



The Town of Prescott Valley, Arizona: Using AI-Driven Analysis for Affordable Housing Strategy

June 2025



Client: Town of Prescott Valley

Industry: Municipal Government | Affordable Housing & Urban Planning

Solution: City Detect PASS AI

Executive Summary

In 2024, the Town of Prescott Valley launched a forward-looking affordable housing initiative, backed by a \$200,000 grant from the Arizona Department of Housing, to strategically expand housing while enhancing neighborhood quality. Partnering with City Detect, the town deployed PASS AI to assess 17,108 residential parcels, identifying 712 undeveloped lots and 4,158 blight indicators in under one week. This AI-powered analysis enabled precise, parcel-level insights aligned with state reporting mandates, empowering Prescott Valley to prioritize remediation, guide infill development, and meet compliance with unprecedented speed and accuracy. The initiative transformed compliance into opportunity, equipping local leaders with the actionable intelligence needed to shape a more affordable, resilient, and equitable housing landscape.



Undeveloped Lot Map 1 of 2 of Prescott Valley, AZ; Data collected by City Detect

The Challenge

In 2024, the Town of Prescott Valley entered into a \$200,000 funding agreement with the Arizona Department of Housing to support its Local Jurisdiction Affordable Housing Plan. The grant, sourced from the State Housing Trust Fund, outlined a strategic imperative: expand housing availability while enhancing neighborhood livability across the town's growing residential footprint. This agreement required Prescott Valley to demonstrate measurable progress through bi-monthly reporting, compliance with state and federal housing regulations, and data-backed insights that could inform investment and policy.

While Prescott Valley's baseline housing quality scored very highly, a 9 out of 10 on City Detect's Housing Quality Index, the town faced a complex and familiar challenge: aligning residential growth with affordability, infrastructure capacity, and proactive blight management. The 712 undeveloped residential lots presented opportunities for housing expansion, but their potential was unevenly distributed. Many of these lots were concentrated in areas with visible indicators of decline. These blight indicators include neglected lawns, overgrown structures, and even structural degradation—conditions that deter investment and undermine public confidence.

Historically, data collection and housing assessments have relied on manual inspections, limiting the town's ability to scale, standardize, or strategically prioritize action. Prescott Valley needed a modernized, high-fidelity approach that could map urban decay, identify buildable land, and deliver actionable intelligence to meet both the regulatory demands of the state's funding agreement and the town's long-term housing affordability goals.

Project Complexity

Executing Prescott Valley's affordable housing strategy required more than identifying underused land or detecting signs of urban blight; it demanded alignment with an increasingly sophisticated and regulated statewide housing framework. At the heart of this framework is the Local Jurisdiction Affordable Housing Plan, which outlines how municipalities can promote sustainable, equitable housing growth through structured planning and accountability.

These plans typically include:

- Needs Assessment – Analysis of housing shortages, affordability gaps, and demographic shifts
- Policy Framework – Zoning and incentives to spur affordable housing development
- Funding Strategy – Coordination of state, federal, and local resources

- Site Selection and Land Use – Identification of suitable, hazard-free parcels
- Community Engagement – Structured input from residents and stakeholders
- Monitoring and Reporting – Ongoing tracking of housing targets and public transparency

In 2025, Arizona expanded these expectations with new regulatory requirements mandating five-year Housing Needs Assessments and annual progress reports. These reports must track development applications, permit approvals, and zoning allocations between single-family and multifamily uses, further reinforcing a statewide commitment to transparency, data-driven governance, and long-term affordability.

Innovative Leadership

Against this backdrop, Prescott Valley faced a complex challenge: assess the condition of the housing stock, identify land suitable for development, and build a strategy rooted in clear, actionable data. This work was supported through a \$200,000 funding agreement with the Arizona Department of Housing, which emphasized fiscal responsibility and required structured reporting, environmental review, and photographic documentation.

To meet these expectations, the town's leadership integrated high-resolution data collection, real-time tracking, and GIS-informed analysis into its planning process. This included bi-monthly performance reporting, rigorous environmental review, and before-and-after photographic documentation for each housing development project. These requirements placed a premium on precision, efficiency, and cross-departmental coordination—demands that traditional methods simply could not meet at scale.

The Solution

To achieve the ambitious housing goals outlined in its funding agreement with the Arizona Department of Housing, Prescott Valley partnered with City Detect to deploy PASS AI—a scalable, AI-powered system designed to support municipal housing strategy with speed, precision, and accountability.

Deployment Strategy

In less than one week, PASS AI reviewed 17,108 residential parcels across the town. During this data collection period, the system identified 712 undeveloped residential lots and detected 4,158 indicators of blight. More critically, the platform structured this data to align seamlessly with the town's reporting requirements, providing clear outputs for state compliance and internal planning needs.

Key outcomes:

- 712 undeveloped lots mapped
- 4,158 blight indicators detected
- Data delivered in < 1 week
- Meets new 2025 state reporting mandates



Example detection of an undeveloped lot in Prescott Valley, AZ; image captured by City Detect's PASS AI

Data Privacy and Community Trust

The deployment was carefully tailored to Prescott Valley's local context, balancing technological efficiency with public transparency and resident privacy. City vehicles passively collected image data using mounted hardware, while built-in anonymization features automatically blurred license plates and faces. Operating on a controlled schedule set in consultation with community stakeholders, the deployment was designed to uphold community trust and avoid any perception of overreach.

“The way we can really position ourselves to succeed is by showing how this audit positively impacted the community. It wasn't used for enforcement—it's about preserving community value, supporting policy, and meeting standards.”

— Gavin Baum-Blake, City Detect CEO and Cofounder

Object Detection and Policy Alignment

Beyond its speed and coverage, PASS AI was configured to detect the specific housing conditions most relevant to Prescott Valley's goals. Object recognition features were selected in close alignment with both state mandates and local priorities. These included indicators such as overgrown vegetation, exterior paint deterioration, structural damage, and other visible signs of property neglect. The results were translated into a Housing Quality Index, offering a visual and data-driven baseline to inform policy development, funding strategies, and long-term remediation planning.

The deployment marked a shift in how Prescott Valley could approach housing strategy—not reactively, but proactively. With a clearer picture of housing conditions town-wide, leaders could visualize, quantify, and strategically prioritize investments. The results also supported budget planning, town council presentations, and community engagement through transparent, evidence-based reporting.

“Having the ability to figure out what our existing housing stock looks like is paramount. This helps us decide where we start our rehab efforts and how to preserve affordable housing before it's lost.”

— Stephanie Robinson, Neighborhood Services Director, Town of Prescott Valley

The Results

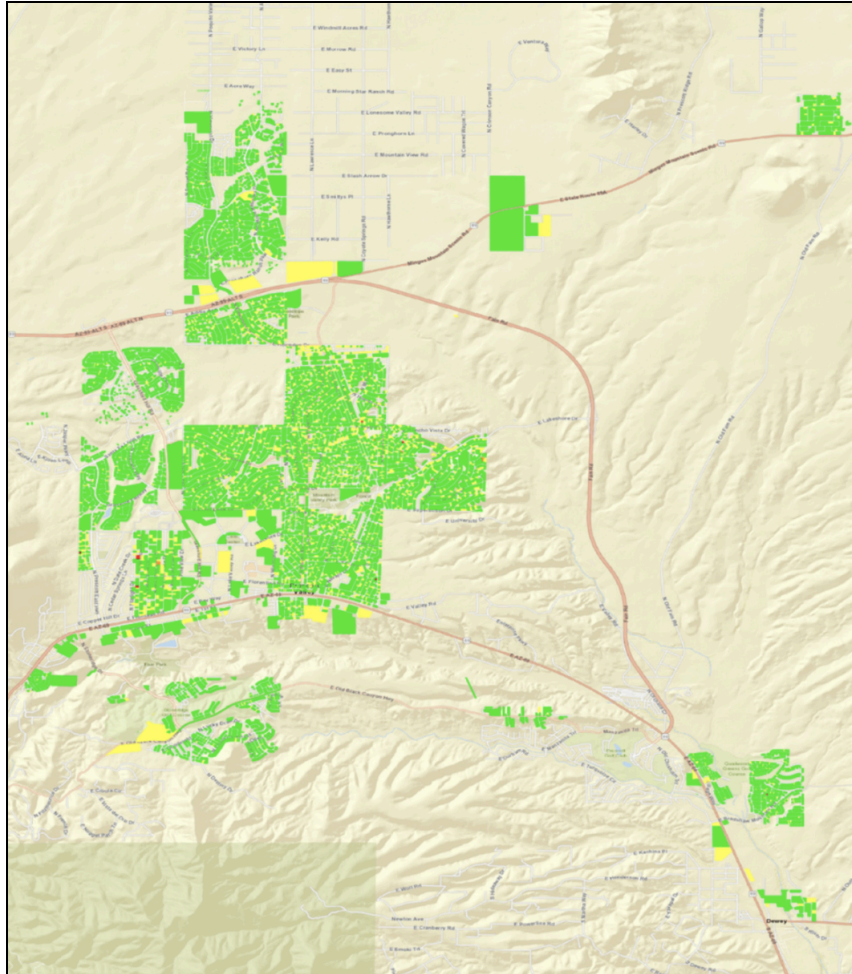
City Detect's deployment of PASS AI did more than fulfill regulatory obligations—it directly addressed Prescott Valley's most pressing housing challenges and empowered the town to make evidence-based decisions about housing development, resource allocation, and revitalization.

Actionable Housing Data

PASS AI identified 712 undeveloped residential lots across the town, approximately 4% of all parcels surveyed. Of these, 146 are located in low-blight areas, making them ideal candidates for near-term housing development. This precise, parcel-level insight allows the town to align zoning, incentives, and infrastructure investments with the areas that offer the greatest potential impact.

Targeted Remediation Priorities

The system mapped over 4,000 blight indicators like structural damage, boarded windows, and cracked pavement, allowing Prescott Valley to prioritize remediation efforts that directly align with state and local housing goals. This ensures that public investments focus on overcoming the most significant barriers to development.



Citywide blight index heat map

Enhanced Planning Efficiency

With geo-tagged data, photographic evidence, and a housing quality index generated from 48 parcel attributes, the town now has a powerful toolset for guiding policy, zoning adjustments, and housing incentives. The data not only satisfies compliance but also accelerates decision-making across departments, from neighborhood services to finance and planning.

Community and Economic Impact

Equipped with credible, visual evidence of housing conditions and development opportunities, city leaders can now build stronger cases for state funding, private investment, and policy reform. This proactive approach improves neighborhood aesthetics, supports code compliance, and lays the groundwork for economic revitalization through infill development and improved housing accessibility.

PASS AI didn't just help Prescott Valley see its housing landscape—it gave the town a new way to strategically shape it. The result is a more informed, agile, and

opportunity-ready municipality, prepared to tackle housing affordability with precision and foresight.

The Impact

At the core of any effective, affordable housing strategy is the ability to expand the available housing supply. In Prescott Valley, City Detect's survey uncovered a powerful asset: 712 undeveloped residential lots, representing approximately 4% of all analyzed parcels. Many of these parcels are located in underutilized or transitional neighborhoods and already zoned for residential use, offering a timely and targeted opportunity for infill development. While most lots would still require acquisition by the city or private developers, the ability to identify and prioritize them in advance reduces planning time, supports cost-effective investment, and avoids the delays and expense associated with large-scale rezoning or new infrastructure expansion.

What makes this opportunity particularly significant is the location and condition of the parcels. Of the 712 lots, 146 are located in low-blight areas, making them prime candidates for near-term residential development. These areas are already attractive to potential homebuyers and developers, meaning new construction could begin quickly and integrate smoothly into the existing community fabric.

Lots situated in moderate to high-blight areas are equally important. While they may not be market-ready today, they represent key infill opportunities that could be unlocked through targeted blight remediation and the strategic application of residential development incentives. By focusing public resources on these areas and removing barriers such as structural decay or overgrowth, Prescott Valley can transform overlooked parcels into attractive housing sites.

Importance to Prescott Valley's Affordable Housing Strategy

Developing these lots doesn't just ease pressure on affordable housing—it creates a ripple effect across the local economy. Infill housing increases population density, which can help sustain the municipal tax base, grow local businesses, attract new employers, and improve infrastructure utilization. Mixed-use or multifamily developments on strategically located parcels could provide even broader benefits, supporting housing diversity, walkability, and economic vitality.

By identifying where development is most feasible and impactful, City Detect provided Prescott Valley with the actionable intelligence needed to guide its next steps, supporting data-driven decisions on housing investments, policy, and planning. With this comprehensive assessment in hand, the town now has clear visibility into one of its most underutilized assets: undeveloped residential lots—a key lever in shaping a more affordable and resilient housing landscape.

Conclusion

An initiative launched to meet compliance requirements has evolved into a critical element of Prescott Valley's forward-looking housing strategy, grounded in visibility, community alignment, and smart investment. Prescott Valley's partnership with City Detect exemplifies what's possible when technology, policy, and proactive leadership align. In the face of evolving state requirements designed to promote transparency, accountability, and long-term housing resilience, the town turned compliance into opportunity. With limited resources and increasing housing demands, Prescott Valley used PASS AI to shift from manual, reactive assessments to a system of precision-driven decision-making, ensuring that every housing policy, zoning adjustment, and infrastructure investment is guided by complete and up-to-date, parcel-level insights.

The project gave Prescott Valley the data to meet compliance goals while supporting long-term planning—mapping blight, identifying infill potential, and prioritizing policy actions with data. This project not only prepared Prescott Valley for its upcoming status as an entitlement community, but it also equipped local leaders with the insights and tools to sustainably grow their housing stock, attract development, and preserve neighborhood character.

With PASS AI, Prescott Valley demonstrated how cities of any size can lead with innovation, manage complexity with clarity, and turn data into action. Equipped with deeper insights and greater agility, the town now moves forward with increased confidence, stronger public trust, and a clear path to shaping a more equitable and resilient housing future.

City Detect is proud to support communities like Prescott Valley in building housing strategies that are not only compliant but visionary. [Contact us](#) today to get started.