



... Alliance for a Communications Bill of Rights

VALUATION OF THE PUBLIC RIGHTS-OF-WAY ASSET

I. Introduction

The value of the rights-of-way held in trust by state and local government is the sum of the value of the real estate plus the value of the capital improvements, which make rights-of-way useful and usable. There are numerous appraisal methods to identify this value: Book Value; Replacement Value; Willing Buyer/Willing Seller Value; Income-Based Method and a Comparable Transactions Valuation.¹ This paper employs the book value and comparable transaction valuation methods. These and the other valuation methods substantiate that state and local governments hold, and are responsible for, one of the most important and valuable assets in the United States economy. Managing this asset in trust on behalf of the nation's taxpayers is a central responsibility of state and local elected officials.

II Establishing the Size of the National Rights-of-Way Inventory. (625,517,587,200 square feet)

The Federal Highway Administration of the U.S. Department of Transportation estimates there are 3,917,232 linear miles of roads in the United States.² State and local governments are responsible for the acquisition, construction and maintenance 78% of this total inventory.³ This paper uses an average width estimate of 40 feet.⁴

¹ See *Fair Market Value Analysis For a Fiber Optic Cable Permit in National Marine Sanctuaries*, National Oceanic and Atmospheric Administration (August 2001.) Assigning a value to the rights-of-way is not a case of first impression for federal, state or local government. Federal agencies such as the United States Department of Transportation, the U.S. Department of the Interior (Bureau of Land Management "BLM"), the United States Department of Agriculture (U.S. Forest Service) and the National Oceanic and Atmospheric Administration ("NOAA") have all been actively engaged in assessing value for rights-of-way for years. Valuation of rights-of-way, and the requirement that government receive fair market value for their use, can be found in regulations (43 C.F.R. Sections 2803 and 2883) statutes, and case law. A whole industry has developed to provide federal, state, and local governments, as well as individual land-owners, with valuations of their rights-of-way. The public side of this industry can be found at the International Right of Way Association <http://www.irwaonline.org/> and the American Public Works Association <http://www.apwa.net>. Private practitioners of evaluating and valuing rights-of-way may be found at the Appraisal Institute <http://www.appraisalinstitute.org/>.

² All highway number are drawn from the U.S. Department of Transportation's Highway Statistics 2000 study available at <http://www.fhwa.dot.gov/ohim/hs00/index.htm>

³ The total 3,917,232 inventory includes 2,961,731 miles that are the sole responsibility of state and local governments. In addition, 160,161 miles belong to the Interstate System, and an additional 795,340 miles are state and local roads entitled to Federal funds. State and local governments pay ten percent of the acquisition, construction and maintenance of these roads. This analysis reflects this burden by adding ten percent of the federal roads (79,534 + 16,016) to the state and local mileage.

⁴ 40-foot average width is a conservative number. A traffic lane must be a minimum of nine-feet wide. A 40-foot width provides a single lane of traffic, two lanes of parking, plus a six-foot sidewalk/ pedestrian way/utility right-of-way on each side of the street. Many streets and roads are much wider than a single traffic lane.



5,280 feet/centerline mile x 2,961,731 centerline miles x 40 feet width = 625,517,587,200 square feet of rights-of-way that are the sole responsibility of state and local government.

III. Establishing the Value of the Rights-of-Way Inventory

1. Net Book Value: (\$4,676,039,947,040)

A. Value of Improvements: (\$1,110,589,700,000)

The Bureau of Economic Analysis (BEA) states that the present value of the total capital expenditures on streets and highways is \$1,423,833,000,000.⁵ This is the depreciated capital cost borne by taxpayers to improve streets and highways. State and local taxpayers paid 78% or \$1,110,589,700,000.⁶

B. Value of the Land.⁷(\$3,565,450,247,040.00)

There are several methods to establish an average value for each square foot of land in the rights-of-way. Land in the right of way has widely varying value. The “Across or At the Fence” value (ATF) is less than a penny per square foot for some western rural counties.⁸ The ATF value exceeds \$2,500 per square (in 1989 dollars) for downtown New York.⁹ Between these extremes lies a national average.

The Minnesota Department of Transportation estimated in 1994 that the average ATF value of the land abutting the rights of way for the City of Minneapolis at \$5.70/square foot.¹⁰

⁵ The Bureau of Economic Analysis of the Department of Commerce (the organization that estimates the Gross National Product numbers other leading economic indicators) has tracked government fixed assets for decades. Among those fixed assets is a category for roads and highways. See Department of Commerce’s Bureau of Economic Analysis Fixed Asset Tables for 2002. These tables may be viewed at www.bea.doc.gov/bea/dn/faweb/FATableView.asp?SelectedTable=67&FirstYear=1995&LastYear=2000&Freq.

⁶ This valuation understates the interest of state and local government in the rights-of-way. BEA staff, in interviews for this paper, suggested state and local jurisdictions are responsible for 100% of the ownership and maintenance of the nations streets and highways, regardless of whether the road is identified as a local, state or interstate highway.

⁷ There exists no government research number for a national value of the land located in the right-of-way. This paper therefore employs the following formulae: [(Feet per mile) x (miles of no-federal roads)x (40 feet width)] x value of land per square foot.

⁸ Not all western land, however, is that cheap. In 1994 Nevada Bell paid the federal government an annual fee of \$1.05 per linear foot or \$5,544 per mile for an easement. This followed a determination by the Bureau of Reclamation that the market price for the land ranged from 1,000 to \$50,000 per mile. See page 25 of the National Ocean Service “Fair Market Value Analysis” of December 2000.

⁹ See *Indirect Costs of Utility Placement and Repair Beneath the Streets*. A Report by Raymond L. Sterling , Ph.D., P.E. to the Minnesota Department of Transportation. (1994)

¹⁰ The \$5.70 is 1994 dollars. Adjusted for recent increases in property values in Minneapolis and other inflation, the value would be \$9.00 per square foot in 2002 dollars. \$9.00 per square foot appears to be a representative number based on two recent fiber optic easement class action lawsuits brought against railroads by abutting landowners. In *Vera J. Hinshaw et.al , v. AT&T Corp* (S.D. Ind, 2001) Civil Action No. IP99-0549-C-T/G) a Federal Court



This paper uses the Minnesota 1994 valuation of a mid-size, mid-western urban area as a conservative approximation of the nation-wide average.¹¹

Multiplying the length x width x average value equals \$3,565,450,247,040.00.¹²

C. Total Book Value (\$4,676,039,947,040)

The total book value of the rights-of-way is the sum of the value of the land plus the value of the improvements, which equals \$4,676,039,947,040.¹³

II. Comparable Transaction Valuation (\$7.1 trillion to \$10.9 trillion)

Comparable transaction valuation looks in the marketplace and uses sales and transfers of similar assets to establish a value for the property in question. As explained by NOAA, “Prices paid in actual market transactions provide direct data of fair market value.”¹⁴ NOAA cautions that “a wide variety of conditions and prices can create difficulties in finding the right comparison. A verifiable set of comparable sales must be viewed as a tool for identifying market trends and a basis for establishing a range of possible appraisal values.”¹⁵

Employing this traditional method for assessing real estate values faces specific difficulties that must be accommodated when used to assess rights-of-way value:

- ∑ **Proprietary Information:** As the U.S. Department of Transportation learned in its study *Shared Resources: Sharing Right-Of-Way for Telecommunications* (FHWA-JPO-96-0015, April 1996): “Although access to rights-of-way is leased and prices are recorded in various contracts, these values may not be generally available because they are considered proprietary.”
- ∑ **Dramatic Increases in Value:** The explosive growth of telecommunications sector has resulted in an exponential growth in rights-of-way value. In its report, NOAA stated, “For...rights of way greater than 5 miles in length, price levels rose from \$8,026 per mile in 1987 to \$11,880 per mile in 1993 to \$100,042 in 1997.” See NOAA report at p. 18.

accepted \$10 per square foot for the class action settlement. A copy of the agreement may be found at http://att.fsiwebs.net/settlements/IN_docs/ClassSettlementAgreement.htm. *Uhl v. Thoroughbred Tech and Telecomms.*, 2001 U.S. Dist Lexis 13115 (S.D. Ind. 2001), settled another class action lawsuit by landowners abutting a railroad right-of-way. The *Uhl* court awarded \$31,875 per mile (approximately \$6.00 a linear foot), plus an equity interests in the optical fibers deployed, plus 7.5% to 11.25% of the operator’s gross receipts. In an affidavit filed with the United States District Court for the District of Oregon, in *Qwest v. Portland*, (D.Oregon) Civil Action No. 01-CV-1005-JE) Brant Williams, a city engineer for the City of Portland, stated that the combined property value and improvements in the city’s rights-of- way was almost \$10.00 per square foot.

¹¹ Assessing right-of-way values at full value is difficult, as value has been rapidly growing over the last 15 years. In its report, NOAA stated “For...rights of way greater than 5 miles in length, price levels rose from \$8,026 per mile in 1987 to \$11,880 per mile in 1993 to \$100,042 in 1997.” See NOAA at p. 18.

¹² Value of Land in Right of Way: 625,517,587,200 square feet x \$5.40/square foot = \$3,565,450,247,040.00.

¹³ \$3,565,450,247,040 (land) + \$1,110,589,700,000 (improvements) = \$4,676,039,947,040

¹⁴ NOAA report at 12.

¹⁵ *Id.*



NOAA's research identified two valuation trends for market rates for fiber optic rights-of-way fees:

- Σ Linear trend, which places the value of right-of-way in October 1995 at a value approaching \$120,000 per mile per year; and
- Σ Exponential trend, which for the same time period established the rates at \$100,000 per mile per year.¹⁶

Employing either of these base numbers as capturing the entire value of the nation's rights of way for a single year produces an annual rental value range between \$ 366,153,720,000 and \$305,128,100,000.

Normal sales prices for real estate are based on 30 times annual lease payments, according to NOAA. Doing the math, comparable rates for the rights-of-way ranges between \$10,984,611,600,000 and \$9,153,843,000,000¹⁷

A second comparable transaction valuation may be reached by multiplying the "ATF" average value by a corridor enhancement factor. The International Right of Way Association suggests that current prices paid by governments and private utilities to condemn and construct right of way is related the "across the fence value" of the abutting land, plus a multiplier factor to account for the "connectivity nature of right of way". This multiplier accounts for the transactional cost savings realized by the right of way user not having to negotiate rights of passage with each abutting landowner and the value added by the nature of the two points the right of way connects. According to NOAA, the connectivity factor ranges between 2 and 6.¹⁸

¹⁶ While the fiber optic rights-of-way numbers identified by Federal Highway Administration and NOAA are supportive of the values discussed in this paper, they establish a floor, not a ceiling. Fiber rights-of-way are not exclusive and most often are in rights-of-way housing competitive fibers. So the value assigned to a particular fiber facility is necessarily less than the value of the right-of-way as a whole.

¹⁷ The NOAA evaluation was based in part on the following transactions identified in its study. In 1994 the Bureau of Reclamation established that the market price for the non-exclusive rights-of-way in rural Nevada reached \$50,000 per mile for rural interstate. 1988 research developed by the United States Department of Transportation established a value for non-exclusive rights-of-way per mile in urban areas at \$31,250. See *Shared Resources: Sharing Right-of-Way for Telecommunications*, Appendix A, U.S. Department of Transportation (April 1996). A research study by San Francisco established an annual rate of \$350,000 per mile for a seven-mile right-of-way that crossed the grounds of the Presidio and the Golden Gate Bridge. The City of Austin Texas charges the equivalent of \$126,316 per mile per year for an easement on 31 miles of Transit Authority right-of-way. The Massachusetts Turnpike Authority concluded a deal for 50 miles of right-of-way with Level 3 Communications of Boulder, Colorado for \$112,477 per mile per year plus a fee for each fiber deployed. The parties further agreed that these additional fees per fiber have the potential to raise the level of compensation to \$1 million per mile.

¹⁸ NOAA acknowledges this multiplier in its seminal study: "In contrast to the ATF [Across the Fence] approach, what is called a 'corridor value' accounts for assemblage of land parcels into a contiguous right of way. ATF values for land along a right of way may be multiplied by an 'assemblage factor' or 'corridor enhancement factor' to reach an estimate....Some analyses have determined that corridor values typically exceed ATF appraisals by a factor of two to six." (NOAA at p. 6) See also Clifford A. Zoll, A Logical Approach to Appraising Railroad Rights of Ways, *The Appraisal Journal*, October 1998 and Clifford A. Zoll, Rail Corridor Markets and Sale Factors, *The Appraisal Journal*, October 1991.



The following formula projects the value:

$$\begin{aligned}\text{Value of right of way} &= \text{Value of ATF square footage} \times \text{Value of Connectivity} \\ &= \$3,565,450,247,040 \times 2 \\ &= \$7,130,900,494,080\end{aligned}$$

CONCLUSION

The total value of the land and improvements held in trust by state and local governments for the taxpayer is enormous. Using conservative assumptions, the value ranges from \$1.1 Trillion for the improvements alone to \$4.7 Trillion for the improvements and the ATF land value. However the cost of acquiring a right-of-way corridor necessarily is more expensive than simply the ATF value of the abutting land. Applying the lowest corridor enhancement factor now employed by appraisers suggests the value is \$7.1 Trillion. These results are consistent and conservative when measured against comparable transactions reported by federal government agencies.

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Another way to think of this multiplier effect has been captured by Charles P. Bucaria and Robert G. Kuhs in their paper "*Fiber Optic Communications Corridor Right of Way Valuation Methodology*" delivered at the December 4, 2002 Appraisal Institute Workshop. They captured the multiplier as "Cost Avoidance Analysis." David Harris in an unpublished paper cited by the Department of Transportation study below, identifies that the savings from dealing with a single landowner can be as much as the purchase price of the land.

The U.S. Department of Transportation has also accepted the premises that a straight valuation based upon "ATF" or the value of adjacent land is not sufficient for valuation of a telecommunications corridor. "Using adjacent real estate values directly overlooks the degree of uninterrupted access afforded by public rights-of-way as well as the very real financial and administrative advantages of dealing with one agent rather than a number of individual landowners." The Department then cites examples of this "continuity factor". Citing from Miltenberger's "Rail Right of Way Valuation," *The Appraisal Journal* for 1992, Vol. 60, No. 1 (Chicago IL), DOT demonstrated that the lowest continuity factor employed was 1.9 by Penn Central in 1995.