AUTONOMOUS
MOWING ROBOT™

RC MOWERS

BEST PRACTICES FOR LANDSCAPE CONTRACTORS:

Building Profitable Bids with Integrated Autonomous Mowers

Author: Colin Busse, RC Mowers Director of Autonomy

Colin Busse leads the development and integration of RC Mowers' Autonomous Mowing Robots (AMRs) into commercial contractor operations. He brings extensive experience in commercial landscape maintenance and robotic mowing operations across diverse sectors, including universities, municipalities, landscape contractors, and airports.

EXECUTIVE SUMMARY

Labor challenges and rising operating costs continue to reshape the landscaping industry. Autonomous mowing is emerging as a solution, but contractors face a critical question: How much of a property can actually be mowed autonomously?

RC Mowers, in partnership with Site Recon and Attentive AI, has developed tools that integrate our Autonomous Mowing Robot (AMR) safety specifications directly into property measurement software. This allows contractors to predict autonomous-ready acreage and hours on prospective jobsites with a high degree of accuracy.

This whitepaper explores how predictive software is transforming the bidding process, enabling contractors to:

- Confidently estimate autonomous mowing potential.
- Create more accurate, profitable bids.
- Justify investments in autonomy with data-backed ROI.
- Build the foundation for integrating AMRs into their operations.

1. THE PROBLEM WITH TRADITIONAL BIDDING

For decades, landscape contractors have relied on a simple formula: estimate labor hours, apply an equipment rate, and add margin. This method fits a conventional crew-based model, but new considerations arise with autonomous mowing.

Contractors face several new challenges when bidding autonomous-ready properties:

- **Reliability concerns** – Many contractors are still learning how to account for autonomous mowing reliability in real-world conditions. Without historical data, it is difficult to forecast uptime and confidently price work.
- **Uncertainty around mow times** – Manual mowing offers predictable timeframes, but autonomy introduces new variables. Contractors are beginning to refine how they estimate AMR completion times across defined mowing plans.
- **Shifting labor-hour models** – Traditional bids are based on crew size and labor hours. With AMRs, the operator supervises robots while completing other work (trimming, blowing, detailing). Contractors are exploring new ways to assign labor hours in this hybrid model.
- **Updating estimating software** – Most existing tools are built around conventional labor and equipment assumptions. Many contractors are finding they need updated input to better reflect simultaneous operator and AMR productivity.

The result is that many contractors either overestimate the value of autonomy (bidding too aggressively and risking margin erosion) or underestimate it (failing to capture savings and losing competitive edge).

2. THE ROLE OF ADVANCED MAPPING TOOLS

In the past, estimating turf areas was a manual and time-consuming process. Contractors would walk properties with a measuring wheel ("wheeling") to calculate square footage. Not only was this labor-intensive, but it was also prone to error. Small mistakes in measurement often scaled into large inaccuracies across a portfolio of properties.

As technology evolved, contractors adopted basic online mapping programs that allowed them to measure properties digitally. While an improvement over wheeling, early versions were often limited by outdated imagery, inconsistent resolution, and the inability to account for obstacles or safety boundaries.

Today, advanced mapping platforms like Site Recon and Attentive AI represent a major leap forward. These tools:

- Use **high-resolution aerial imagery**, often updated within the same year, improving accuracy and relevance.
- Allow contractors to layer in **property-specific details** such as obstacles, zones, and mowing boundaries.
- Provide **detailed acreage and square footage calculations** that are consistent across multiple properties.
- Offer integrations that embed **safety specifications** directly into measurement layers, enabling automated detection of obstacles and precise identification of "autonomous-ready" acreage.

From walking wheels and basic digital tools to today's advanced aerial platforms, this evolution has transformed property measurement from a rough approximation into a precise, data-driven input.

For contractors evaluating autonomous mowing, this accuracy is critical. Autonomous-ready acreage cannot be estimated with a rough guess; it must be calculated precisely to forecast AMR runtime, operator workloads, and ultimately, to bid profitably.

3. PREDICTING AUTONOMOUS ACREAGE AND CONTRACTOR IMPACT

Mapping platforms like Site Recon and Attentive AI can accurately measure turf areas, but they do not predict how long an Autonomous Mowing Robot (AMR) will take to mow those areas. This is where integrating operational benchmarks becomes critical.

By layering safety specifications, operational criteria, and field-tested data onto aerial maps, contractors can identify which turf is truly "autonomous-ready" and estimate how long it will actually take to mow.

Two key elements drive these projections:

1. **Complexity of the mapped area** – Not all acres are equal. A set of baseball outfields, for example, has very different start-stop navigation and obstacle avoidance requirements compared to a wide-open, multi-purpose field.
2. **Historical production paces from real-world AMR operations** – Benchmarks derived from thousands of autonomous mowing hours establish realistic mowing paces for different property types and levels of complexity.

The result is a site-specific projection of autonomous mowing hours that is grounded in measured acreage, refined by complexity, and validated against real-world performance.

For contractors, the business impact of this precision is significant. Traditionally, many have walked a property and "eyeballed" whether it was a good fit for autonomous mowing. With today's mapping and benchmarking, contractors can quantify autonomous potential with accuracy.

On recurring jobsites, mapped autonomous acreage and projected AMR hours can be directly compared to historical manual mowing hours, allowing contractors to confidently reduce dedicated labor while crews still cover all trimming, detailing, and supervisory tasks.

For new portfolios or jobsites without historical data, best practice is using a conservative industry benchmark as the starting point:

- **One AMR should perform approximately 30 acres of autonomous mowing per week.**
  - This benchmark reflects performance after the AMR is fully integrated into the contractor's operation.
  - While AMRs are capable of much higher production rates, the 30-acre benchmark ensures contractors plan realistically for learning curves, operational alignment, and variability across different property types.

By replacing guesswork with data-driven benchmarks, contractors can:

- **Understand both acreage and time** – measure how much can be mowed autonomously and how long it will take.
- **Bid with confidence** – accurately reflect labor savings without over-promising.
- **Protect margins** – avoid underestimating the support labor required alongside AMRs.
- **Scale consistently** – apply a repeatable methodology across new contracts, portfolios, and geographies.

Ultimately, contractors who apply precision measurement and realistic benchmarks not only win more profitable bids but also integrate autonomous mowing seamlessly into their daily operations.

4. FROM PREDICTION TO PROFITABILITY: NEXT STEPS

Accurate prediction of autonomous-ready acreage is only the first step. The true value for contractors comes when these predictions are transformed into profit-driven bidding strategies and operational plans.

With the right tools, contractors can go beyond acreage measurement and incorporate key cost drivers:

- **Number of mowings per season** – Multiplying autonomous hours across the full contract term ensures accurate annualized cost modeling.
- **Multiple AMRs with a single operator** – Factoring in scenarios where one operator supervises two or more AMRs while completing other site work reveals the full labor savings potential.
- **Cost-per-acre or cost-per-hour outputs** – By combining mowing frequency, operator efficiency, and AMR utilization, contractors can calculate a reliable cost-per-acre or cost-per-hour figure to use directly in bids.

Developing an accurate cost model is a critical best practice when bidding autonomous-ready properties. Contractors who do not have an internal calculator should consider utilizing or building one that accounts for both equipment and labor efficiencies. This allows teams to confidently set costs and margins.

In addition to cost modeling, creating a tailored operational plan for each property ensures that projections translate into real-world performance. Aligning labor allocation, deployment logistics, and site-specific details with the cost model helps contractors avoid margin erosion and deliver predictable results.

- **Pre-integration planning** – Using mapping data, we design site-specific mowing routes and determine where and how AMRs should be deployed.
- **Integration support** – We guide crews through the adoption process, combining AMRs with existing labor in a way that maximizes efficiency and minimizes disruption.
- **Post-delivery adoption** – Our team works closely with contractors to track performance against success criteria, making adjustments to routes, labor allocation, and utilization benchmarks as needed.

This end-to-end approach ensures that autonomous mowing is not just purchased but successfully integrated into the contractor's business model. By incorporating predictive data, accurate cost modeling, and hands-on support, RC Mowers helps contractors move from prediction to profitability with confidence.

5. CASE EXAMPLE: SCHOOL DISTRICT PORTFOLIO EVALUATION

One of the most effective ways to understand the value of autonomous bidding is through real-world customer experiences. Recently, a landscape contractor maintaining a school district portfolio evaluated how autonomy could optimize their existing operations.

Using our AMR Integration Plan, we mapped every property in the district applying RC Mowers' built-in safety specifications. The analysis revealed that across the district, properties averaged 40–70% autonomous-ready acreage.

This range of autonomous suitability was a key factor in the contractor's decision to invest in multiple AMRs. By knowing exactly how much acreage could be reliably mowed autonomously, the contractor could:

- Confidently justify the investment in autonomous mowing equipment.
- Forecast labor savings by reducing the number of crew members required for recurring jobs.
- Design operational routes that kept operators productive while AMRs handled large, open turf areas.

Ultimately, the ability to measure and predict autonomous acreage gave the contractor the data needed to make a business decision that aligned with both cost savings and operational efficiency.

This case underscores the power of moving beyond guesswork. Eyeballing a property is no longer necessary — accurate, data-driven evaluations now provide the foundation for integrating autonomous mowers into operations.

6. IDENTIFYING AUTONOMOUS-READY PROPERTIES

Not every property is equally suited for autonomous mowing. The most profitable bids come from identifying sites where Autonomous Mowing Robots™ (AMRs) can operate efficiently while keeping operators fully engaged with other tasks.

KEY CHARACTERISTICS OF A GOOD FIT

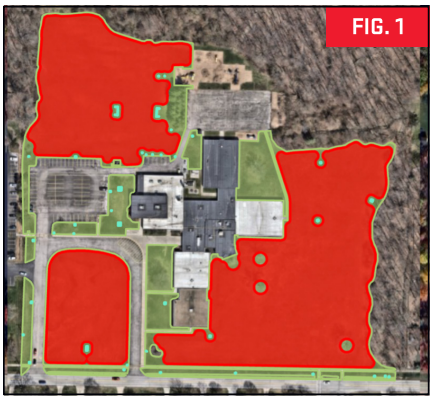
- Large, open turf areas – Athletic fields, parks, school grounds, and campuses where AMRs can mow continuously.
- Minimal obstacles – Fewer trees, beds, or playground equipment to disrupt mowing paths.
- Accessible trailer entry/exit points – Smooth deployment without bottlenecks.
- Defined operator tasks – Trimming, edging, blowing, or detail mowing that aligns with AMR runtime.
- Balanced workflow – Operators remain productive, avoiding idle time while AMRs run.

GOOD FIT EXAMPLE: *ELEMENTARY SCHOOL CAMPUS*

- Large open turf around fields and playgrounds.
- Minimal obstacles allow uninterrupted AMR mowing.
- Operators stay fully utilized with trimming, edging, and detail work near buildings and walkways.

TAKEAWAY: This type of site strikes the right balance between AMR runtime and operator workload, making it an excellent candidate for autonomous mowing.

Figure 1. **Elementary School** – Strong Autonomous Candidate. Large, open fields support AMR productivity while the operator stays busy with detail work.



WARNING SIGNS OF A POOR FIT

- Narrow, fragmented turf – Roadways, medians, and ditches that force frequent stops and resets.
- High obstacle density – Dense landscaping, trees, benches, or irregular layouts that restrict AMR efficiency.
- Limited operator tasks – Little or no detailing available, leaving operators waiting.
- Challenging access – Inefficient trailer staging or difficult property entry points.

OPERATIONAL RULE OF THUMB

- Good Fit: 30–70% of the site is autonomous-ready.
  - Leaves enough operator work (trimming, edging, detailing) to align with AMR mowing time.
- Poor Fit: Less than ~20% or more than ~90% of the site is autonomous-ready.
  - Too low = not worth deploying AMRs.
  - Too high = operators waiting on AMRs to complete runs.

POOR FIT EXAMPLE: ***COMMERCIAL PARKWAY / ROADSIDE MOWING***

- Long, narrow strips with irregular shapes and frequent obstacles.
- High ratio of trimming/detailing compared to AMR mowing time.
- Few parallel tasks available, causing operator downtime.

TAKEAWAY: Roadside and parkway mowing typically deliver poor returns for autonomy, as fragmented turf and low operator utilization undermine efficiency.

Figure 2. **Commercial Parkway** – Poor Autonomous Candidate. Narrow strips and fragmented areas lead to idle time and reduced AMR productivity.

CONCLUSION

The landscaping industry is at a turning point. Traditional bidding methods built on guesswork and manual measurements can no longer keep pace with the precision, efficiency, and cost savings offered by autonomous mowing. By combining advanced mapping platforms, RC Mowers' proprietary data, and realistic operational benchmarks, contractors can finally bid with confidence — knowing they are maximizing profitability while reducing labor challenges.

At RC Mowers, we are proud to be the leader in autonomous mowing technology and contractor integration. Our Autonomous Mowing Robots are designed not only to mow reliably and productively but also to transform how crews are deployed on every jobsite. With RC Mowers, one operator can easily deploy one to three AMRs simultaneously, all while completing other high-value work such as trimming, blowing, or spraying. This proven model redefines jobsite efficiency and creates a measurable advantage for contractors who adopt it.

Our commitment extends beyond the mower itself. We partner with contractors through every stage — from pre-integration planning and jobsite mapping to post-delivery adoption — ensuring that success criteria are met and exceeded. When you work with RC Mowers, you're not just buying equipment; you're investing in a complete solution that makes your business stronger, more competitive, and more profitable.

RC Mowers is not just keeping up with the future of landscaping — we are building it. Join us, and take the next step toward smarter bidding, more efficient operations, and sustainable growth.

Contact RC Mowers today to access our cost calculator, request a custom operational plan, or learn more about how autonomous mowing can transform your bidding process. Let us show you how to reduce labor costs, improve margins, and win more bids by leading the way in autonomous-ready properties.