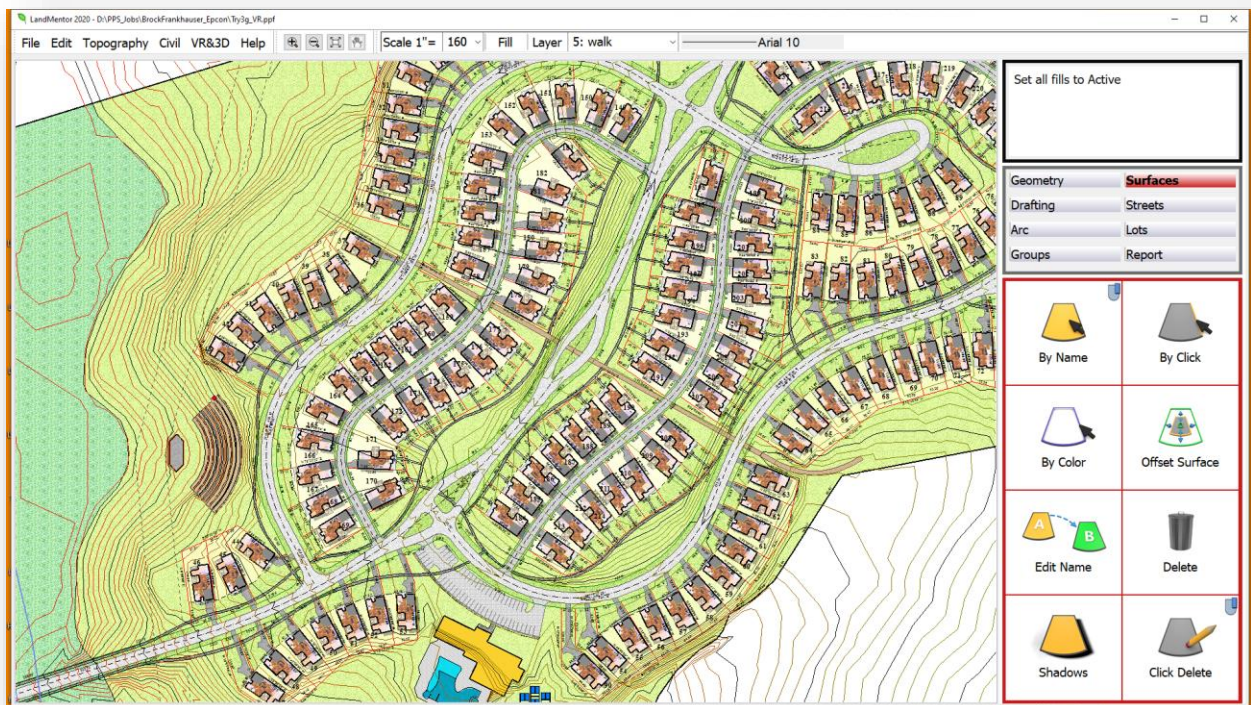


## July 1<sup>st</sup>, 2022: The full 'Land Mentor' System released at no charge to the Land Development Community

Neighborhood Innovations, LLC. is doing this to solve many of the problems with new growth and redevelopment worldwide.



LandMentor is a 'System' that blends technology with an education in advanced *market proven* design methods.

The education and technology of using LandMentor should decrease the infrastructure needed to develop land between 5-40% compared to current and past development patterns.

For redevelopment, the reduction can be greater than 50%.

This has obvious economic and environmental benefits to developers, residents, cities and is needed with today's escalating construction costs and increased interest rates.

## What is LandMentor?

In the mid-1970's Rick Harrison began developing software as a hobby for land surveying and civil engineering to expedite tasks going from fieldwork to subdivision plats. His experience by 1975 was in land planning, surveying, civil engineering and development.



By 1982 he collaborated with Hewlett Packard and founded Land Innovation, which became a leading civil/survey software developer for two decades.

In 1989 he founded a planning research entity, Rick Harrison Site Design (RHSD), to discover new methods of design based on new forms of software. This led to new forms of land uses, development design and architecture.

Two decades ago with Keith Willenson in charge of software innovation, they began developing a new core technology to reinvent the growth industry.

Realizing software cannot change anything without an education to 'think differently' this new product could not have a separate educational component to enact change, nor could it be modular with separate components and options.

That is the essence of LandMentor. Essentially 'Land Development 101' in a single *easy to use and quick to learn* complete system.

## How LandMentor will improve the world's growth

Current CAD & GIS software automates geometric relationships that have been in place for centuries. Utilizing robotic automation to 'land plan' typically results in mundane repetitive neighborhoods with excessive infrastructure. Lately, that infrastructure has risen in price by as much as 40% or more.

Replication by CAD should be obvious when most residential and commercial new construction appears to have been designed by the same person. It's because the software industry has 'dumbed down' design with a button press for 'typical configurations' or replicable components. It's all about speed, not quality.

LandMentor was developed to bring 'quality of growth' and foster better design.

Before technology, to calculate the geometry on a 100-lot subdivision could take several weeks. Today, software firms often demonstrate that one hundred lots can be designed and calculated in less than a minute or two. The result will be a cookie-cutter subdivision, not likely a great place to live and raise a family. How could it be, with a minute of thought behind it? Technology should be all about moving design forward, not backward!

To address this, LandMentor introduces an industry first - a software packaged with an education. For example, does Microsoft Word instantly make you a great author? Obviously, no. But what if it was packaged with a complete education in story telling?

LandMentor provides the tools and education in the new methods to create exciting, more functional development with less economic and environmental impacts.

LandMentor's 'holistic' education merges land surveying, site engineering, advanced land planning, architecture, 2D presentations and interactive 3D/VR that can be learned in a dedicated week or so. This eliminates the long learning curves (and costs) required of CAD and GIS.

To reduce the world's infrastructure, LandMentor includes industry firsts:

- It's training teaches how to instantly recognize waste in a design – planning or architectural floor plans.
- The spatial intelligence can instantly report surface area and chart it, to quantify the waste, so it can communicate economic and environmental impacts.
- Within the system, and on-line free videos, users can learn techniques to reduce or eliminate the waste.
- Cities can now be more in control of their growth by providing feedback of submittals at initial design stages to demonstrate any waste in the proposed development or redevelopment. The developer can then demand from their consultants a better and more efficient design or continue with the approval process. Assuming the feedback will reduce the construction costs and increase profits, the developer is likely to resubmit an improved neighborhood. LandMentor provides a win-win solution.

## Reducing (or eliminating) the dependence on CAD:

LandMentor has no commands, and its *patented* graphic & video prompts make all tasks easier and more enjoyable.

LandMentor does not 'data base' which means it allows computers to do what they do best – *compute*. In LandMentor the drawing does not exist – only precision math. Every screen refresh and external plot, LandMentor builds the drawing from scratch eliminating geometric mistakes using a CAD base engine. LandMentor can flip between English and Metric for international use.

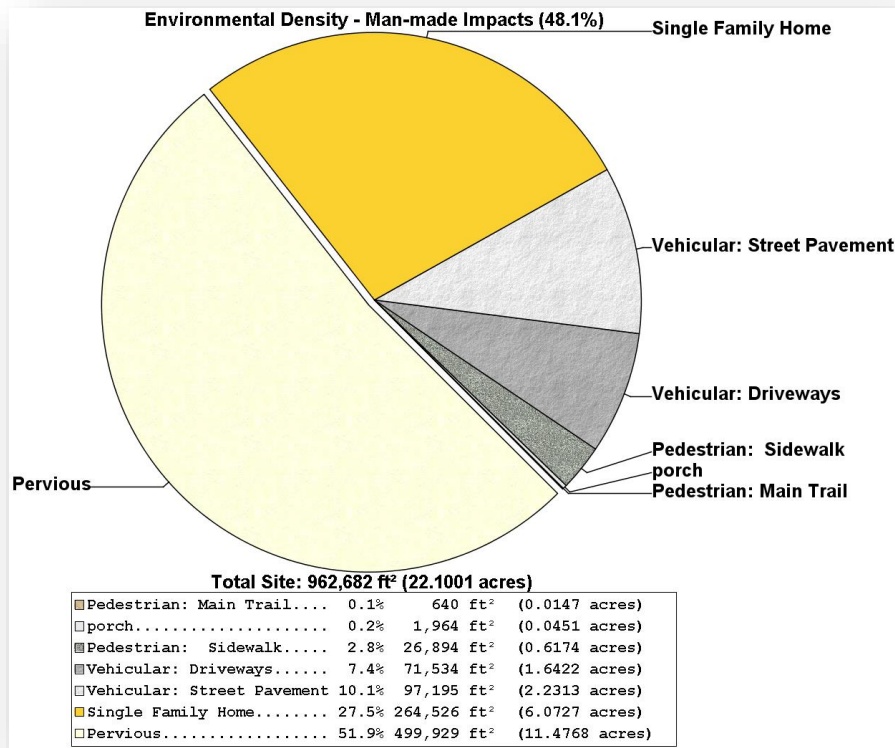
There is no better solution for land surveying and precision mapping. Its core strength makes it the ideal engineering and advanced planning design platform.

## The first 'Surface Based' solution:

We live in a world of surfaces – not lines and curves, and those surfaces have environmental and economic impacts. LandMentor is the first 'surface based' solution that eliminates the need for hundreds (or thousands) of CAD layers.



LandMentor instantly reports surface impacts with easy-to-understand charts so designers can take action to reduce waste and cities can communicate the waste to the developer.



The developer can demand less wasteful design (taught in the LandMentor system) which can increase profits while creating more attainable housing.

## Changing the way the industry communicates:

LandMentor 'video gaming' based interactive 3D is easily created from normal planning, surveying, and engineering tasks. Since most users today will be familiar with video gaming there is no learning curve.



LandMentor includes 'plug & play' VR headset support so users can transport themselves into a meta environment. In 2015, LandMentor was the first technology that used VR headsets in public meetings for planning and council approval. This was in Springfield, Kansas for GDR Development on a tract of land that Lady Gaga's music video 'You and I' was filmed on.

But the most important beneficiaries will be the future generations that will have increased living standards with less economic and environmental impacts.

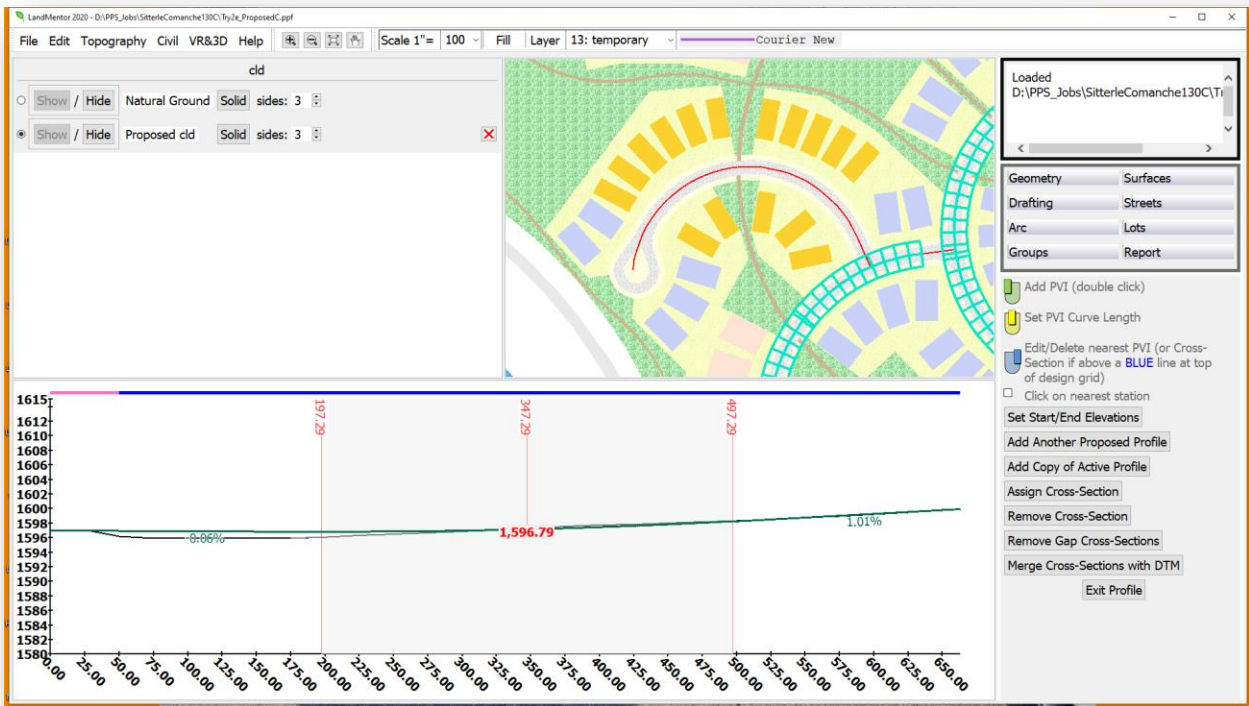


## **LandMentor's holistic approach includes:**

- *The first 'land surveying based' technology with positional coordinate geometry and precision spatial intelligence – unparalleled accuracy*
- *Land surveying includes import coordinate and raw data from total stations and export to field by descriptions*
- *Integrated site engineering, street & utility design, & earthwork*
- *Advanced land planning and land use methods to create better neighborhoods and more successful commercial growth*

- *How to blend interior spaces with surrounding exterior open spaces – even on more affordable production housing to increase value & livability*
- *Learning how to instantly recognize design induced waste and communicate it to take action to reduce the waste – critical for sustainable growth*
- *Precision city mapping, important because most GIS maps are not precise*
- *Automated Legal Description writing eliminating transposition errors*
- *Financial aspects of development including forecasting tied to the design*
- *Landscape Architecture with materials and costing*
- *Teaches how to reduce both Time and Energy with more efficient street design as well as creating safer and more direct pedestrian systems*
- *Integrated interactive DTM - Digital Terrain Modeling (natural & proposed)*
- *Spectacular ‘textured’ 2D presentations and plats as a byproduct of design*
- *Precise intelligent communication of spatial information*
- *Introduces proven new solutions for land use and zoning transitions*
- *Efficiency gained by increasing – not reducing existing minimums*
- *Improve communication of everything ‘land’ related*
- *Video Gaming based interactive 3D that is easy to use. Quickly go from a survey – engineering – planning environment to 3D creation*
- *Demonstrate shadow casting in real time - useful for vertical building impacts on surrounding neighbors at public meetings*
- *Plug & Play VR Headset Support for immersive experiences*
- *The ability to filter excessive data of LiDAR to a more usable form without losing any digital terrain accuracy can reduce data as much as 99%*
- *Ability to export LandMentor Virtual Reality to SketchUp with Enscape for more photo-realistic interactive 3D*
- *Ability to read ESRI ‘shape’ files with analysis to produce curved property lines if shape file data is accurate enough*
- *Read and Write DWG files, DXF, and SiteComp .ASC files...*

*...and much more!*



For universities, reduced learning curve enables professors to concentrate more on better design and solutions. This will provide a new generation of empowered students that can add significant value to those seeking new talent.

## Creating a More Collaborative Industry:

The sad state of the consulting industry is the lack of communication and collaboration between the four pillars of consulting services:

- Land Surveying
- Civil Engineering
- Land Planning
- Architecture

This is because there is no common knowledge base, no common understanding of how one's action can destroy another's intention. This creates common conflicts between planning, engineering, and architecture. Currently no University teaches a common knowledge base. This is why we included it in the education and training of LandMentor.



## **No Charge - to encourage change worldwide**

The software development and patents are paid for, and not encumbered by investors to demand immediate profits. Neighborhoods Innovations, LLC. gifts LandMentor to the world so that the industry can finally solve many problems facing growth, from both regulatory and design perspectives.

Over 1,500 developments were designed with LandMentor (approx. \$100 billion in construction), it's time to distribute the technology and education out into the marketplace to as many end users as possible.

LandMentor does have several patents to prevent other software firms from replicating its advantages.

**United States Patent**  
Harrison et al.

(10) **Patent No.:** **US 8,490,024 B2**  
(45) **Date of Patent:** **Jul. 16, 2013**

## **What's Included and what's not?**

After July 1<sup>st</sup> 2022, all that's needed is to download the 'system' from [www.landmentor.com](http://www.landmentor.com) and dedicate the time (about a week or two) to go through the included initial training (on video and PowerPoint with example files) as well as through the internal textbooks under the Help menu.

The LandMentor software technology is free until the end of 2023.

*If the LandMentor system goes viral with over 100,000 users, another free year of use will be added.*

When LandMentor does revert to a subscription model, the more end users, the less cost it will be.

During this free time period, all updates and upgrades and video trainings via the website and YouTube will be available at no extra charge.

On occasion LandMentor reports how often it's being used. More advanced video lessons will be offered at no charge to those that use it more often.

The education included that provides a wealth of information for the career success for those that use LandMentor.

## **Extra Cost items:**

### Printed Material:

The textbooks (over 1,000 full color pages) including the book Prefurbia and quick reference guides with the software, 3D models, videos and training in PowerPoint on a USB is extra cost. Currently it is \$300.00, however, should the numbers of users and demand increase, the cost will go down.

Prefurbia is available separately on Amazon.

### Support:

The technology and educational materials were intended for beginners as well as those with extensive software backgrounds. No prior CAD or GIS experience is needed.

Support is available. Price will be listed on the LandMentor website.

### Training:

Full day trainings will be available in Minneapolis. Trainings are in a class setting specific to the needs of the type of end user at \$1,995.00 a day. Since the first day of initial training – available in video format - is included, the extra trainings are intended to increase ability and productivity.

The four different classes will be specific to these end users:

- Land Developers and Home Builders
- City Staff, Planning and Council members
- Civil Engineers and Land Surveyors
- Land Planners (Landscape Architects) and Architects

The classes will be coordinated and scheduled with demand with a minimum of 4 attendees and a maximum of 15.

### The Future Subscription:

Eventually the System will revert back to a subscription model with the option to purchase a permanent license.

Our intention is for the system to go viral internationally – the more users, the less annual cost. This model is similar to when SketchUp was offered at

no charge gaining 35 million users in 2016, and now SketchUp Pro is just \$300 annually. While LandMentor is far more comprehensive than SketchUp, we hope to be able to emulate the pricing.

## **LandMentor as a conduit of other technologies**

LandMentor was designed to be a translation tool between other hardware and software technologies specific to real estate development including precision mapping and military applications.

Field Instruments:

LandMentor can read and reduce raw .Rw5 files, including line connection codes.

Most surveyors reduce the raw data, the typical import format is: Pt#, North, East, Elevation, and description.

LandMentor is an 'object based' system using positional coordinate geometry, eliminating the need for point number management. This comes in handy when transferring new coordinate data to the data collector for stakeout.

It is NOT a high-level construction stakeout system. We recommended a software such as Carlson for that purpose.

AutoDesk and most other CAD:

LandMentor can read all versions of DWG files and can export all versions. When reading in a DWG file, it appends the LandMentor layering system with the imported CAD layers. DWG does not fuse common corners as LandMentor does, so for each point read in, it tests to see if that location has been used and will fuse linework to easily create surface intelligence. When exporting to CAD, much of the internal intelligence and power will be lost because of the limitations of CAD.

## ESRI:

LandMentor can read ESRI shape files. These files do not contain curved property lines. However, LandMentor will perform an analysis and attempt to rebuild the information with curved lines if the shape file is accurate enough. LandMentor is not (yet) a fully functioned GIS system.

## LiDAR:

This more recent technology produces an excessive amount of data that can overload most computational tasks. When the LiDAR data is clean (non-spastic lines), LandMentor contains filtering functions that can replicate the land surface with 1/100<sup>th</sup> or even less of the original LiDAR data.

## SketchUp:

SketchUp is a very polished technology, easy to use (we include SketchUp training in the LandMentor system), and everywhere for a good reason. LandMentor uses Collada (.dae) format specific to SketchUp to communicate to and from SketchUp. While SketchUp is excellent, when dealing with hundreds of homes – it can be tedious. To solve that problem, LandMentor can create a 3D ‘group’ from a SketchUp model, so that hundreds of homes can be quickly set all coming out at the correct elevation. While other sources from 3D such as from AutoDesk and other systems have seemed to work fine, their digital overhead can present a significant 3D performance problem.



## Enscape

For a more photo-realistic and powerful interactive 3D that is also plug & play VR (see screenshot above) at low extra cost, we highly recommend using Enscape, by exporting the LandMentor 3D job to SketchUp. We have created files as large as 2 gigabytes that have home interiors detailed with landscaping that sways in the wind without any signs of slowing down in screen and VR performance. For that reason, as much as we would love to eliminate the need for any external software, we recommend Enscape.

## Financial Modeling Software

LandMentor education included spans into the cost of construction as well as financial modeling and forecasting from the precision spatial information imbedded in the core data structures. This section of the software and training was done with the help of Skip Preble of Land Analytics, one of the top industry experts.

It is not intended to replace high level financial software, but instead use the precision data to gain information without the possibility of transposition error. The information LandMentor can export can be read into a spreadsheet for other software to expand upon.

## SiteComp

SiteComp was founded and initially developed by the founders of LandMentor. LandMentor can read in SiteComp ASCII format files.

## Downward File Compatibility:

Because the updates and upgrades of LandMentor are at no charge, downward compatibility (example not able to read in the latest CAD file using an older version) should not be an issue.

## LandMentor Registration:

Existing LandMentor users prior to this gift paid between \$4,995.00 a seat and \$50,000 a seat. These are permanent licenses and will never have any extra fees. The new users of LandMentor, will need to register the software. After that it will occasionally query the server to make sure it's a valid license within the fee use period. It will also report how much it's being used.

When there is no internet connection:

Other subscription-based software checks the validity of the license every time it is opened, which can be irritating or a disaster if the license can't be verified during a critical meeting. LandMentor is intended to be the primary communication tool at critical public and private meetings when the user never wants to see a warning that the software cannot operate because of a bad internet connection. If LandMentor cannot check the license because the internet is not available or intermittent (like on an airplane), it will still work without a problem and check later when internet is available.

## User Testimonials:

**From Michael Shamsie of the LandMark Group (a Civil Engineer user).**

From a Planning Commission member:

*"Your submittal and presentation set a new standard for future applicants"*

From a Planning Commission member in Missouri:

*"The 3D model helps us with the transformation from paper to the reality of what the development will look like"*

**From Chris Canaday – Developer and Builder in California:**

*Here's a few bullet points about the advantages of the planning methods that are taught in the included educational materials of LandMentor:*

*We developed Placitas de La Paz which contained 270 homes. The community is located in a small city that was virtually 100% low-income Hispanic population. The*

*home sizes were small, and the density was much higher than normal at the time. The design was new and different - it created more interest and privacy than a standard land plan. They were virtually sold well before construction was completed in each phase.*

*We did not jack up the sales prices and still made an excellent profit. Today, the resale of home prices are substantially higher in spite of the huge real estate problems we experience in California.*

*Granted timing was excellent but I do believe the land plan was an important factor in our success.*

**From Ed Taravella – Head of the Houston Builders Association, and Developer:**

*Would you like to see the as-built environment of a new development before it is built? Want to fly/drive/walk through the development you are proposing in virtual reality? The incredible thing about this feature is that it is just a by-product, if you will, of the LandMentor system. I was pretty amazed when I saw my tract of land transform into my own unique immersive community. Usually, we only see our plans in 2D. With LandMentor, you not only walk through your proposed community, but you can also walk through the actual homes (or buildings) you propose build.*

*One of the unique things about LandMentor is the ability to determine environmental density and show in a pie chart how the site is covered i.e., streets, driveways/flatwork and building pad. I have never seen a land plan break out the coverage quite like this. But in today's market, impervious cover and the resulting drainage issues are now at the forefront of local government regulation.*

*I have never heard of anything like LandMentor before being introduced to Rick and LandMentor many years ago and there is still nothing like it out there. LandMentor can integrate the different elements of the land development and construction process. Engineering, surveying, land planning, development, home construction and virtual reality in one integrated system. A system as tightly integrated as this is accurate and precise. (Nothing is lost in translation as there is nothing to translate) not sure about this last line.*

**Nick Rhodes –Developer & Builder – Rio Grande Valley, Texas:**

*“The current development landscape is rapidly changing as new buyers continue to enter the housing market. Cities and developers are having to think outside the box to fill the demand to produce the housing inventory to meet the needs of the modern buyer. Rick Harrison Site Design and software Land Mentor are critical in displaying and educating all parties involved in the development process. The 3D capabilities of the software streamline the development process so cities and developers can be on the same page when presenting new concepts and everyone can virtually walk the streets and understand the livability of what is getting built. Land Mentor has been an extraordinary asset for our company in developing several projects that offer higher quality of life than competing developments, but we would not have been able to get them approved without being able to have city staff and commission visualize the project. Rick Harrison and his software, Land Mentor, is a great tool for all stakeholders involved on the development process from engineers, cities, developers and the end consumer, who ultimately is why we all do what we do. “*

**Greg Somers: Land Developer – Mentor, Ohio**

*The technology and assets that LandMentor provided has completely transformed, innovated, and most importantly streamlined the process of pursuing and obtaining new community development approvals. Gone are the days where we would present a black and white plat map. The technology brings a community to life prior to ever existing. The virtual reality, color renderings, and color site plans has an immediate positive impact when presenting a new community plan. One of the most important functions the technology provides is the ability to address neighbor concerns and show that the new community is going to be an asset vs. a liability.*

*We have had many circumstances where we may not have been able to obtain approvals and community acceptance if it wasn't for the technology and assets that LandMentor provides when being used in the design and presenting of a new community development plan.*



## **From Steve Wilhelmy, Real Estate Broker in Minnesota and Texas**

*As a commercial broker that specializes in listing land for residential development, I am a big fan of the Land Mentor system. The ease of use and ability to generate quality 2D and 3D concept plans to include in the marketing packages really helps potential buyers visualize the property's potential.*

## **From Jeff Buell co-owner Sitterle Homes, Texas**

*It recently occurred to us that we have been working for over two decades with you and your team at LandMentor. After getting over the fact that we are now two decades older, we began to reflect on the projects we very successfully have completed with your help.*

*Our first experience with your "Coving" street design was in our Roseheart community. Beautiful site made more beautiful by the relaxed curves and staggered home setbacks of the street design. Having less asphalt and more "green" throughout the neighborhood allowed us to create a monument to development that has truly endured the test of time. Even though we completed that project years ago, people still clamor to "get in" and find a residence there.*

*On we traveled to several other projects, some more complex than others. Each benefitting from the thoughtfulness and effectiveness of the design. Limiting asphalt, alternative pedestrian plans, and greenbelts meandering behind the homes all providing for wonderful community feel.*

*Along the way, we reflect on some of the intangible items you provided that assisted with our successes. Speed, clarity, knowledge, vision all come to mind. Speed of creating the vision we want to achieve. Clarity of the vision backed by knowledge of what this vision will entail from a cost standpoint. All these traveling hand in hand in the creation a community. A community for people to live in and to bring them peace from the outer world.*

*Amongst all the variables this business will throw at you, LandMentor has provided a consistent platform in which to operate regarding land planning. Just thought we would drop you a note, as we appreciate the time together and the achievements we have reached, with the help of you and your firm.*

**From Walter Magill, PE & PLS Four Points Surveying & Engineering  
Steamboat Springs, Colorado**

*Four Points Surveying and Engineering has utilized and benefitted from LandMentor software on three recent development projects in Steamboat Springs, Colorado. The LandMentor software was an excellent asset to our project presentation for public meetings on a multi-building apartment development project. The software allowed the planning commission and City Council to understand the proposed development and provided visualization of grading, landscaping, walls, and other improvements. The ability to render the project in 3-D for a public presentation was instrumental in gaining approval for the project. We also worked with the LandMentor project on a 100+ acre property to quickly develop a multitude of proposed layouts at a fraction of the cost of other products and we can create grading volume scenarios. Quickly developing sites with LandMentor Software makes it a unique product.*

*Sincerely;*

*Walter*

**Endorsements:**

Over the years we have had many endorsements from top organizations on the technology and the methods which include:



The methods and/or the technology has been featured in almost every industry specific publication – in print and online.

Neighborhood Innovations, LLC. has been involved in PlanningTank.com as well as LandSurveyorsUnited.com both addressing international issues.

## The methods and technology have won many awards:

### Winning Awards...



Land Development  
Visionary Project



Smart Growth  
Honorable Mention



New Mexico  
Residential Project of  
the Year (DR Horton)

### Professional Builder

Achievement of the Year Award



Excellence in Affordable  
Housing Initiative  
Award

Building Product  
Magazine's 2010 Most  
Valuable Product of the  
Year Award



Semi-finalist  
MN TekNe

LandMentor was also chosen accepted into the CleanTech Open in 2012.