

Using new building materials to decrease construction costs, we have **the opportunity to save about \$1.75M** for a subdivision of 100 houses.

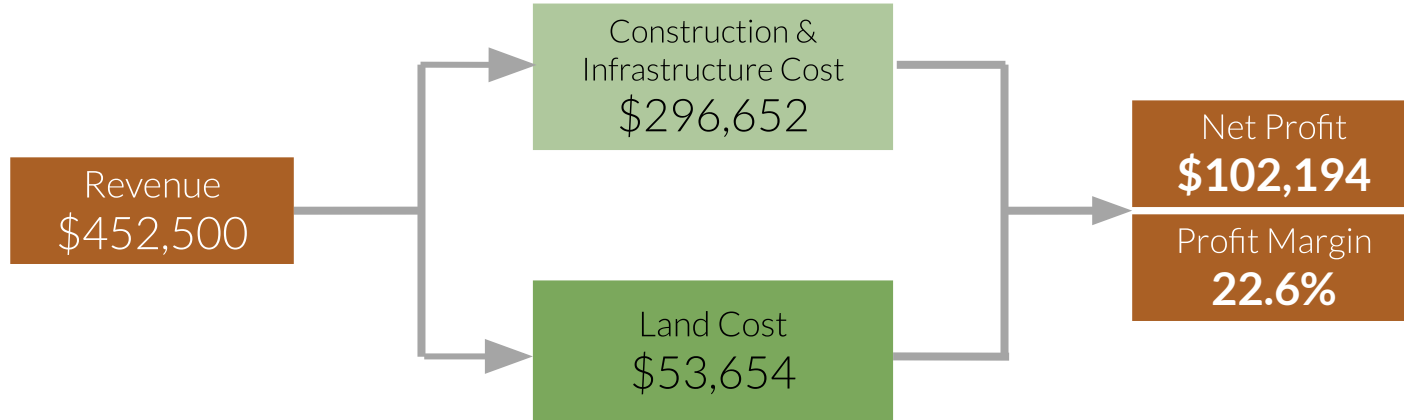
Average cost of house - \$296,652
Savings per house - \$17,500
Percent saved - 5.9%
Subdivision Savings - \$1.75M

An aerial photograph of a suburban neighborhood with numerous houses featuring red-tiled roofs. The houses are arranged in a grid-like pattern with streets and green spaces. A large, white, stylized 'V' shape is superimposed over the center of the image, pointing downwards. The word 'Problem' is written in white, bold, sans-serif font across the horizontal bar of the 'V'.

Problem

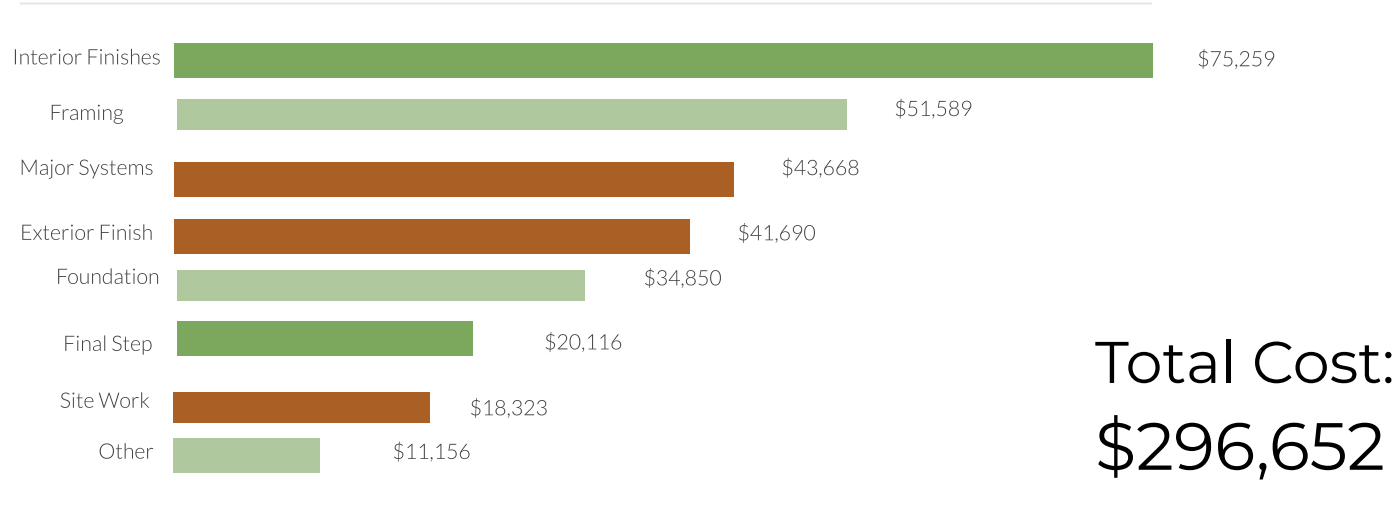
Developer Profit Status Quo

(Median Calculation in Nevada)

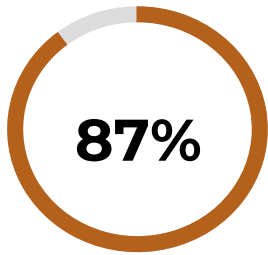


House Construction Cost Breakdown

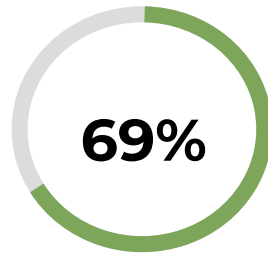
(estimated 2500 sq. ft, national average)



Material Cost is the second biggest challenge for developers, as of 2019.



Of developer cited material cost as one of the challenges experienced in **2018**.



Of developers cited material cost as one of the challenges experienced in **2019**.



Solution



Solution Targets & Overview

Wall finishes has the highest cost in exterior finishes, about \$20,000. Our solution will reduce the cost of wall finishes.

Terracotta Material

Instead of traditional materials, exterior walls built with Terracotta bricks will decrease cost and increase sustainability.

Landscaping is responsible for most of the 'other costs' in building a home, roughly \$7,000, which our solution reduces.

Vertical Landscaping

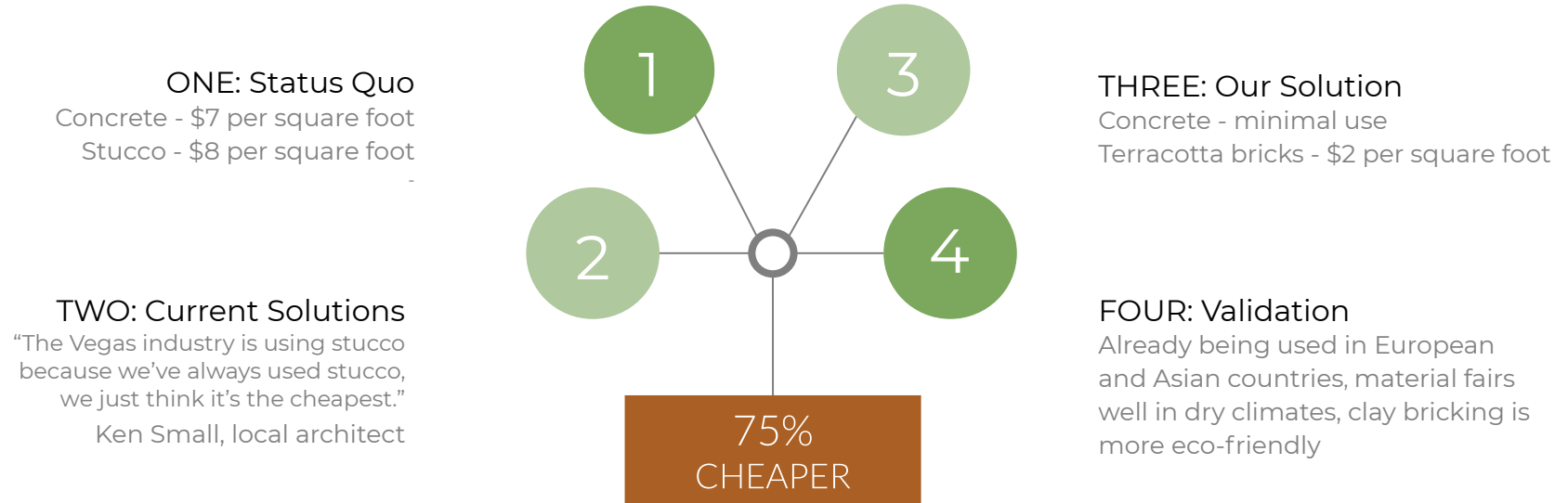
Terracotta wall can be used as a vertical planter which will provide the house with a space-efficient garden and natural landscaping.

Desert Landscaping

Desert Landscaping for houses in Nevada can decrease traditional landscaping cost but at the same time increase visual aesthetic.

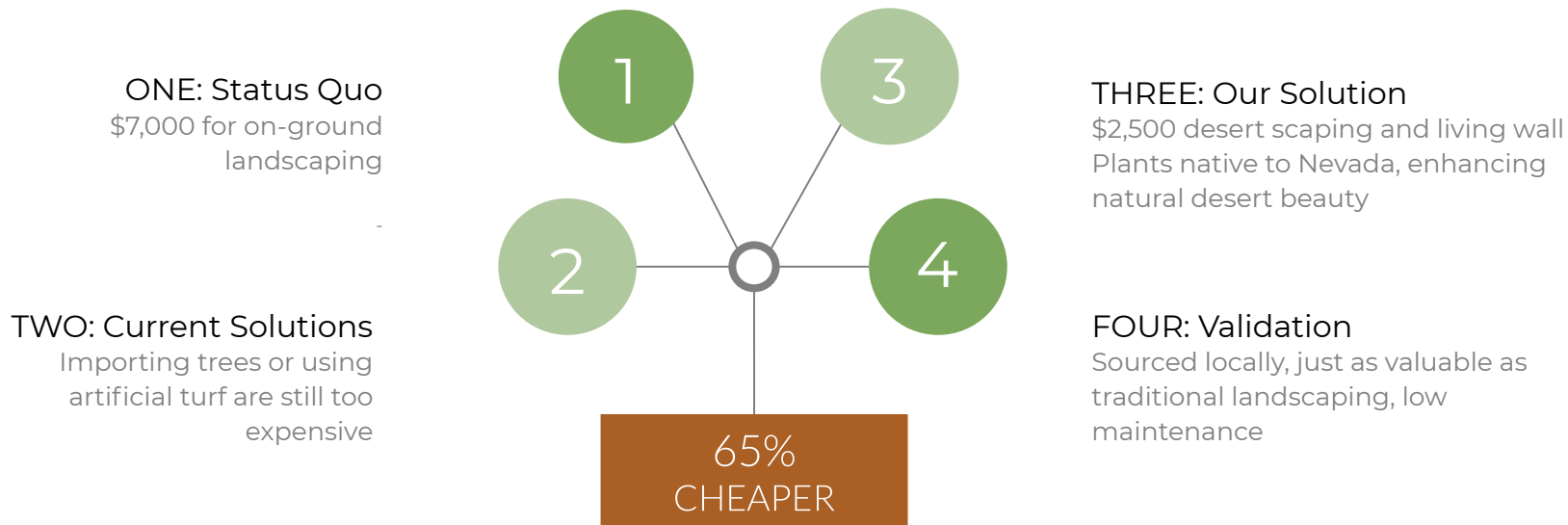
Exterior Finishes

Using hollow terracotta clay bricks for the decorative and structural exterior of homes



Landscaping

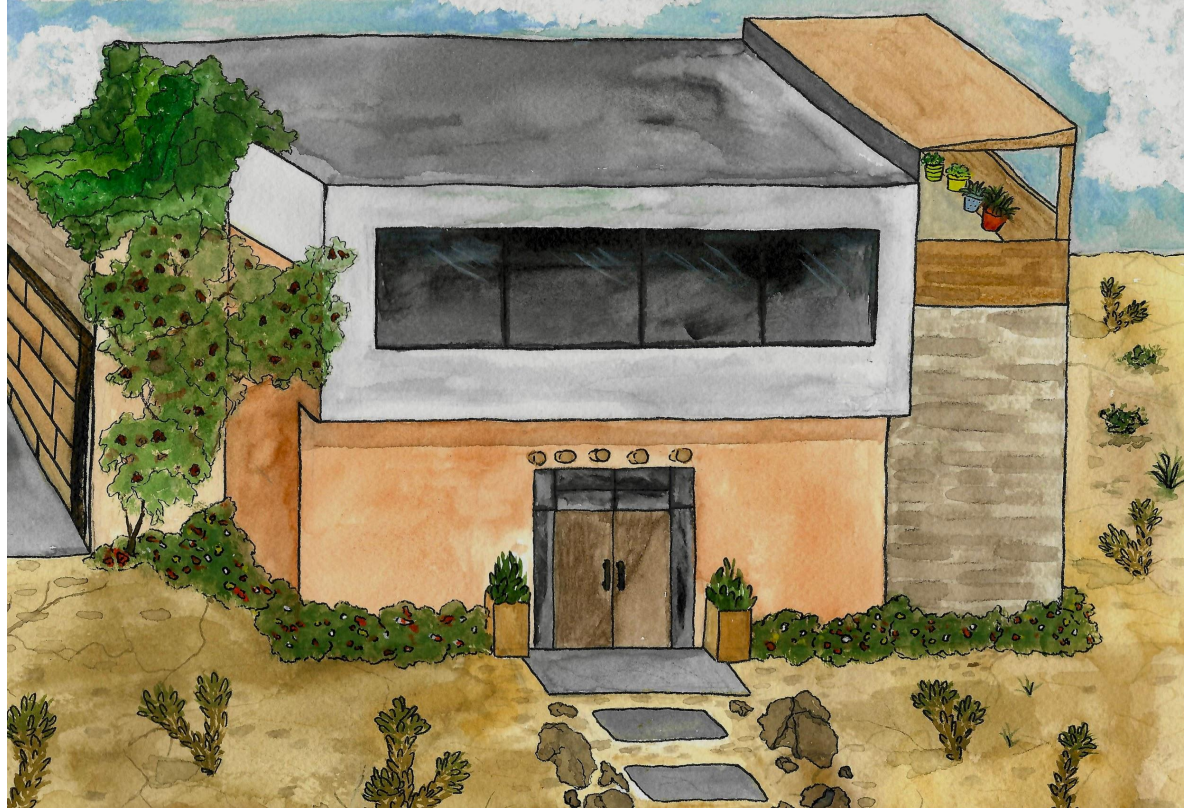
Decreasing landscaping costs with local, environment based desert scaping





Living Walls

Terracotta walls enable plant growth on the side of the house, hence, a living wall. Desert succulents anchored to the terracotta give a unique, low maintenance, and high value landscaping detail.



@babblingbrooksketches

Caveats and Thoughts

Of course, we understand there are real world barriers to a solution like this. Here's are our input on them.

Development

This style of housing must be built from the ground up. Renovations this extensive do not have the same savings value and would be less feasible.

Barriers to Entry

Hollow terracotta clay bricks aren't widely manufactured or used in the US. In the short term, we have considered importing the bricks, and in the long term we have looked at creating a direct supply chain in the US or Nevada specifically.

Assumption

Our main risk is building these somewhat luxurious homes as a planned community. This does target the audience of those who pay the price we're selling the property at, but if the project wants to cater more to those who want luxury homes we can make this customizable.

Assumption

Here we've assumed that the plan is to build a 2500 square foot house for less money and sell it for the same price, despite the fact that it's higher value. If the developer is willing to raise the cost 15-20% to align with the value of the home and change the demographic of the buyer there will be a higher net profit.



Extensions

1)

ENVIRONMENTALLY CONSCIOUS

87% of Americans would purchase a 'greener' product when given the opportunity, even at a higher price point → meaning more room for higher profit margins. The average sales price of green homes is 10% higher than that of traditional homes

2)

MILLENNIAL MARKET

Green initiatives spark the interest of many modern, informed consumers → thus leading to a higher demand of these 'green' products → leaving an area in the real estate market which can be capitalized on

3)

LANDSCAPING VALUE

Will increase the property value by 5-15%, just by having well designed landscaping → selling houses at the same price as traditional homes gives them a high value compared to the cost

Professional Validation



A solution like this is wanted by 69% of developers in the industry. This solution can eliminate one of the biggest challenges faced by developers.



Ashok Chaluvasi

Senior Research Associate
at NAHB



A regenerative housing design that can compete in existing market instead of creating a new market will be the turning point for sustainability in the real estate industry.



Adam Sgrenci

Home Builder, Founder of
Center for Infrastructure and
Society



A positive first impression of a home can mean the difference between a buyer driving by or stopping to take a closer look.



Jill Kaminsky

Top Real Estate
Salesperson
at CORE in NYC

Scalability

Copy-Paste Design

We could develop a simple design with both the landscaping and terracotta bricks and recreate a similar if not the exact same house repeated across a neighborhood.

Linear Savings

This idea is not a one time savings. The savings are on a per house basis with each new house allowing for the savings to grow with bigger and larger projects.

Savings per house: \$17,500

Savings per development: \$1.75M

Percent saved - 5.9%

Meet the team!



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