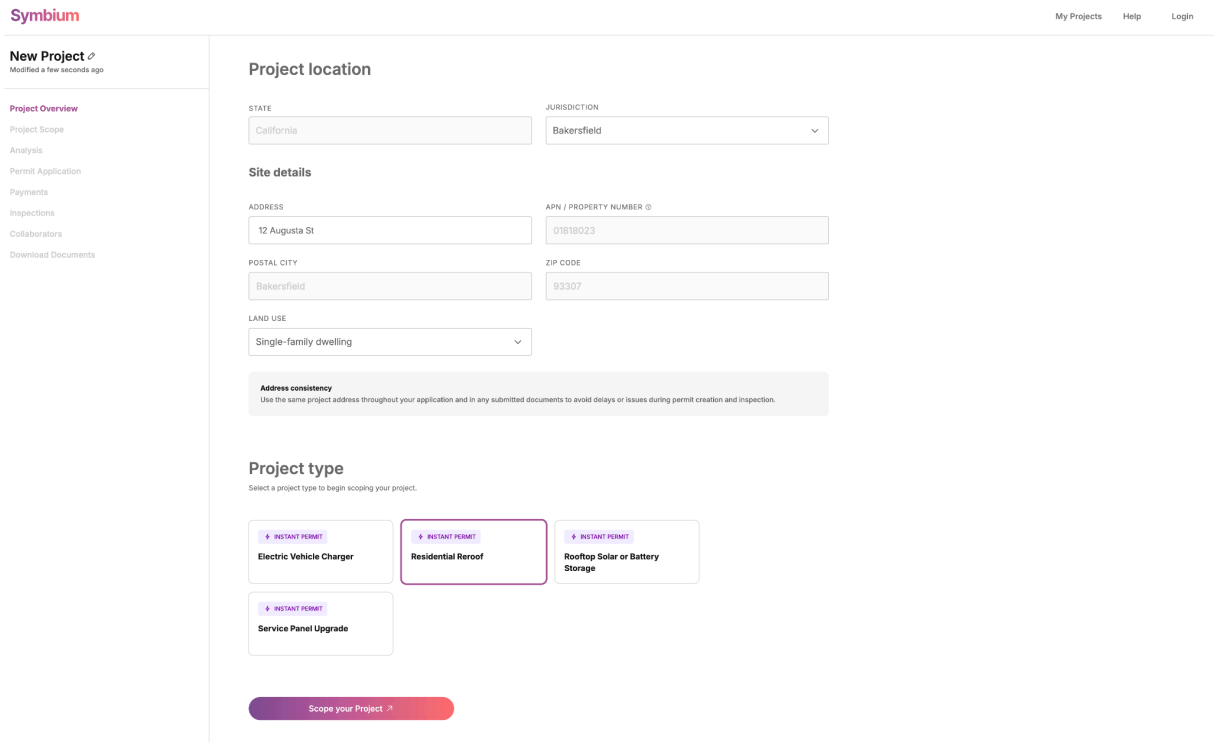
6. Exhibits and Attachments

See Screenshots below as well as required pricing and other addenda, separately uploaded.

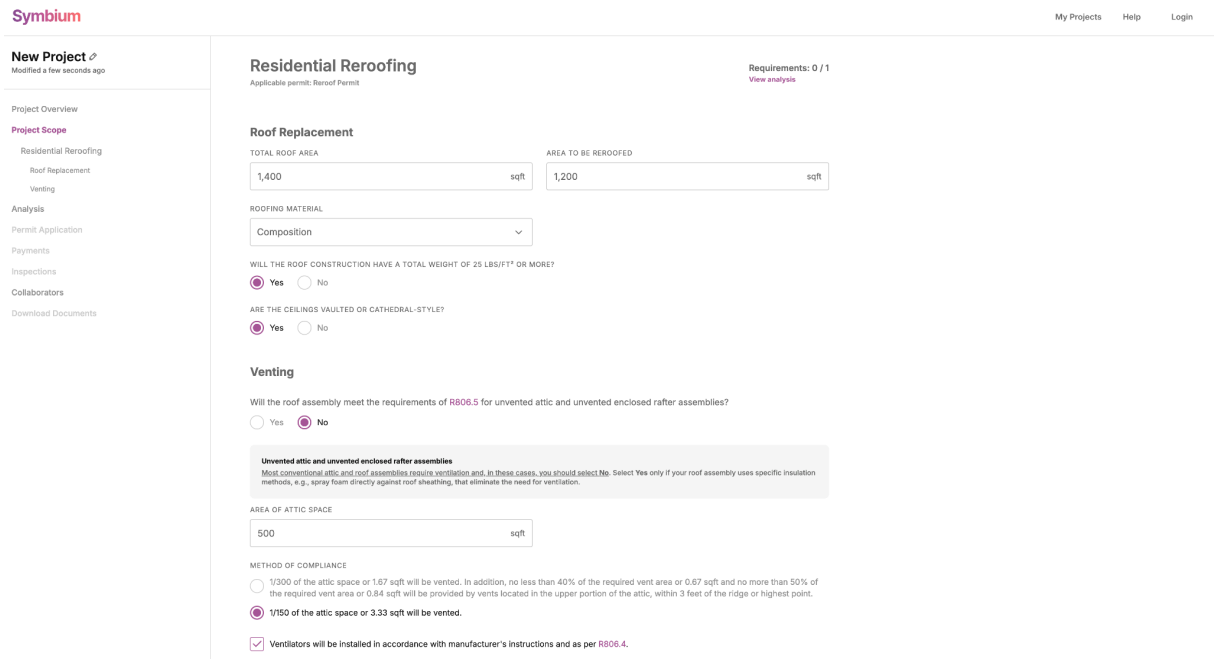
Symbium

Symbium Screenshots

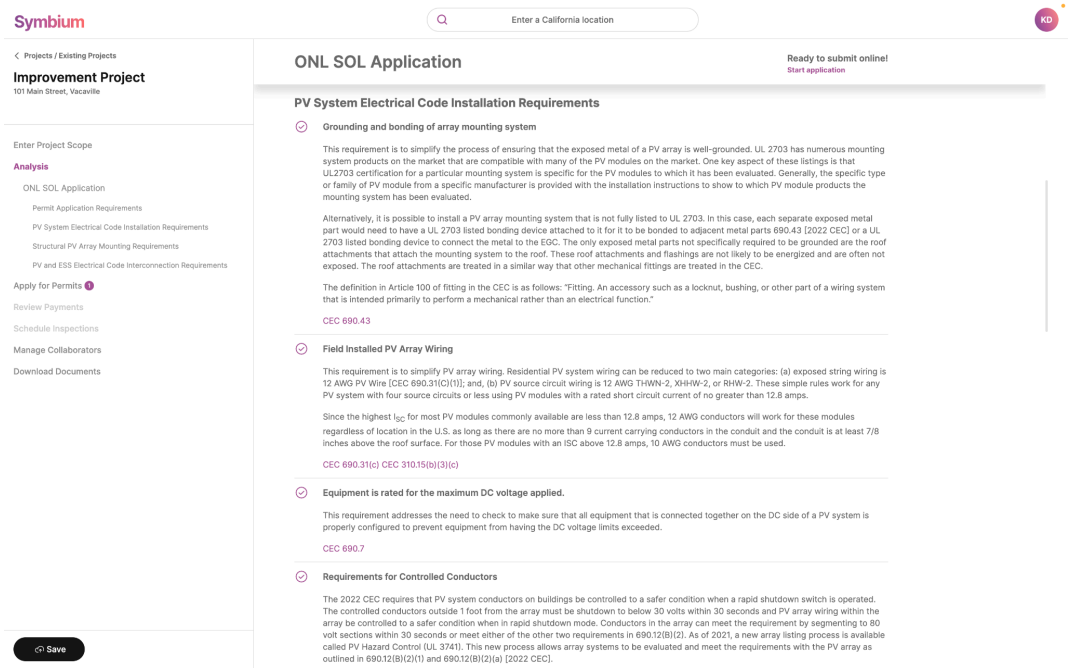
STEP 1: The Symbium experience begins with selecting a project type, as available, for a given address.



STEP 2: Applicants answer detailed questions about their proposed project to apply for an instant or accelerated permit. Another form of input is the upload of project plans, which Symbium analyzes.



STEP 3: Based on the inputs and uploads, Symbium provides instant completeness and compliance analyses (and why) against applicable codes, including substantive and procedural requirements.It is the only service that provides this level of transparency *at the time a project is being configured*.



STEP 4: Applicants may submit permit applications directly on Symbium once requirements are met and Symbium and AHJ fees are paid. The AHJ decides whether certain project types are eligible for instant permit issuance or accelerated permit issuance (with review of pre-checked applications from Symbium.