

# PIPELINE PROXIMITY

The truth about the impact on value

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Throughout the United States, there is ongoing opposition to pipeline and other infrastructure projects that historically were permitted and built with little notoriety or conflict. From the White House to the courthouse, nearly every right of way project seems to face scrutiny and opposition. The resistance comes from a variety of sources ranging from pipeline safety to the impact of the pipeline on real property values.

When a pipeline has proximity to a residential area, residents typically become concerned about the potential impact it may have on real property values. While there is an overabundance of data available in the news and through online sources, much of the published information is not subject to verification or peer review to validate the results or conclusions. Thus, it is incumbent on the individual seeking the information to vet the findings for accuracy and reliability.

In order to make informed opinions about the real impact of pipelines on residential property value, it is imperative that factual data and information be analyzed and presented for consideration. However, finding factual data that has been substantiated is no easy task.



### Studying the Impact

During a recent appraisal assignment on the impact of Marcellus Shale activity in the state of Pennsylvania, our firm, Allen, Williford & Seale, was surprised to see how much information was available, but how little was actually factual. As a result, we decided to perform a study to analyze the impact of a natural gas pipeline on the sales prices of residential lots and homes in the area.

Part of planning such a study involves many hits and misses as it pertains to locating a viable candidate. Selecting a residential subdivision works best, as it reflects the most common real estate transactions in the market and typically yields the most common

sales data. In our search, we looked for a pipeline that was well marked in an area that yielded abundant and recent data to ensure credible results. This led us to the Saddle Ridge Subdivision located in Dallas Township in Luzerne County, Pennsylvania.

Saddle Ridge is a residential subdivision that was platted and approved in 2005. At the time it was platted, there was an existing 50-foot wide natural gas pipeline easement in place. Home construction began shortly after approval, and the homes built were relatively similar with respect to quality, size and year completed. The pipeline easement contains the Williams Pipeline Company's Leidy 24-inch natural

gas pipeline. Originally installed in 1958, the pipeline traverses the central portion of the subdivision and crosses multiple lots.

This impact study focused on sales of unimproved residential lots and residential home sales in Saddle Ridge spanning from 2009 to 2014. There were 17 transactions of unimproved lots, six being encumbered with the Williams Pipeline easement. There were 30 transactions of home sales, with nine that were encumbered by the Williams Pipeline easement.

### Unimproved Lot Sales

To study the impact on the unimproved lots, we compared lot sales that were encumbered with the pipeline easement to lot sales without the pipeline easement encumbrance.

Based on a paired sales analysis of residential lots sales within this subdivision, it was determined that no adjustment was necessary for market conditions (difference in time). Essentially, the unimproved lots within this subdivision showed no substantial increase or decrease in prices from 2009 through 2014.

In order to assess the impact the pipeline easement had on the unimproved lot sales prices, we compared the average/median lot price of the encumbered sales to the lot price of the unencumbered sales. The six lots encumbered by the pipeline had an average and median price of \$50,333 and \$50,000, respectively. The 11 unencumbered lots had an average and median sales price of \$60,110 and \$59,755, respectively. This indicated that the encumbered lots sold for 16 percent less than the unencumbered lots.

Our next step was to determine if the discount in price of the encumbered lots was contained within the easement area, or if the discount extended beyond the easement's border. To analyze this occurrence, we compared the percentage of discount in the sales price (16 percent) to the portion of encumbered area for each of the lots. The lots located on the pipeline had an average and median encumbered area of 20 percent and 22 percent, respectively. The discount in sales price for the encumbered lots was 16 percent, which was less than the percentage of encumbered area (20 percent, 22 percent) for those same lots. This indicated that the marketplace only discounted the actual encumbered area of the lot—the discount did not extend into the unencumbered area of the lot.

**SADDLE RIDGE HOME SALES**  
Average Adjusted Sales Price

	Sales Price	% Difference
Encumbered	\$383,174	3%
Unencumbered	\$372,094	

**SADDLE RIDGE HOME SALES**  
Median Adjusted Sales Price

	Sales Price	% Difference
Encumbered	\$364,000	1%
Unencumbered	\$360,000	

We also conducted a paired sales analysis to verify and quantify the price discount for the encumbered lots. Three sets of paired sales were selected, and each pair compared one lot sale that was unencumbered to a similar lot sale that was encumbered. In all three pairs, the percentage price discount was less than the percentage of area encumbered by the pipeline easement. This finding corroborated the earlier conclusion that the discount in price was contained within the easement area. In addition, these paired sales comparisons implied that the actual price discount to the encumbered area ranged from 43 percent to 64 percent of the allocated sales price.

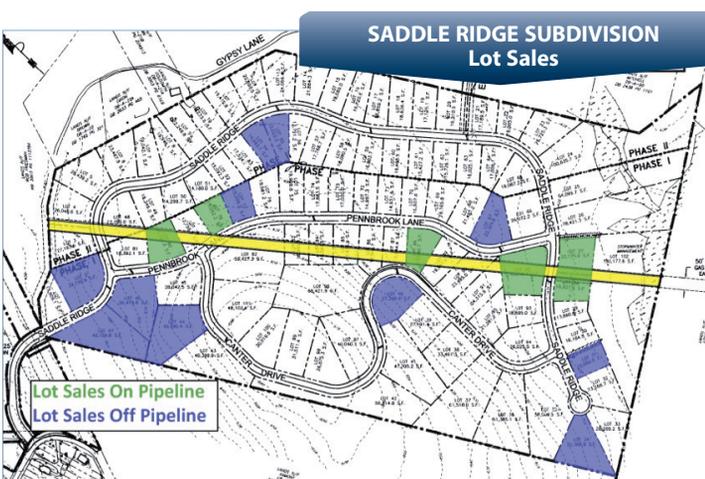
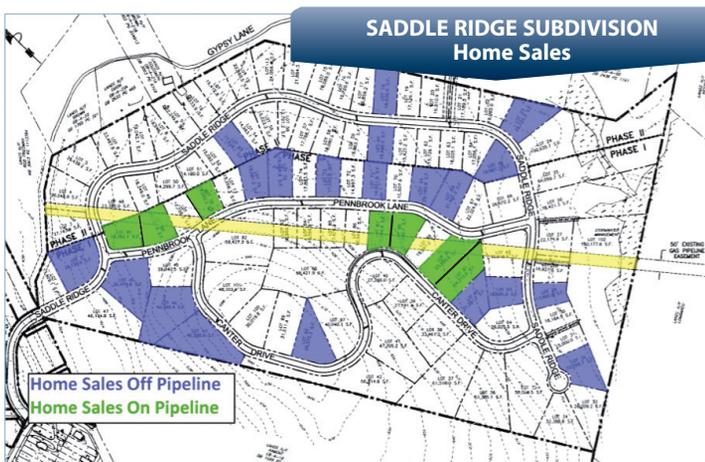
After examining the unimproved lot sales from 2009 and 2014, the findings showed that the unimproved lots encumbered by the pipeline sold for a discount compared to the unencumbered lots. However, the percentage discount in price was less than the actual percentage of the encumbered area. This indicates the discount in sales price is contained within the easement area, and there is no negative impact on the price paid for the area outside the easement.

**Home Sales Comparison**

In studying the home sales, 30 transactions were observed with nine located on the pipeline. Two homes located on the pipeline sold and were subsequently resold. Therefore, there are only 7 homes shaded in green.

After analyzing the home sales through linear regression and paired sales analysis, it was determined that a market conditions adjustment of 3 percent annually was appropriate. To compare the home sales encumbered by the pipeline easement to the unencumbered sales, we first analyzed the similarities. After adjusting for market conditions, we evaluated the average/median lot sizes and house sizes in order to determine if there was a significant difference for comparison purposes. It was determined that no adjustments for lot or house size were necessary.

The next step was to compare the total sales price of the homes encumbered by the pipeline to those without a pipeline encumbrance. The home sales encumbered by the pipeline easement had an adjusted sales price range from \$308,000 to \$458,872, with an average of \$383,174 and a median of \$364,000. The home sales without the pipeline easement had an adjusted sales price range of \$284,640 to \$541,650 with an average of \$372,094 and a median of \$360,000.



These plats depict the home and lot sales between 2009 - 2014 for Saddle Ridge Subdivision. The 50-foot pipeline easement is highlighted in yellow, the encumbered sales in green and the unencumbered sales in purple.

The average and median adjusted sales prices for the houses encumbered by the pipeline easement is 1 percent to 3 percent higher than the average and median adjusted sales prices for the homes not encumbered. This analysis indicated that the pipeline had no effect on the price paid for the encumbered homes in Saddle Ridge.

The home sales were also analyzed on a price per square foot basis. The homes encumbered by the pipeline easement have an adjusted price per square foot ranging from \$130.29 to \$170.04, with an average of \$144.48 and a median of \$142.65. The homes not encumbered by the pipeline easement have an adjusted price per square foot ranging from \$108.39 to \$168.92 per square foot with an average of \$140.13 and a median of \$140.21. The average and median price per square foot for encumbered homes is higher than the unencumbered houses. Based on this analysis, we determined that the encumbrance of the natural gas pipeline easement had no negative impact on the prices paid for encumbered homes located within the Saddle Ridge Subdivision on a per square foot basis.

Further analysis involved paired sales to determine if encumbered homes sold for a noticeable discount compared to similar homes without the pipeline easement. Eight pairings were selected based on similarities in sale date, lot size, house size, bed/bath count, garage and year built. The pairs selected all sold within eight months of one another and have been adjusted for market conditions (0.25 percent per month) as previously discussed. Six of the eight pairings have the encumbered home selling for more than the unencumbered home. Only two of the pairings show the encumbered home selling for less than the unencumbered home. Based on these paired sales comparisons, it does not appear the pipeline easement has a negative effect on home sales prices within Saddle Ridge.

In comparing the home sales prices, those that were encumbered by the pipeline easement sold for more than the unencumbered homes. This indicates that the pipeline easement had no negative impact on the sales prices for the encumbered homes in Saddle Ridge. To verify this conclusion, we conducted a paired sales analysis which also showed the majority of the homes with the pipeline encumbrance sold for more the unencumbered residence. The market evidence indicated the Williams natural gas pipeline easement had no impact on the price paid for the homes in Saddle Ridge.

**“ This analysis indicated that the pipeline had no effect on the price paid for the encumbered homes in Saddle Ridge.”**

### In Summary

The goal of this study was to gain insight into the effect that proximity of a natural gas pipeline easement has on real estate prices. With an abundant supply of sales activity for residential homes and lot sales data, the Saddle Ridge development provided a quantifiable case study for this endeavor.

The study determined that the unimproved lots encumbered by the pipeline did sell for a discount to those lots without the pipeline encumbrance. However, through studying both the average and median prices, as well as utilizing a paired sales analysis, it was determined that the discount in price was contained within the encumbered area only. Thus, the pipeline caused no impact to the price paid for the area outside the pipeline easement. In both scenarios, the homes encumbered by the pipeline easement sold for more than the homes without the pipeline encumbrance. The paired sales analysis utilized eight pairings

and demonstrated that homes encumbered by the pipeline sold for more than the homes without it. The paired sales analysis substantiates the conclusion that the Williams pipeline has no negative impact on the price paid for the residential homes in the Saddle Ridge Subdivision. While our conclusions are based on the data and findings of this study, we recognize that other data sets or different geographic areas might not present the same conclusions.

Since a resident's home often represents their largest asset, it is important for all sides to be aware and knowledgeable of the impact of this type of pipeline easement. Studies like these can assist landowners and pipeline companies in their negotiations when purchasing an easement. ☺



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