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Home Builder Lennar Finds Peace With AB Fence as a Solution

When Highway 212 near Minneapolis, Minnesota was expanded, the road increased traffic volume to the Southwest metro. With such expansions, it is common that housing and/or commercial developments follow close. Lennar Homes was one of the developments that looked at the area and finalized a new housing development - Reflections at Lake Riley. Upon review of the site, it was apparent that the traffic on the multi-lane highway added a large amount of unwanted noise for the newly constructed homes. Lennar worked with a local certified Allan Block contractor, Designing Nature Inc, out of Hamel, Minnesota to come up with a solution for the site. Designing Nature hadn't worked with [AB Fence](#) yet, but since they were comfortable with other Allan Block products, they began researching and found that this scenario was perfect for using AB Fence. After reviewing the products, Lennar established that AB Fence would meet the criteria for sound and the color would be neutral for the location.

Now that Lennar had selected a product and the site layout was established, it was up to Designing Nature to begin the construction of

the [sound wall](#). Even as a new system to the contractor, the step by step installation and the assistance of [Amcon Concrete Products](#), the local Allan Block producer, helped streamline the installation process. Designing Nature used an unreinforced concrete leveling pad between the piles to save on leveling the base block. This isn't the standard installation method as there is typically an aggregate leveling pad 6 in. deep (150 mm) and twice the width of the block (which is 12 in. (305 mm) for AB Fence). Although the material cost was higher, they were able to increase efficiency and save on installation time.

Project Information

Name: Lennar Homes featuring AB Fence

Location: Chanhassen, MN

Products: AB Fence

Size: 2 AB Fence projects totaling 12,000 ft² (3,600 m²)

Contractor:

Designing Nature, Hamel, MN

Designer:

[Duffy Engineering](#)

Allan Block Manufacturer:

[Amcon Concrete Products](#),
St Cloud, MN



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When it comes to AB Fence installation, the layout of the fence is the most important step. Even though it may not look like the installation is not moving forward in the first couple days, taking the time to properly layout the piles and creating offsets will drastically improve the overall installation process.

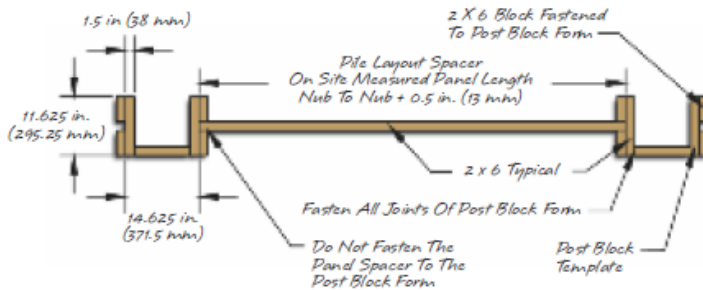
Once the offsets are placed, it was time to manufacture jigs that would be used to fit the piers within the site constraints.

Designing Nature made sure to take the extra time to verify locations prior to drilling any holes. The extra time that was spent before the fence was beginning vertical construction,

ensured that efficiency would be maximized on the rest of the project.



Figure 1: AB Fence Pile Layout Jig



The piles and base were completed soon after and the fence was built in no time at all. Before long, over 4,200 ft² (400 m²) of fence was installed which met all the requirements of Lennar Homes. Lennar found that the fence system worked so well that they decided to

establish a second development a few miles down the road. With the second fence, Lennar specified AB Fence this time around based on the perfect fit at the previous development. Since Designing Nature now had the experience with AB Fence, they were able to competitively bid the project and were awarded the AB Fence construction for the development at Camden Ridge.

The project wasn't anything out of the ordinary, but had a different layout and site adjustments that were not on the Reflections at Lake Riley project. Lennar specified an 8 ft high sound wall (2.4 m) which was to be placed on a berm to reduce the noise level of Highway 212 close by. Designing Nature hired [Duffy Engineering](#), the local Engineer of Record to provide the full calculations.



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The initial layout of the fence system is the most important part of the project. Taking the extra time to verify exact pile locations will save a lot of time during the building of the fence. Designing Nature did just this by using the installation guide from Allan Block and the jig construction which kept the fence spaced properly, similar to the Lake Riley project. Before Lennar could blink an eye, Designing Nature had constructed the full 8 ft (2.4 m) sound wall which spanned more than 830 ft long (250 m)!

Soon after the fence was installed, Lennar had acoustical testing done which resulted in a noise level exceeding what was originally thought. It was found that the fence would need to be 10 ft high (3 m) to interrupt the noise from Highway 212. Lennar went back to Designing Nature and Duffy Engineering to check calculations on the fence and a possible solution. After reviewing the calculations, the design had enough capacity to increase the height of the fence as the original foundation design had to be increased in depth due



to the position on the berm. This allowed the additional 2.6 ft (0.8 m) to be transferred to the foundation without requiring a redesign of the piers.



With the solution found, the construction soon followed. The increased height required the posts to be dowelled in to provide reinforcement from bottom to top. Designing Nature was required to embed the new rebar into the existing post while providing reinforcement for the additional height of the fence. An additional bond beam was required per the calculations which was placed in the top two courses of the added height. The fence was then recapped which brought the fence to the required design height and gave Lennar the decibel reduction that they were looking for.

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Both projects were brought together by the site contractor, sub-contractor, engineer, and client working as a team to establish the best option moving forward. AB Fence met all requirements and has the versatility to adapt with site changes even after the initial construction was completed.

Lennar Homes is quickly expanding around the country to bring new home construction to expanding markets. With many developments being placed near major roadways, Lennar has provided a quiet, safe home for families to enjoy with easy access to developing areas of many metropolitan locations.

Overall, Lennar has seen a need to provide a quiet environment for families and wanted to do so with a system that can be aesthetically appealing, cost effective, and provide the property that we all have dreamt of. AB Fence was quickly found as the product that can achieve the needs and wants, with the next project already in the works to be constructed at another Lennar Development.

