



# Valuation of **TELECOM** *Sites*

## A Method for Appraising Unique Properties

**O**ne of the defining characteristics of real estate is its uniqueness, that is, the fact that no two properties are identical. More than anything else, it is the unique characteristics of real estate that complicate the appraisal of telecommunication sites. Along the west foothills, overlooking the Salt Lake Valley, stands Farnsworth Peak. From that site, telecommunications facilities can reach well into counties along the Wasatch Front providing service for hundreds of thousands of customers.

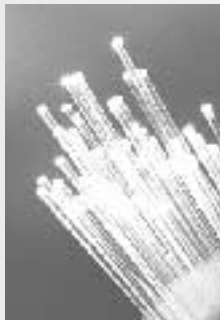
Like many prime communications sites, the site is unique and without parallel in the area. Despite that, valuation of unique sites like Farnsworth Peak has typically occurred using the Sales Comparison method, despite the fact that in many cases, recent local comparable sales of similar established sites simply do not exist. It is not unusual at all for appraisers to go to different states searching for comparable sales.

The Sale Comparison Approach may be entirely valid for valuing more homogenous, undeveloped sites. However, it is in measuring the comparability of established, developed sites where it often falls short. This paradox points to the need for an appraisal method that recognizes the uniqueness of these sites as well as the nature of the interest being appraised.

What follows is a suggested methodology for solving the problem. The model is based on a recent appraisal assignment (the names in the examples have been altered) prepared for a public landowner. For that reason, some of the agreements authorizing facilities used in the example are exempt from fees. It was also made at a time when Federal Regulation 59 (telecommunications act) was pending and assumed that it would be approved (it was in December 1995).

The new federal guidelines include a fee system for facilities based on the population that a site serves. This seems inherently logical since a premium site serving a metropolis should be more valuable than a rural site (i.e., serving the fictitious Cougar County used in this example). The new fees would be “phased in” over five years and adjusted based on the consumer price index. Our example assumes that the new fee schedule “sets the market” among competing sites as to rates. Given roughly equivalent sites, we believe that this would be the case - that federal rates would establish a “ceiling” for rates.

**By R. Lane Boice**



### **Ownership Interest and Methodology**

In most cases, telecommunication sites comprise a leased fee interest. That is, a fee simple interest which is subject to short and long-term leases for the location of telecommunication facilities. The owner of such a site receives a return on investment by virtue of the leases and the income streams attributable to those agreements. The owner receives a return of equity when the site is sold at some future time. In this respect, the real estate interest is similar to a multi-tenant shopping center or office building. Arguably, the best vehicle for appraising multi-tenant, income-producing properties is based on the Income Approach, specifically Discounted Cash Flow Analysis.

Discounted Cash Flow Analysis values real estate assets by measuring the return on equity in forms of lease payments over the projection period as well as the return of equity in the form of a potential sale (future reversion) at a later date. This appraisal tool can readily be applied to the valuation of telecommunication sites operating under long-term lease to multiple operators. It has the advantage of allowing specific consideration of each lease in effect and specifically addressing underlying assumptions regarding future income and expenses.

THUNDER RIDGE COMMUNICATION SITE USERS										
LEASE NUMBER	NON-EXEMPT LESSEE	FACILITY TYPE	DATE	AREA	BASE RENT	RENT ADJUST. DATE	PROPOSED RENT	SUBLESSEES EXEMPT	NON	EXPIRATION DATE
1	Key Largo Communications	Commercial Comm.	04/24/64	0.920	\$1,100/Yr	12/31/95	\$600/Yr	0	6	04/23/14
2	Cascade Mountain Gas	Two-Way Radio	08/01/80	0.230	\$770/Yr	06/01/99	\$600/Yr	0	0	07/31/10
3	A B Smith	Two-Way Radio	02/07/63	0.230	\$770/Yr	06/01/99	\$600/Yr	0	0	02/06/13
4	Waco Oil & Gas	Two-Way Radio	03/08/66	0.230	\$735/Term	03/27/16	\$600/Yr	0	1	03/27/16
5	Comstock Corp.	Industrial Microwave	09/13/71	0.240	\$1,100/Yr	12/31/95	\$1,000/Yr	0	0	09/12/21
6	High Tech Fuels	Two-Way Radio	06/08/82	1.430	\$385/Yr	06/01/97	\$300/Yr	0	0	06/08/12
7	Western USA	Industrial Microwave	06/21/85	0.074	\$1,100/Yr	12/31/95	\$1,000/Yr	0	0	06/20/15
8	American Eagle Cellular	Cellular Phone	07/28/81	0.955	\$1,000/Yr	na	\$600/Yr	0	0	07/28/11
9	Indigo Corp.	Commercial Comm.	07/28/81	0.230	\$1,100/Yr	06/01/99	\$600/Yr	5	15	07/28/11
LEASE NUMBER	EXEMPT FACILITY	FACILITY TYPE	DATE	AREA	BASE RENT	RENT ADJ. DATE	PROPOSED RENT	SUBLESSEES EXEMPT	NON	EXPIRATION DATE
10	Moon River Power	Powerline	06/16/61	169.640	na	na	na	na	na	06/15/11
11	US Wildlife Service	Radio Site	06/20/61	0.230	na	na	na	na	na	na
12	Moon River Power	Comm. Site	12/01/64	1.434	na	na	na	na	na	11/30/14
13	Cougar County	TV Receiver/Translator	08/02/71	2.070	na	na	na	na	na	08/01/21
14	Moon River Power	Powerline	08/19/71	3.640	na	na	na	na	na	08/18/21
15	Air Ambulance Service	Automatic Repeater	05/09/81	1.000	na	na	na	na	na	05/08/11
16	Desert Electric	Comm. Site	11/20/81	0.010	na	na	na	na	na	11/19/11
17	Lightning Communications	Microwave Repeater	05/23/84	0.230	na	na	na	na	na	na

The analysis begins with a study of the current rent roll for the telecommunication site. This is a study of the current agreements and their terms now in effect. It is helpful to consider previous agreements that have either been canceled or not renewed to get an idea of the turnover (cancellation rate) as well as the absorption rate (demand) for sites on the subject property. In applying the discounted cash flow method the appraiser must make judgements regarding each lease in effect, its potential for continuation (renewal) as well as the potential of growth from additional agreements which may be in demand in the future (absorption).

A study of the historic and current rent roll can provide valuable insight into these factors much the same way as studying a rent roll in a shopping center can illuminate the trends on occupancy and rent rates for that type of a property. This analysis begins by using a spreadsheet to lay out the current agreements and in their payment terms (see Exhibit #1). Once the current agreements have been addressed the appraiser is then

free to consider demand for various types of agreements (facilities) which may be needed in the future.

### Absorption

In estimating future absorption of (demand for) available space on the site, the appraiser should be cautious to consider competition from both other sites (where applicable) as well as other technology. It may be that demand for future sites will be affected by satellite technology versus two-way radio or microwave technology. Interviews with current tenants and members of the local communications industry can help the appraiser gain an insight into how much and what type of competition this particular site faces from those sources.

This portion of the analysis should consider other factors as well. The graphs (Exhibits #2 and #3) compare local population and gross retail sales levels with the numbers of permits in effect on the subject site. It appears that demand for communication sites most closely parallels (but slightly lags) growth in population. Finding a correlation

assists the appraiser in forecasting future demand based on such a factor.

The appraiser should also consider the available site size, its stage of development, and its capacity. An article written by Wayne Lusvardi appearing in the July/August 1997 issue of *Right of Way* magazine, "Definitive Factors For Selecting and Valuing Mountaintop Telecommunications Sites," comprehensively outlined numerous factors affecting valuation. In our example, we concluded that demand for sites followed population growth which had leveled off, and that demand would remain relatively constant (no growth) for the foreseeable future.

### Income Forecasting

Included in the analysis should be the appraiser's estimation of future rental income from the leases on the telecommunication sites. Some sites are leased on a one-time-fee basis, in which the fee is paid up front for a certain agreed upon period of time. The discounted cash flow analysis allows for specific consideration of each type of lease (flat "one-time" fees versus annual

renewables) as well as consideration of any escalation clauses on those leases. The appraiser should carefully consider current trends for various types of facilities in his local market, with the best source being the subject's own recent lease agreements.

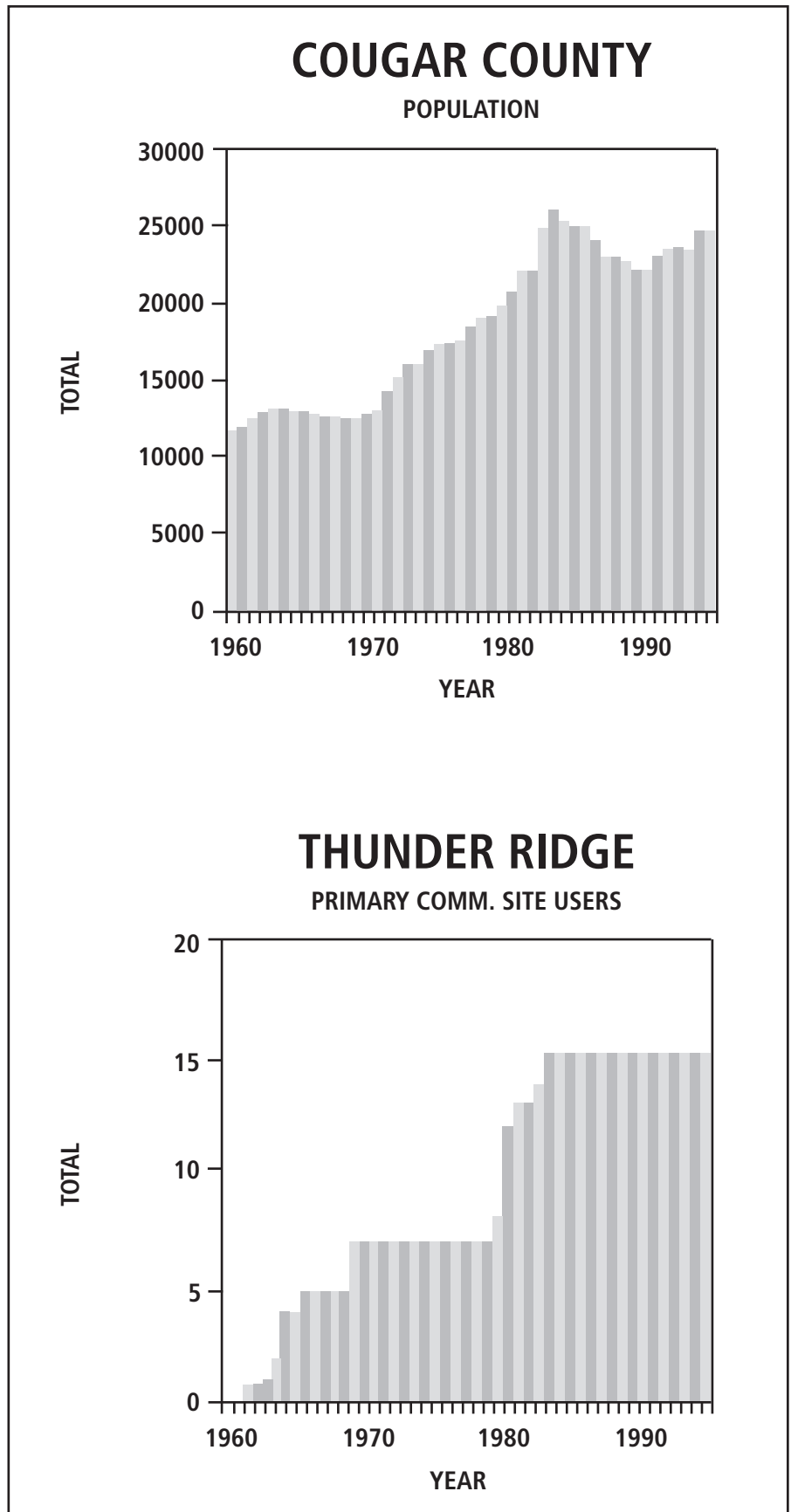
Once the appraiser has established what type of leases and lease rates are in demand, the discounted cash flow analysis model makes it possible to input these items specifically addressing each one. In many markets, federal agencies' policies act to establish market rates by offering competitive sites on fees and lease terms set by federal government schedules. In those situations, the government is essentially setting the market for lease rates and lease terms in those areas. The appraiser should carefully consider if such a substitute is available and the effect of the competition from government sites on the subject.

Typically, a projection period of about ten years (plus one year to estimate a reversion value) is adequate and desirable in forecasting future demand for these sites. In longer projections, the appraiser's opinion becomes speculative and subject to changes in competition, particularly from other technology which may become available.

**Income Discounting**

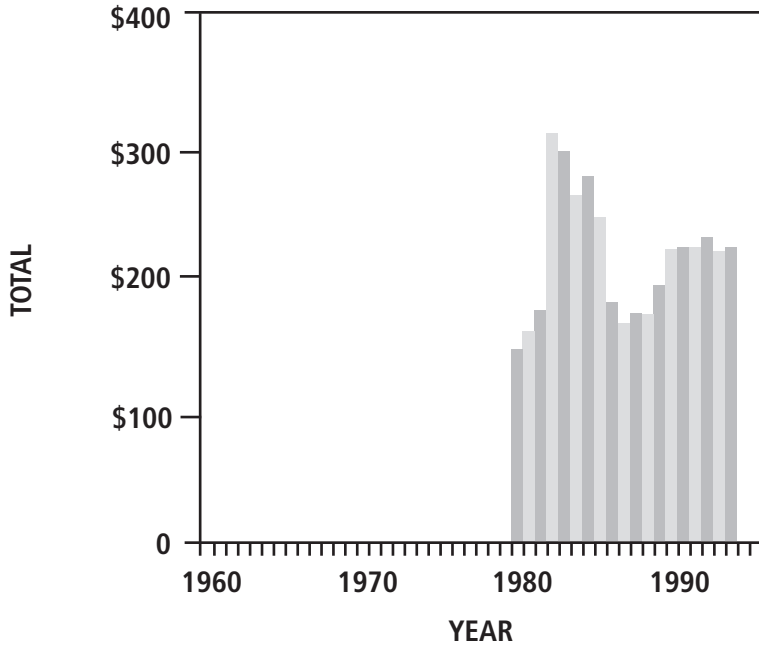
Once the appraiser has constructed the discounted cash flow model addressing the current and potential future leases and rentals to be received for the property, those cash flows must be discounted back to present value at a discount rate. Because of the general scarcity of sales and information, deriving a discount rate from the market may not always be practical, particularly in smaller markets where numerous sites do not exist.

As an alternative, an appraiser could consider a discount rate drawn from bond rates in the general and local market and from competitive investments. Bond rates are drawn from other financial instruments that are similar in respect of their risk, the timing of their cash flows, and the size of their cash flows.

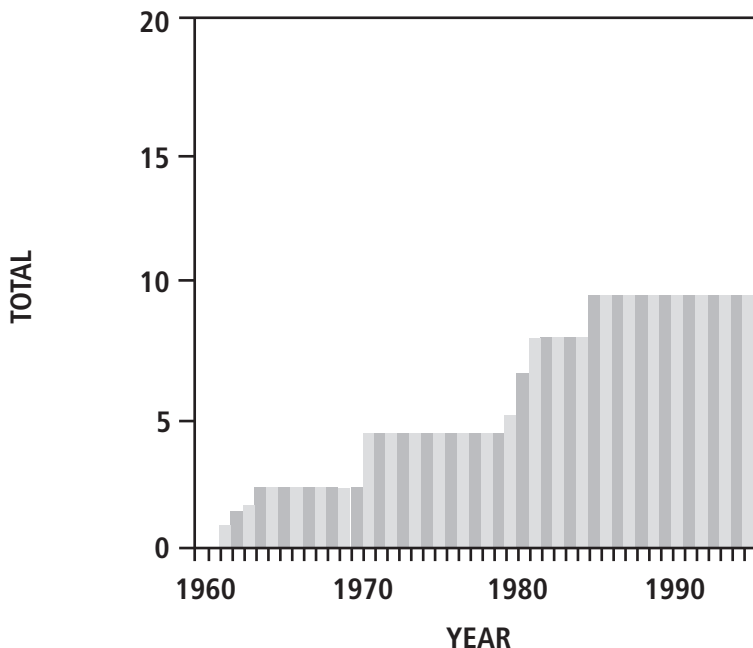




### COUGAR COUNTY GROSS RETAIL SALES



### THUNDER RIDGE PRIMARY COMM. SITE USERS



Several scholarly articles have been published suggesting a relationship between discount rates on leased fee interests and ground leases and rates on long-term treasury instruments. Local municipal rates adjusted for taxation may also represent a benchmark. These rates can form the basis of a reasonable estimation. The same is true of estimating a terminal capitalization rate used in calculating the reversion.

The discounted cash flow model (Exhibit #4), based on the rent roll, projects the existing and potential cash flows from leases. A management fee has been deducted as an allowance for the owner's time and efforts in collecting and accounting for the rent and dealing with the lessee's. It is based on a typical fee percentage charged by property management firms in the area for management of similar, multi-tenant cash flow streams. An additional consideration might be made if the lessor (owner) is responsible for maintaining a significant roadway into the site. Annual maintenance costs of such a situation might represent another expense that should be accounted for.

**Conclusion**


Recognition of the various differences in established communications sites can be simplified by an in-depth analysis of their income-earning potential. Valuable sites should command high demand in terms of numbers of permits and/or rental rates. Conversely, less valuable sites likely experience slow demand and/or relatively lower rates. Direct comparison of limited sales data on established sites is difficult. Use of a discounted cash flow model allows the appraiser/investor to explicitly consider the differences and specifics of each site and allow for differences in current and future demand and rates. It represents a rational and logical methodology for addressing the value of these specific, unique sites. ■

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**THUNDER RIDGE COMMUNICATION SITE - DISCOUNTED CASH FLOW ANALYSIS**

Lease#	Lessee	Time Zero	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
<b>NON EXEMPT LESSEES</b>													
1	Commercial Communications	\$600	\$621	\$643	\$665	\$689	\$713	738	\$763	\$790	\$818	\$846	\$876
2	Cascade Mountain Gas	600	621	643	665	689	713	738	763	790	818	846	876
3	A B Smith	600	621	643	665	689	713	738	763	790	818	846	876
4	Wa co Oil & Gas	0	0	0	0	0	0	0	0	0	0	0	0
5	Comstock Corporation	1000	1035	1071	1109	1148	1188	1229	1272	1317	1363	1411	1460
6	High Tech Fuels	300	310	321	333	344	356	369	382	395	409	423	438
7	Western USA	1000	1035	1071	1109	1148	1188	1229	1272	1317	1363	1411	1460
8	American Eagle Cellular	600	621	643	665	689	713	738	763	790	818	846	876
9	Indigo Corporation	600	621	643	665	689	713	738	763	790	818	846	876
<b>EXEMPT LESSEES</b>													
10	Moon River Power	0	0	0	0	0	0	0	0	0	0	0	0
11	US Wildlife Service	0	0	0	0	0	0	0	0	0	0	0	0
12	Moon River Power	0	0	0	0	0	0	0	0	0	0	0	0
13	Cougar County	0	0	0	0	0	0	0	0	0	0	0	0
14	Moon River Power	0	0	0	0	0	0	0	0	0	0	0	0
15	Air Ambulance Service	0	0	0	0	0	0	0	0	0	0	0	0
16	Desert Electric	0	0	0	0	0	0	0	0	0	0	0	0
17	Lightning Communications	0	0	0	0	0	0	0	0	0	0	0	0
	Sublessees (22)	\$3300	\$3415	\$3535	\$3659	\$3787	\$3919	\$4057	\$4199	\$4345	\$4498	\$4655	\$4818
	Income From Leases	8600	8901	9213	9535	9869	10214	10572	10942	11325	11721	11646	12054
	Net Income After Management	8256	8545	8844	9154	9474	9806	10149	10504	10872	11252	11646	12054
	Net Present Value	\$113705	\$7839	\$7444	\$7068	\$6712	\$6373	\$6051	\$5746	\$5456	\$5181	\$4919	\$50915
	Growth Rate CPI-U (Per Year Change)	3.50%											
	Management Fee	4.00%											
	Discount Rate on Net Income	9.00%											
	Terminal Capitalization Rate	10.00%											

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