# Easement Valuation

**With the ever-expanding Barnett Shale gas field in North Central Texas, the valuation of easements places an increasing demand on appraisers to correctly evaluate pipeline easements and their impact on market value. This treatise is not limited to gas pipelines but is an attempt to provide some thought on how to value easements in general. The valuation of easements requires knowledge of a wide variety of market factors and a look at the rights included in the easement document.**

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First, what is an easement? According to the Dictionary of Real Estate Appraisal, an easement is the "conveyance of certain property rights, but not ownership, to a parcel of real estate." By definition, the ownership of real estate is endowed with a bundle of rights. The concept of bundle of rights maintains that like a bundle of sticks, real property ownership may be wholly intact (fee simple estate) or may be conveyed in part to a third party.

In real property ownership, one has the inherent right to use the property, to sell it, to lease it, to enter upon it, to give it away or the right to refuse to do any of these things. For example, the creation of a lease conveys to the tenant a portion of one's rights for the specific term and space occupied by the tenant according to the terms of the lease. During the lease period, the tenant may have a measurable interest in the property (leasehold estate). The creation of an easement is somewhat similar in that we are dealing with concepts of time and space. By definition, the creation of an easement conveys a portion of the total bundle of rights to a third party. The challenge before the appraiser is the measurement in terms of dollars of the market value of the rights conveyed.

With respect to time, easements may be either permanent or temporary in nature, with either specific or indefinite time frames. One of the most common temporary easements is a temporary construction easement (TCE). This type of easement is generally used to facilitate construction of a project and either terminates at the end of construction or at the end of a specific use period. For example, a 25-foot-wide permanent easement may not provide ample space for construction. An additional 15 feet may be needed for the actual construction and would be acquired as a temporary construction easement.

## CLASSES OF EASEMENT

In terms of space, three broad classes of easements exist and include subsurface, surface and overhead easements. Subsurface easements may be required for the construction of water and sewer lines, gas pipelines, communication lines, or tunnels. During construction, surface disturbance may occur and some above ground appurtenances may be present, however the bulk of the project remains below the surface and is unseen. Common surface

easements may allow for drainage, flowage, railroads and highways. These types of easements severely impact the surface area. Typical overhead easements include electrical transmission lines and avigation easements. Some easements may involve two or even all three of these types of space. For example, overhead transmission lines require surface areas for the placement of the towers and some subsurface areas may be needed for the underground footings required. Thus, while generally classified as one of these three broad classes of easements, most easements involve multi-space occupancy.

The task before the appraiser is to evaluate the "rights conveyed" by the creation of the easement and to properly measure these rights. The principles and techniques applied to appraising property for partial acquisitions apply to the valuation of an easement. Under the federal rule, the value of the easement will be based on the difference between the value of the whole property before (or without) the easement and the value of the property with the easement in place.

In this example, the $60,000 of total compensation includes the value of the easement and any damages that may result due to the placement of the easement.

| | |
|---|---|
| **Value of Whole Property Before** | |
| 120 acres @ $10,000 per acre | **$1,200,000** |
| **Value of Whole Property After** | |
| 120 acres @ $9,500 per acre | **$1,140,000** |
| (Encumbered with 10 acres in easement) | |
| ***Total Compensation*** | **$ 60,000** |

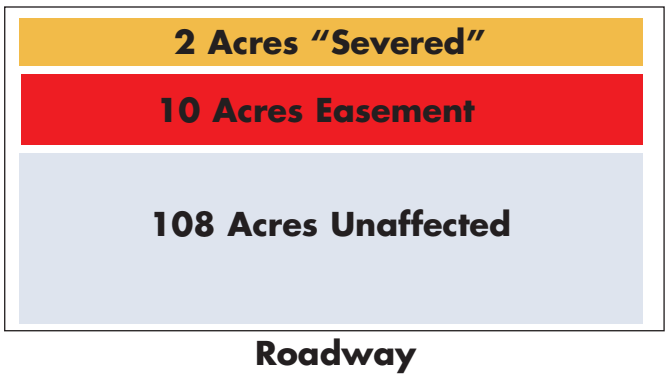
Under the state rule, the appraiser will be required to estimate the value of the easement plus damages to the remainder, if any. For example:

| | |
|---|---|
| **Value of Whole Property** | |
| 120 acres @ $10,000 per acre | **$1,200,000** |
| **Value of the Part Acquired** | |
| 10 acres in easement @ $10,000 per acre @ 50% | **$50,000** |
| **Value of the Remainder Before the Acquisition** | |
| $1,200,000 - $50,000 | **$1,150,000** |
| **Value of the Remainder After the Acquisition** | |
| $1,200,000 @ $9,500 per acre | **$1,140,000** |
| (Encumbered with 10 acres in easement) | |
| ***Damages*** | **$10,000** |
| ***Total Compensation*** | **$60,000** |

**"... the mere presence of an easement is not generally the deciding factor in a purchasing decision."**

Where do these figures come from? The answer: the market! The appraiser's task is to see what effect, if any, an easement has on the sale of property encumbered with similar easements. In the case of residential property, most urban properties within platted single family subdivisions are likely encumbered with common utility easements. In most situations, these easements extend along the property boundary and have little effect, if any, on the sale of the home. Thus, the market tells us that the easement has little value, if any. Why? The presence of the easement does not affect the use or utility of the property. The easement does not place any undue burden or hardship on the ownership.

Using the illustration below, assume that the 120-acre ownership will be encumbered with 10 acres in permanent easement; however a "gap" exists between the easement and the north property line. The use and utility of this "severed" area is limited given its narrow shape and size. The following is an illustration of this example.




The total effect of this easement can be measured by looking at actual market sales unencumbered with similar easements. Finding encumbered sales can be an extensive exercise requiring lots of time and manpower. While it is highly unlikely that the market will produce an exact situation, it may be possible to find sales encumbered with an easement and compared to a sale unencumbered. This is often referred to as "matched pair sale analysis."

In our local market, we have investigated sales encumbered with gas pipelines and compared them to similar sales encumbered. By nature, the real estate market is a very imperfect market and no two sales are identical. However, by gathering a sufficient number of matched pairs, general trends may emerge that give some market evidence of the effect easements have on value. Our analysis indicates the following trends as outlined below:

**PAIRED ANALYSIS SUMMARY**

| Sales | Dates | Land Sizes (Acres) | Pipeline Size | Price Differential |
|---|---|---|---|---|
| A-1<br>A-2 | 9/27/01<br>4/30/01 | 5.78<br>5.73 | None<br>16″ | -2.4% |
| B-1<br>B-2 | 5/29/02<br>7/18/02 | 38.427<br>25.5 | None<br>16″ | +1.5% |
| C-1<br>C-2 | 9/4/01<br>12/6/01 | 16.39<br>15.68 | None<br>12″ | +44.0% |
| D-1<br>D-2 | 8/13/01<br>7/12/01 | 101.27<br>97.92 | None<br>18″ | -2.1% |
| E-1<br>E-2 | 8/26/02<br>5/30/02 | 5.0<br>5.0 | None<br>20″ | -27.6% |
| F-1<br>F-2 | 7/31/02<br>8/27/02 | 12.551<br>14.56 | None<br>10″ | +6.4% |
| G-1<br>G-2 | 6/11//01<br>3/8/01 | 29.87<br>48.318 | None<br>20″ | -6.5% |
| H-1<br>H-2 | 5/29/02<br>5/24/01 | 9.81<br>10.0 | None<br>16″ | -9.1% |
| I-1<br>I-2 | 9/20/00<br>2/12/01 | 7.31<br>10.79 | None<br>16″ | -1.9% |
| J-1<br>J-2 | 1/18/01<br>2/1/00 | 112.723<br>139.09 | None<br>10″ | +0.1% |
| K-1<br>K-2 | 12/14/01<br>12/30/02 | 12.665<br>27.29 | None<br>24″ | +8.1% |
| L-1<br>L-2 | 10/25/02<br>11/6/02 | 10.0<br>15.0 | None<br>10″ | -5.7% |
| M-1<br>M-2 | 7/10/03<br>5/20/03 | 14.34<br>20.48 | None<br>10″ | 0% |

Often the market is unclear as to the effect an easement will have on value. Market participants (buyers, sellers, brokers, other appraisers) may offer insight into their personal opinions as to the effect an easement may have on value. In the absence of market data, some appraisers use market surveys of buyers, sellers and brokers to support their opinions. For example, a broker may offer an opinion that a particular property is discounted 5% due to the presence of the easement. This would, at first blush, seem to have a minimal effect on the value. However, some appraisers take such information and apply it inappropriately. Basically, this error results in an overstatement of the effect of the easement may have on value. Using the same example cited above, the appraiser incorrectly assesses the impact as 5% damages to the value of the remainder property plus the value of the easement. The results are as follows:

**Value of Whole Property**
120 acres @ $10,000 per acre **$1,200,000**

**Value of the Part Acquired**
10 acres in Easement @ $10,000 per acre @ 50% **$50,000**

**Value of the Remainder Before the Acquisition**
$1,200,000 - $50,000 **$1,150,000**

**Value of the Remainder After the Acquisition** **$1,092,500**

***Damages*** **$57,500**

***Total Compensation*** **$107,500**

What the broker stated was that the property would command 5% less than the property's unencumbered value. Assuming the unencumbered value was $1,200,000, then the total damages would be 5% or $60,000, resulting in a remainder after value of $1,140,000. The $60,000 includes both the value of the easement plus any damages. What the appraiser has done in the above calculations is provided double compensation, $50,000 for the easement plus $57,500 in damages. As you can imagine, this error is compounded when the estimate of damages rises to 10% or 20%, as opposed to the 5% estimate.

When investigating a new easement, some important questions should be addressed by the appraiser. It is imperative that the appraiser understand the nature of both the legal and physical rights that are being sought. Some questions may include:

- What is the proposed use?
- Where is the easement located? Can it be moved?
- Is the easement located in a setback area or along a property line?
- What will be the construction? (open cut versus bored)
- Who will maintain the property during construction?
- Will the easement be surveyed and monumented?
- May either party alter the construction or grade after completion?
- Will the landowner have to obtain permission to use the easement area?
- Can the landowner cross the easement with roads, utilities, etc.?
- Who pays property taxes and insurance?
- Will the easement cause a loss in view, security, etc.?
- Will the easement provide any benefit to the owner?

These issues are often found within the easement document but may require discussions with the condemnor. In terms of legal encumbrance, it is important to recognize that the easement will impact the ownership title and may affect both current and/or future uses.

One key question is "will the easement affect the use and/or utility of the property that results in a change in highest and best use?" Also, the easement may include accessory rights such as the ability to access the easement and ability to expand the use within the easement (add additional pipes). From a physical standpoint, it should be recognized that most of our activity occurs on the surface. Thus, impacting the surface area tends to affect value to a greater degree compared to a subsurface easement where there is little or no impact on surface use. The appraiser thus needs to know how the easement is intended to be used and how it will be constructed.

## EASEMENT VALUATION MATRIX

| Percentage of Fee | Comments | Potential Types of Easements |
|---|---|---|
| 90% - 100% | Severe impact on surface use<br>Conveyance of future uses | Overhead electric<br>Flowage easements<br>Railroad ROW<br>Irrigation canals<br>Access roads |
| 75% - 89% | Major impact on surface use<br>Conveyance of future uses | Pipelines<br>Drainage easements<br>Flowage easements |
| 51% - 74% | Some impact on surface use<br>Conveyance of ingress/egress rights | Pipelines<br>Scenic easements |
| 50% | Balanced use by both owner and easement holder | Water or sewer lines<br>Cable line<br>Telecommunications |
| 26% - 49% | Location along a property line, location across non usable land area | Water or sewer line<br>Cable lines |
| 11% - 25% | Subsurface or air rights that have minimal effect on use and utility<br>Location with a setback | Air rights<br>Water or sewer line |
| 0% to 10% | Nominal effect on use and utility | Small subsurface easement |

**"... will the easement affect the use and/or utility of the property that results in a change in highest and best use?"**

Damages or the percentage of rights acquired are often difficult to measure due to the imperfections in the real estate market and due to the fact that the presence of an easement represents only one of many factors affecting the buying decision.

While some buyers may react negatively toward a particular easement, others may view the same property with total disregard toward the easement. Other factors such as location or the presence of some amenity may overshadow the presence of the easement resulting in little dscount, if any.

The Easement Valuation Matrix (left) is used as a general guide in looking at the effect an easement may have on the total bundle of rights. This chart should not be considered an exclusive list as to the type of easements and their effect on the total bundle of rights but should be used only as a guide to general effects on the total fee ownership.

### IN SUMMARY

My experience in the valuation of real property leads me to the conclusion that mere presence of an easement is not generally the deciding factor in a purchasing decision. While I recognize that an easement can cause severe harm to a property, each property and situation should be evaluated on an individual basis.

In general, if the market recognizes the presence of an easement as a major adjustment factor, it is likely that market participants would more readily address these concerns when appraisers verify market data.

This is not to say that damages do not occur in the market due to the presence of an easement. Each situation must be reviewed on an individual basis and evaluated using market evidence as opposed to speculation and guesswork. ■