



Nevada's Housing Market

Housing Affordability and Implications of Construction Defect Reform

March 1, 2019

Mr. Steve Thomsen
President
Nevada Home Builders Association
5484 Reno Corporate Dr.
Reno, NV 89511

RE: Nevada's Housing Market | Housing Affordability and Implications of Construction Defect Reform

Dear Mr. Thomsen:

In accordance with your request, Applied Analysis ("AA") is pleased to submit this report titled *Nevada's Housing Market | Implications of Construction Defect Reform*. AA was retained to review and analyze the Nevada housing market, including trends in housing affordability and the impacts of construct defect reforms implemented during the 78th Session (2015) of the Nevada State Legislature. This summary report outlines the salient findings and conclusions of our review and analysis.

This report was designed by AA in response to your request. However, we make no representations as to the adequacy of these procedures for all your purposes. Generally speaking, our findings and estimates are as of December 2018 and utilize the most recent data available. The information provided in this summary, and the conclusions reached herein, are based on the findings of our research and our knowledge of the market as of the date of this report. Our report contains economic, development and other predominant market data. This information was collected from our internal databases and various third parties, including other public data providers. The data were assembled by AA. While we have no reason to doubt its accuracy, the information collected was not subjected to any auditing or review procedures by AA; therefore, we can offer no representations or assurances as to its completeness.

This report is an executive summary. It is intended to provide an overview of the analyses conducted and a summary of our salient findings. AA will retain additional working papers relevant to this study. If you reproduce this report, it must be done so in its entirety. We welcome the opportunity to discuss this report with you at any time. Should you have any questions, please contact Jeremy Aguero or Brian Gordon at (702) 967-3333.

Sincerely,



Applied Analysis

Special Note: The following pages provide a summary of the research and analysis conducted. For additional details and the full-length version of this report, please visit www.AppliedAnalysis.com/Affordability.

Summary of Findings

Summary of Findings: Economic Conditions

The state of Nevada leads the nation in population, employment and income growth. By nearly every measure, Nevada is among the leading economies in the United States. Looking forward, most data suggest that economic conditions are likely to continue on a path of growth and expansion.

- **Population:** Nevada currently ranks as the fastest-growing state in the nation, as population grew by 2.1 percent to surpass 3 million residents for the first time in 2018.
- **Employment:** By the close of 2018, Nevada ranked in the top position nationally in overall employment growth, expanding its employment base by 3.9 percent year over year. Among the country's 30 largest metropolitan areas, Southern Nevada ranked fourth with a 3.4 percent annual growth rate. While the Reno metro area is not classified among the top market areas in terms of size, it is important to note the area posted annual employment growth of 5.2 percent. Rising employment levels have pushed Nevada's unemployment rate more in line with the national average at 4.4 percent as of the close of 2018 after reaching a post-recession high of nearly 14 percent in 2010.
- **Personal Income:** The latest rankings indicate that Nevada stands in the first position in terms of personal income growth across the nation.
- **Economic Outlook:** Given current economic fundamentals, the Silver State is well positioned to capitalize on current and future major investments. Billion-dollar projects are underway in the north and south portions of the state, and the development of multi-year projects is expected to pay economic dividends going forward.

Population Growth

Rank	State	Growth
1	Nevada	+2.09%
2	Idaho	+2.05%
3	Utah	+1.87%
4	Arizona	+1.74%
5	Florida	+1.54%
6	Washington	+1.48%
7	Colorado	+1.42%
8	Texas	+1.34%
9	South Carolina	+1.25%
10	North Carolina	+1.10%
U.S. Average		+0.62%

Income Growth

Rank	State	Growth
1	Nevada	+6.21%
2	Washington	+6.16%
3	Arizona	+5.42%
4	Colorado	+5.27%
5	New Hampshire	+5.12%
6	Oregon	+5.10%
7	Utah	+4.75%
8	Pennsylvania	+4.71%
9	Texas	+4.65%
10	North Dakota	+4.63%
U.S. Average		+4.0%

Employment Growth

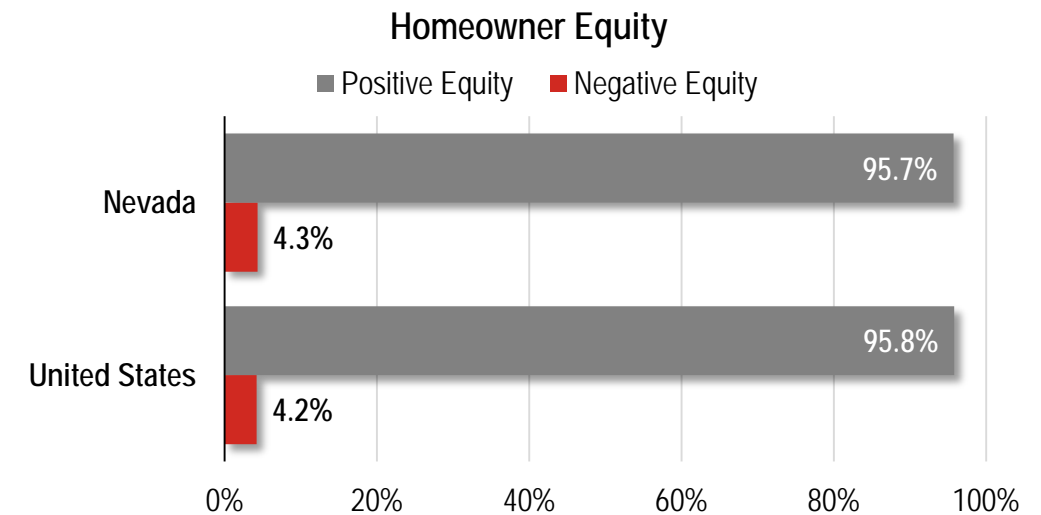
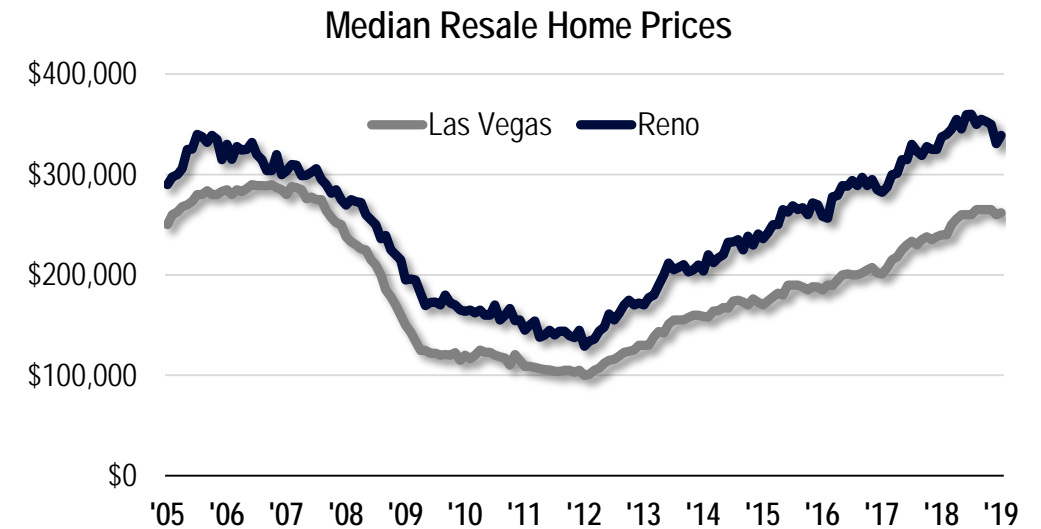
Rank	State	Growth
1	Nevada	+3.9%
2	Arizona	+3.4%
3	Texas	+3.2%
4	Utah	+3.1%
5	Washington	+3.1%
6	Wyoming	+2.8%
7	Colorado	+2.8%
8	New Hampshire	+2.7%
9	Florida	+2.7%
10	Georgia	+2.5%
U.S. Average		+1.9%

"Nearly \$36 billion in major investments are either under construction or planned for future development in the state of Nevada"

Summary of Findings: Resale Housing Market

Resale housing market conditions continue to experience impressive demand measured both in terms of the number of sales transactions and overall occupancy rates. Overall housing availability remains relatively limited, which is putting upward pressure on pricing.

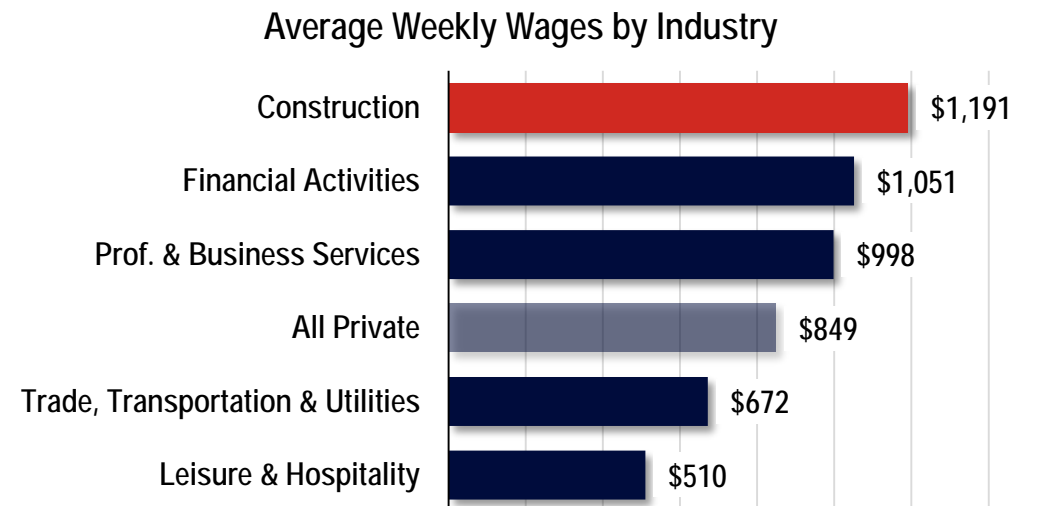
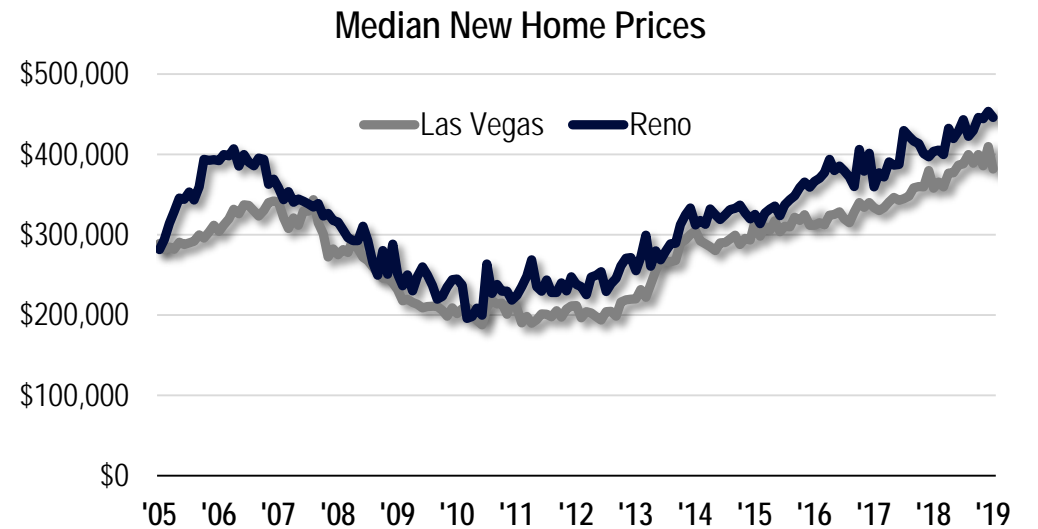
- **Pace of Sales:** The number of resale transactions remains elevated as demand for housing reflects strong economic fundamentals. In 2018, Southern Nevada reported nearly 48,000 resale transactions, while Northern Nevada witnessed nearly 8,000 closings.
- **Prices:** Median prices in the resale market continued to climb. By January 2019, the median price (including single family homes, condominiums and townhouses) reached \$262,000 in the Las Vegas market area and \$339,000 in the Reno market area.
- **Availability:** The number of units listed for sale at any given point in time is a function of the number of new units coming on the market and the pace of sales taking place. Currently, inventory levels in both the northern and southern portions of the state remain modest (less than four months of effective inventory).
- **Market Position:** During the past several years, the residential market has transitioned from an environment dominated by distressed sales activity (REOs, short sales and auction sales) to one that is nearly exclusively equity sellers. As a result, Nevada has quickly moved from leading the nation in underwater home rankings (where mortgage debt is greater than the home value) to a market that looks more like markets across the nation.



Summary of Findings: New Home Market

The new home construction market in Nevada has been responding to strong economic fundamentals, elevated land costs, rising costs of materials, labor shortages and other costs of development.

- Pace of Sales:** While sales volumes in the new home construction market have picked up pace in recent years, the volume remains below historical averages in both absolute terms and on a per-new-employee basis. Southern Nevada reported nearly 10,000 new home closings in 2018, while the northern portion of the state reported nearly 2,000 new home sales.
- Prices:** The median new home price across all product types in the Las Vegas area stood at \$382,188 in January 2019, while the Reno market area posted a median value of \$446,300. Both markets are trading at or near all-time highs.
- Land Costs:** A key component of the cost structure of a house includes the underlying real property. Land values have escalated in recent years; and, in many instances, they are cost prohibitive, particularly for builders focused on the lower-cost spectrum of the market. For example, the average price per acre of land that sold during the past year was nearly \$400,000 in Southern Nevada and has tracked in this range for the past several years.
- Development Costs:** Materials, labor and other residential development costs continue to rise. Lumber prices have increased significantly. At the same time, average weekly wages within the construction industry were the highest among all reporting sectors. Average construction industry wages are up 12.3 percent during the past 12 months.

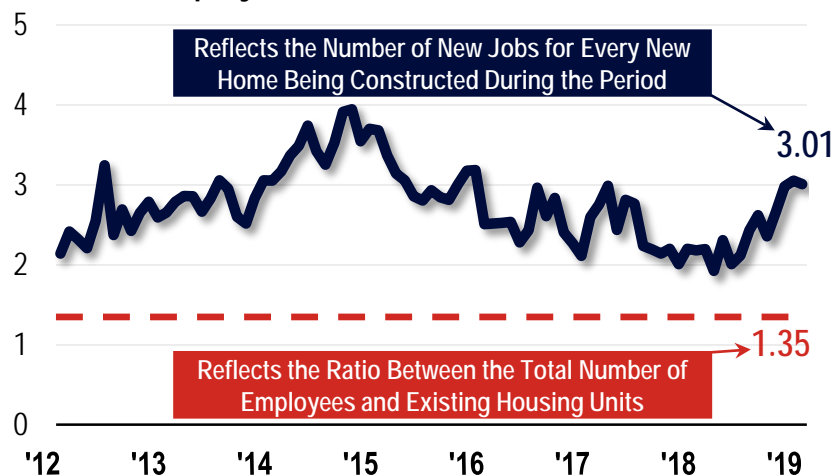


Summary of Findings: New Home Market

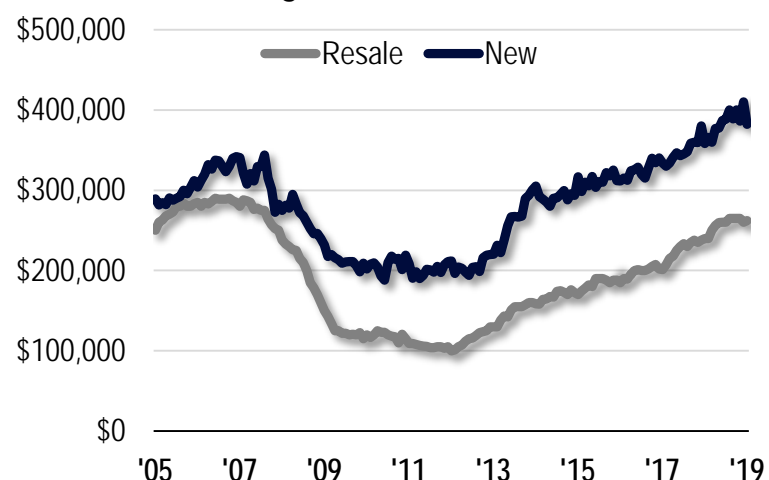
As new home prices have increased significantly in recent years and residential development activity has struggled to keep pace with the rate of population and employment growth, many potential homebuyers have been forced to seek out alternative products.

- New Construction Lagging Behind Growth:** While there has been a significant increase in housing demand fueled by Nevada's strong economy and population growth, the supply of new housing has been slow to respond for a number of reasons. Currently, there are 1.35 employed persons per occupied housing unit in Nevada. However, new units are only being permitted at a rate of 1 for every 3.01 new jobs. Should barriers for future development emerge, housing shortages will only be exacerbated and/or put additional upward pressure on pricing.
- Resale and New Home Construction Relative Costs:** The difference between the median price of new homes and resale homes is now over \$100,000 in both the Reno and Las Vegas markets. While home sizes and other new home attributes play a role in the differential, many potential buyers are priced out of the new construction segment. To the extent higher density developments (e.g., attached homes) are viable, they offer a potentially more affordable product offering.

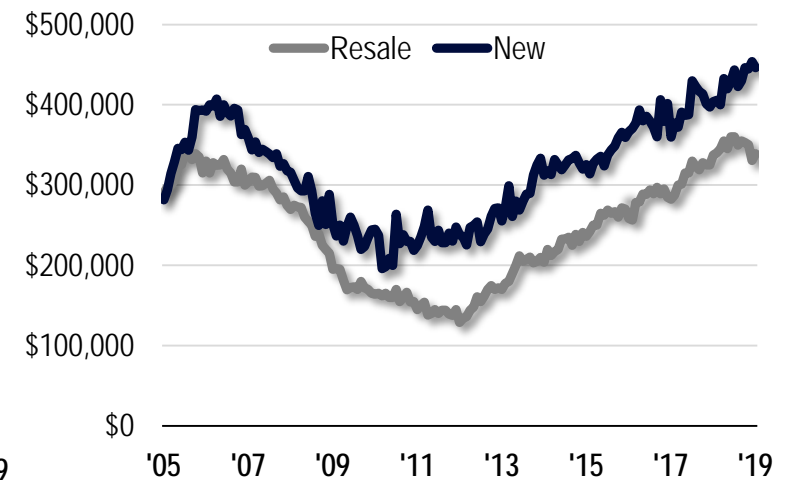
Nevada Employment Growth to New Unit Permit Ratio



Las Vegas Area Median Home Prices



Reno Area Median Home Prices

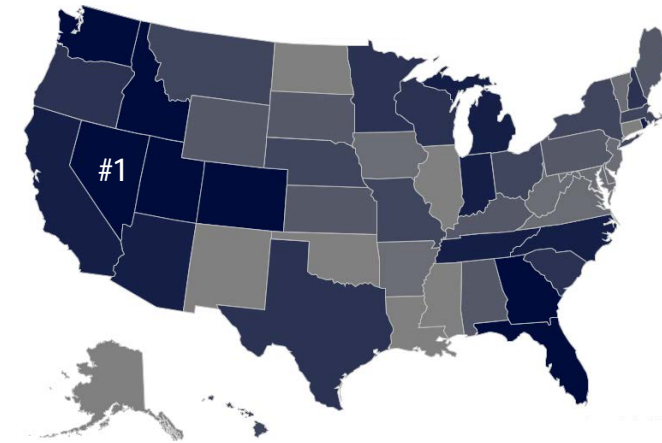


Summary of Findings: Housing Affordability

The trajectory of home prices and household incomes suggest housing affordability is likely to become a more acute challenge in 2019 and beyond. The share of residents that is able to afford the median home price continues to dwindle, while the cost of new development is expected to remain elevated.

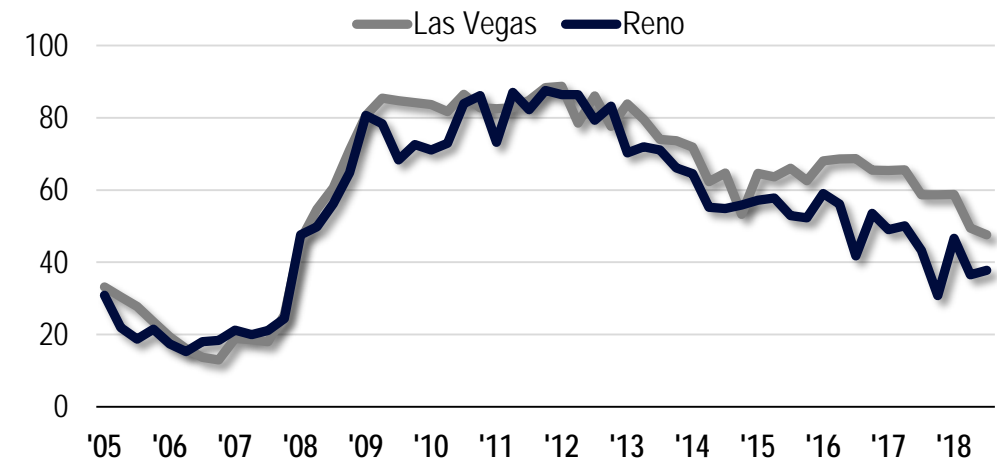
- Housing Price Appreciation:** During the prior economic cycle, Nevada ranked as the fastest appreciating market in the nation, then the fastest depreciating market in the nation. At present, Nevada ranks again as the fastest appreciating market in the country. Unlike the previous cycle, however, this appreciation is largely sourced to organic demand from end-users rather than being fueled by speculative investors of the early to mid-2000s. The reality is that Nevada is not building a sufficient number of new homes relative to the number of new residents and jobs being created.
- Housing Opportunity Index:** The share of households that can afford the median priced home has declined from the 80 percent range during the 2009 to 2013 timeframe to values about half of that in 2018. By 2018, approximately 48 percent of Las Vegas residents and 38 percent of Reno residents could afford the median home price.
- Mortgage Interest Rates:** While mortgage interest rates have held near historically low levels for the better part of the past decade, modest increases in the late part of 2018 and early 2019 demonstrate the impact on consumer behavior. Higher costs of borrowing can put downward pressure on overall affordability.

Housing Price Appreciation



Rank	State	Growth
1	Nevada	+15.0%
2	Idaho	+13.0%
3	Utah	+10.4%
4	Washington	+9.9%
5	Colorado	+9.8%
6	Florida	+9.2%
7	Georgia	+8.9%
8	Arizona	+8.8%
9	California	+8.6%
10	Tennessee	+7.7%

Housing Opportunity Index



Summary of Findings: Housing Affordability

The National Association of Home Builders (NAHB) prepares an annual report on the impact of raising the median price of a new home by \$1,000. The analysis computes the number of households that are effectively priced out of the market (i.e., no longer able to afford the median priced home) due to price increases.

- NAHB Reporting:** The first set of columns to the right reflects the median new home price as computed by NAHB and the associated impact of a \$1,000 increase. The first increase prices out a total of 2,285 households. Similarly, a \$20,000 increase prices out 45,687 households. These data are based on estimates published by NAHB.
- Higher Housing Costs Means Lower Affordability:** Given where median new home prices stand in the two largest urban areas of Nevada, an adjusted analysis was requested of NAHB staff utilizing a median new home price of \$390,417, which is more reflective of today's new home prices in Nevada. With a higher price point, a smaller segment of the population is impacted with each price increase, but a much smaller share of households can afford the starting price. The NAHB estimates that only 23 percent of Nevada households can afford a home at \$390,417. A \$1,000 increase in home prices impacts 1,157 households, while a \$20,000 increase prices out 23,142 households, leaving 21 percent of households able to afford a new home at the median price. With each subsequent increases, the percentage of Nevada families able to afford a new home would continue to decline. Regardless of the calculation selected, it is clear that higher price points translate into fewer households having the ability to afford a home.

No. of Households Priced Out of the Housing Market in Nevada
for Every \$1,000 Price Increase in a Home

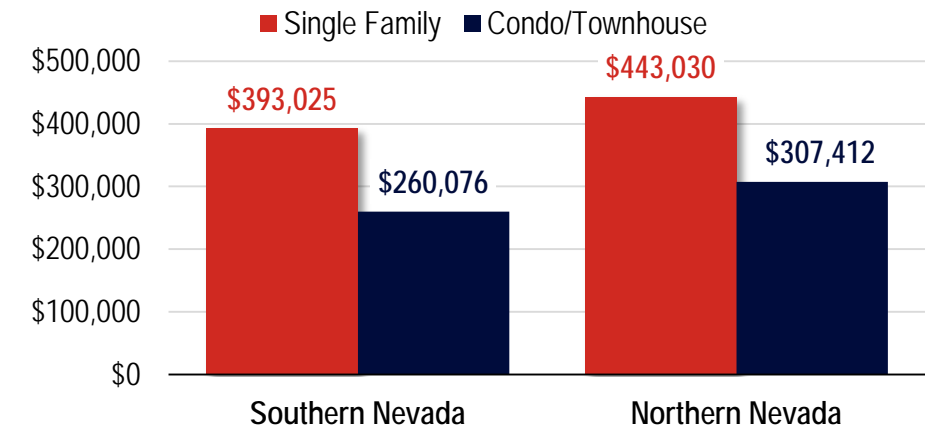
As Reported by NAHB			Adjusted Based on Current Prices		
Median New Home Price	Price Increase	Households Priced Out	Median New Home Price	Price Increase	Households Priced Out
\$255,845	\$ -	-	\$390,417	\$ -	-
\$256,845	\$1,000	2,285	\$391,417	\$1,000	1,157
\$257,845	\$2,000	4,569	\$392,417	\$2,000	2,314
\$258,845	\$3,000	6,853	\$393,417	\$3,000	3,471
\$259,845	\$4,000	9,138	\$394,417	\$4,000	4,628
\$260,845	\$5,000	11,422	\$395,417	\$5,000	5,785
\$261,845	\$6,000	13,706	\$396,417	\$6,000	6,943
\$262,845	\$7,000	15,991	\$397,417	\$7,000	8,100
\$263,945	\$8,000	18,275	\$398,417	\$8,000	9,257
\$264,945	\$9,000	20,559	\$399,417	\$9,000	10,414
\$265,945	\$10,000	22,844	\$400,417	\$10,000	11,571
\$266,845	\$11,000	25,128	\$401,417	\$11,000	12,728
\$267,845	\$12,000	27,412	\$402,417	\$12,000	13,885
\$268,845	\$13,000	29,697	\$403,417	\$13,000	15,042
\$269,845	\$14,000	31,981	\$404,417	\$14,000	16,199
\$270,845	\$15,000	34,265	\$405,417	\$15,000	17,357
\$271,845	\$16,000	36,550	\$406,417	\$16,000	18,514
\$272,845	\$17,000	38,834	\$407,417	\$17,000	19,671
\$273,945	\$18,000	41,118	\$408,417	\$18,000	20,828
\$274,945	\$19,000	43,403	\$409,417	\$19,000	21,985
\$275,945	\$20,000	45,687	\$410,417	\$20,000	23,142

Summary of Findings: Housing Affordability

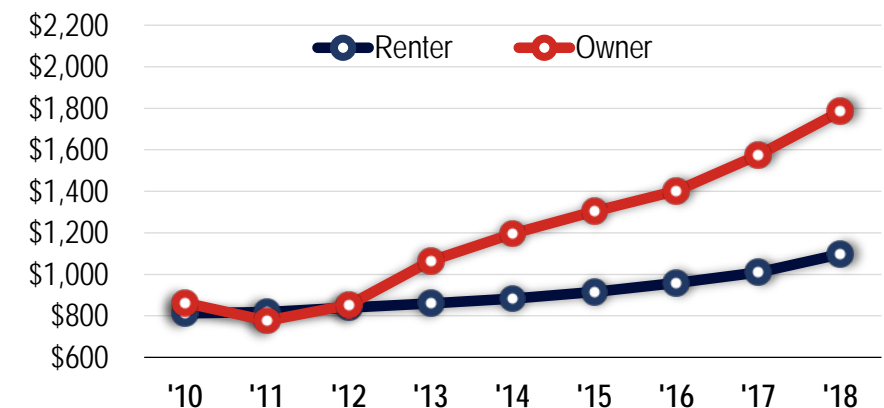
Multi-family housing options tend to offer a more affordable alternative to single family residences. Attached for-sale product (condominiums and townhouses) experience lower overall prices compared to detached residences. Additionally, multi-family rental options are increasingly competitive when considering the monthly cost of housing.

- Affordability Measures Rank Higher in Attached Product:** In 2018, the median price of new condos and townhouses sold in the Las Vegas area was just over \$260,000 compared to the median new single family home price of around \$393,000, a 33.8 percent discount. Both urban areas in Nevada reported a blended average discount of 33.1 percent between single family and attached product pricing. Based on the NAHB data previously detailed, roughly 493,000 Nevada households can afford the median condo price, whereas 268,000 could afford the median-priced single family home, suggesting a quarter million households are priced out of the market between the two. Additional multi-family development can help maintain lower prices for prospective home buyers and make home ownership a reality for a larger share of Nevada's families.
- Higher For-Sale Costs Encourage Renting:** The upward pressure on prices has rippled through the housing market, including the for-rent segment. While rental rates are not keeping pace with for-sale prices, affordability challenges are surfacing within the rental segment.
- The Missing Middle:** As the overall cost of living rises at a faster pace than incomes, a segment of the middle class struggles to make ends meet. With assistance programs for those without the clear ability to afford housing, there is a significant segment of the population (186,000 households in Southern Nevada) that doesn't qualify for assistance yet cannot afford housing. These households are often referred to as the "missing middle" and are among the group that would benefit from additional multi-family housing opportunities.

New Home For-Sale Price Comparison:
Single Family vs. Condominiums/Townhouses



Las Vegas Monthly Cost of Housing: Rent vs. Own

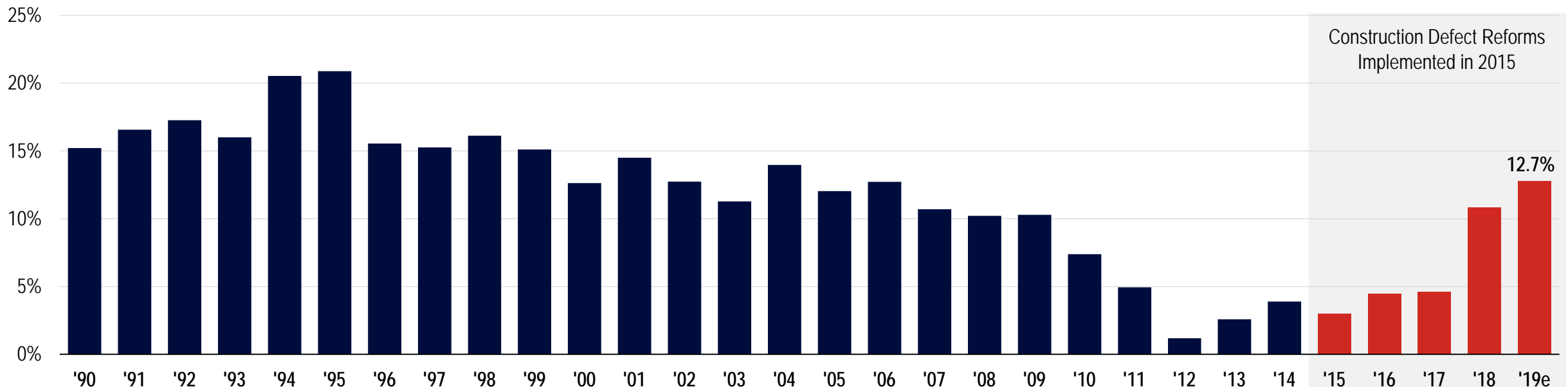


Summary of Findings: The Builder Response

As housing affordability has become an increasingly greater challenge, the builder community has responded to try and maintain lower absolute price points in the for-sale market.

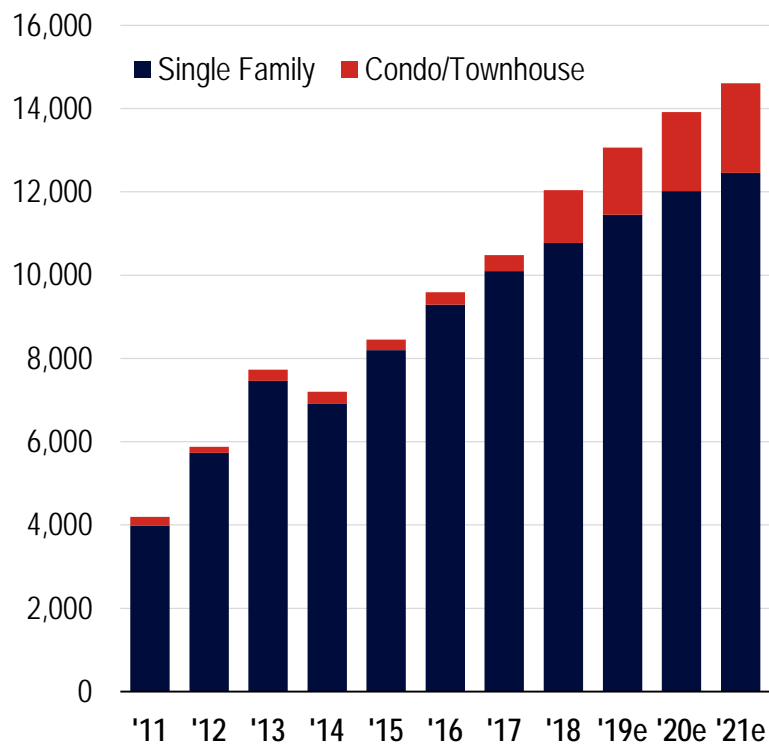
- **Developing Attached Product:** Increased densities (i.e., more residential units on the same amount of land) allow developers to spread the land cost basis across more units, effectively lowering the absolute purchase price of a home. This approach also translates into smaller unit size, another measure to mitigate rising cost concerns.
- **Construction Defect Reforms:** With the passage of Assembly Bill No. 125 (AB 125) in the 2015 legislative session, construction defect reforms resulted in a more predictable and less risky development environment for attached housing products such as condominiums and townhomes. The trend in permitting activity in Southern Nevada clearly demonstrates the impact of such reforms. In 2019, Southern Nevada builders anticipate the construction of nearly 1,700 attached units.

Share of New Home Permits Comprised of Attached Product (Condominiums and Townhomes) in Southern Nevada

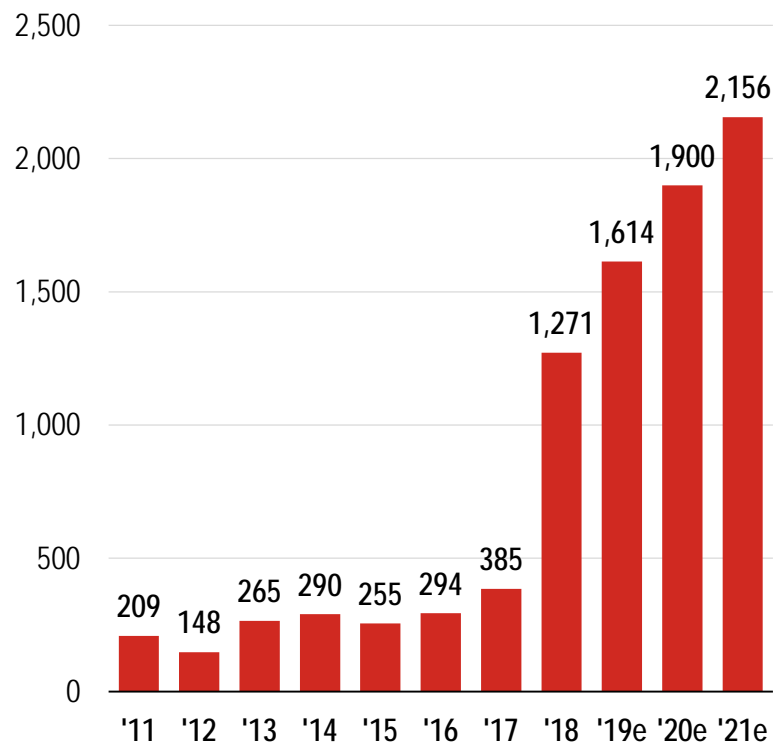


Summary of Findings: The Builder Response

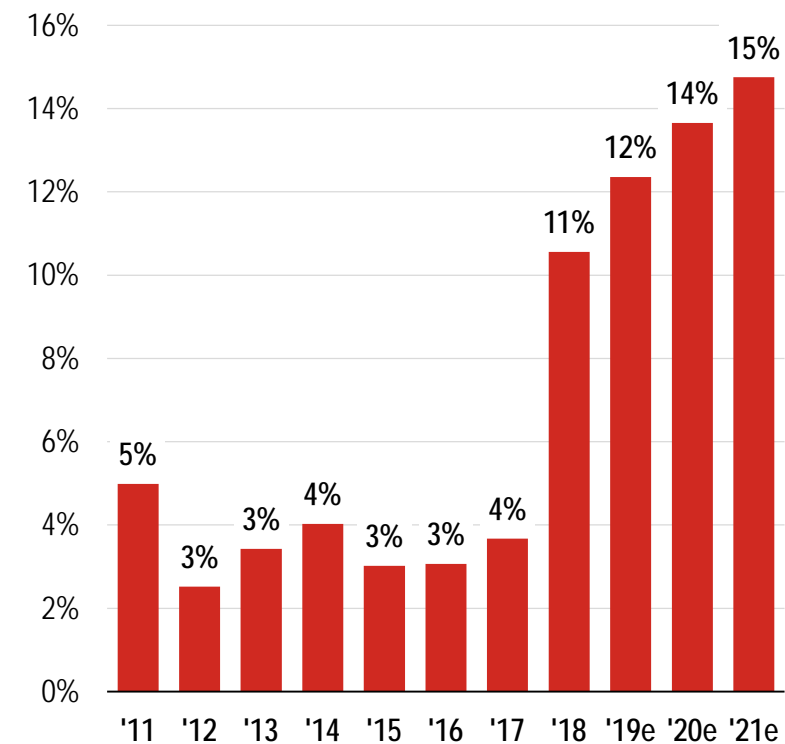
No. of New Home Closings in Nevada
Single Family and Attached (Condo/Townhouse)



No. of New Home Closings in Nevada
Attached (Condo/Townhouse)



New Home Closings in Nevada
Attached (Condo/Townhouse) Market Share

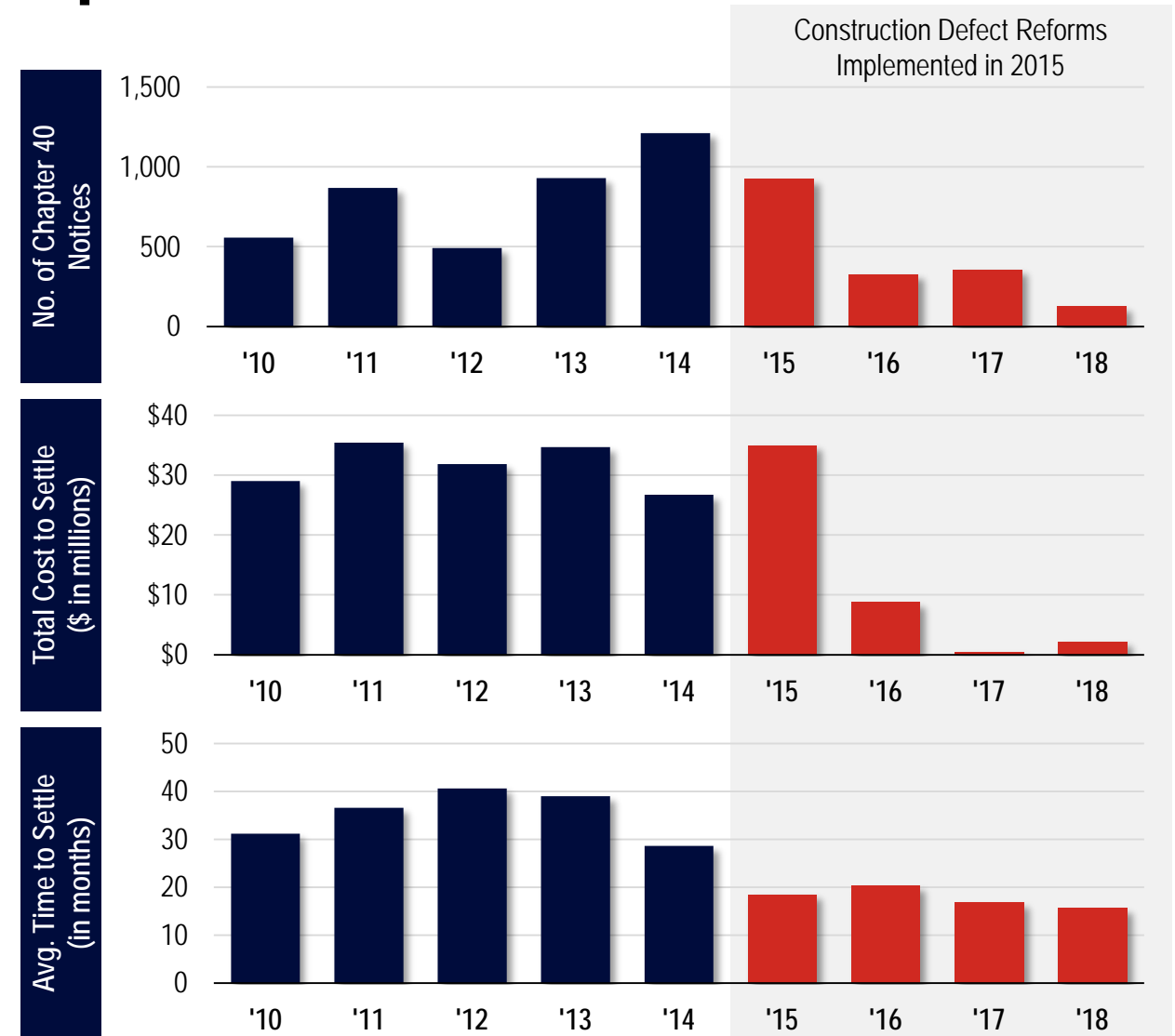


Source: SalesTraq (Excludes High- and Mid-Rises Built Prior to Displayed Periods). Note: Reflects closings in Clark and Washoe Counties.

Summary of Findings: The Impact of Defect Reforms

AB 125 resulted in meaningful construction defect (“CD”) reforms. Trends in the number of CD notices, the cost to settle those claims and the average length of time to settle demonstrates the positive benefits of AB 125 on the industry and ultimately the home buyer. Reforms also include economic and market benefits sourced to reducing risk management costs in the development of for-sale product.

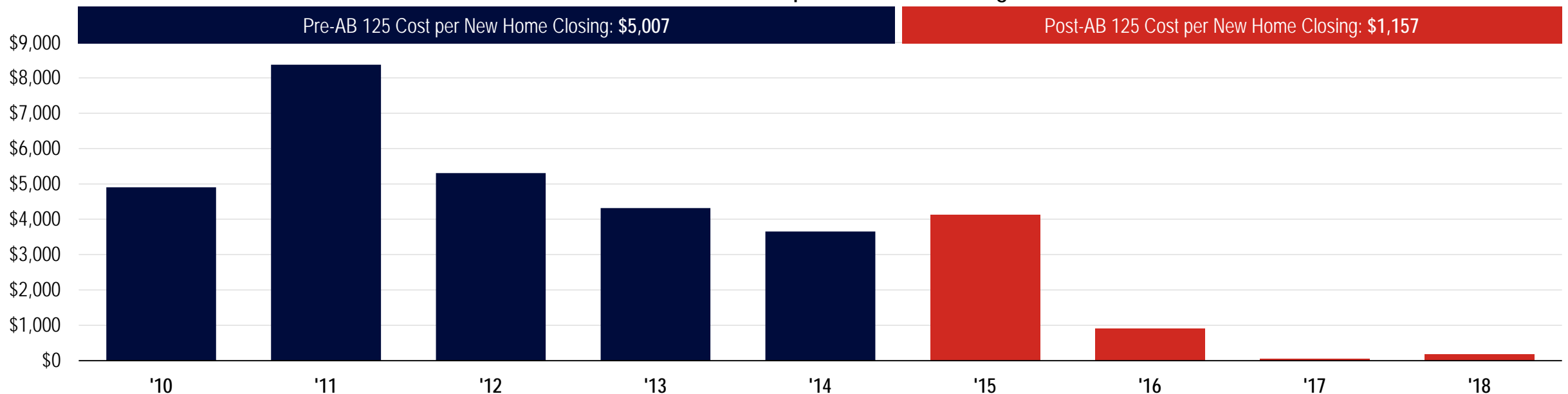
- Chapter 40 Notices:** The annual number of homes in Chapter 40 notices (i.e., homes in litigation for construction defects) has fallen by nearly 90 percent from the peak in 2014, the last full year before passage of AB 125, to 2018.
- Cost to Settle Chapter 40 Claims:** The total cost to settle CD cases averaged \$32.1 million in Nevada from 2010 to 2015, but just \$3.8 million between 2016 and 2018. It is worth noting that given the average length of time to settle a claim, benefits were only starting to be realized in 2016.
- Average Time to Settle Chapter 40 Claims:** Perhaps more importantly, the average time to settle a Chapter 40 CD claim has fallen dramatically. During 2012, the average length of settlement spanned nearly 41 months. Since passage of AB 125, the average time span is has fallen to 16 months.



Summary of Findings: The Impact of Defect Reforms

The effects of construction defect reforms extend beyond home builders and homeowners directly involved in a particular CD claim. All potential buyers of new homes are impacted by way of increased risk management costs (e.g., required builders' insurance costs). While only a portion of new homes were actually involved in such claims prior to the passage of AB 125, the costs incurred by builders ultimately translated into the insurance cost of homes for all buyers. From 2010 to 2014, when comparing the cost of CD claims to the total number of new homes constructed, the average cost per new home closing was roughly \$5,000. Following AB 125, the average settlement cost per new home between 2015 and 2018 was a significantly more modest \$1,157. Excluding 2015 settlement costs from the post-AB 125 calculation since they related to claims filed prior to AB 125, the average cost falls to \$361 per home closing. With the number of CD notices and average cost to settle having both fallen considerably in the years since the passage of AB 125, fewer costs are ultimately included in the cost of the end product. And thus, fewer costs are passed along to homebuyers. Should the construction defect environment revert to something akin to the pre-AB 125 environment, the incremental cost of roughly \$3,850 per home is significant. The resulting increase would be expected to price out approximately 4,000 to 8,000 households and increase housing costs for all buyers.

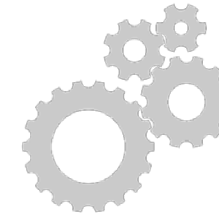
Construct Defect Settlement Costs per New Home Closing in Nevada



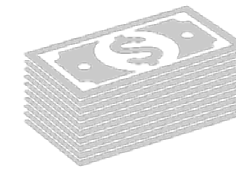
Summary of Findings: Economic Impact of Builders

Residential construction is a significant portion of Nevada's construction industry and the economy as a whole.

- Economic Output:** Nevada's residential construction sector is estimated to directly support approximately \$6.6 billion in economic output annually. When the indirect and induced impacts of the industry are considered, total impacts reach nearly \$11.0 billion per year. The construction industry overall is roughly equivalent in size to Nevada's manufacturing, information, and financial sectors in terms of its contribution to the state's GDP.
- Wages and Salaries:** The home building industry accounts for approximately \$2.5 billion annually in direct wages and salaries in Nevada. Once the ripple effect of the industry is considered, personal incomes for Nevada families supported by the residential construction industry total \$3.9 billion annually. Jobs in the construction field also tend to pay well compared to many of Nevada's other industries, and wages have been rising quickly as demand for labor has increased significantly along with investment in the state. As of December 2018, the average weekly wage for workers in Nevada's construction industry was \$1,191 per week, translating into an annual salary of nearly \$62,000. This is roughly 40 percent higher than wages for all private industry employees in the state.
- Employment:** Nevada's residential construction industry directly supports in excess of 44,000 workers annually. Including the indirect and induced impacts, the industry supports approximately 75,725 local workers. Stated otherwise, for every 1.0 direct job in the construction industry, a total of 1.7 jobs is created throughout the state's economy.



TOTAL ECONOMIC OUTPUT
\$11.0 Billion



TOTAL WAGES & SALARIES
\$3.9 Billion



TOTAL EMPLOYMENT
75,725 Jobs