Calculating Depreciation After the Exchange – Real Estate

by Gary Gorman

It’s my style to explain complicated things in a simple way. Making the subject of depreciation easy to understand for someone who has little or no background in real estate taxation is, too say the least, demanding. In an effort to make this subject understandable, I have divided my explanation into two areas and cover each of the areas in a separate chapter. This chapter will cover depreciating real estate. The next chapter will deal with depreciating personal property (things that move).

To keep the explanation of depreciation as simple as possible, this whole discussion will be about the most common situations and will not cover those areas outside the norm. For example, water treatment plants have special depreciation rules, but for obvious reasons I won’t talk use them as an example here. If you have an unusual situation, please consult a tax professional. If you are doing your own tax return, please consult IRS Publication 946—it will make your life a lot easier. You can download this from the IRS web site: www.irs.gov.

Also, if you do your own returns, consider using TurboTax®. It seems to do a good job of guiding users in reporting depreciation on exchange property. I have not tried the other off-the-shelf programs on the market, so I can’t speak to them.

If you are a tax professional, the IRS has now issued regulations for computing depreciation on exchange property in IRS Regulation 1.168-1T. Start there if you have a client with a problem that is not covered by this download. Regulations are the IRS’s interpretation of the Internal Revenue Code, which is the law.
What is depreciation?

Depreciation is so much a part of real estate and what I do on a regular basis, that I tend to forget that not everyone knows what depreciation is. Depreciation is a tax mechanism that allows taxpayers to write off their investments in certain assets, including real estate, over a period of time that has been predetermined by the IRS. Some assets, such as land, are not depreciable.

To Write Off means to reduce income, through a tax deduction, by the amount calculated in accordance with tables or formulas published by the IRS. These tables are built into off-the-shelf tax software such as TurboTax®. You simply enter into the program the type of asset you wish to depreciate and when you bought it; the program will automatically compute the allowable depreciation deduction.

Different people tend to think of depreciation in different ways: one group thinks of it as writing off, or deducting, the amount they paid for an asset over a given life. Others tend to think of it as an estimated reduction of the useful life of the asset that results in a tax deduction approximating the statistical reduction in value. Still others tend to think of it as a matching of the cost of the asset against the income produced by the asset over its economic life. To some degree, all of these theories are correct, and which theory you espouse does not really matter. However you slice it, depreciation is an annual deduction that is mathematically determined based upon the type of the property, its cost, its economic life cycle, and its current stage in that life cycle.
Application to post-1986 MACRS property.

Effective for property purchased after December 31, 1986, the IRS adopted the Modified Accelerated Cost Recovery System (MACRS). The IRS regulations for calculating depreciation on 1031 exchange property cover MACRS property, that is, property purchased after 1986.

If your Old Property was purchased before 1987, you may choose to determine your own method of depreciating your property rather than follow the IRS rules as I explain them here. Before you choose to follow a different method, I suggest you have a tax professional determine how your exchange is going to be taxed. Very few of our clients are selling property that was purchased before 1987. So, this chapter is for the vast majority of you who bought your Old Property after 1986.

Let me give you a brief background on how MACRS depreciation works so that the rest of this chapter will make sense. MACRS depreciation is primarily calculated using the General Depreciation System (or GDS). A second MACRS system called ADS (Alternative Depreciation System) is used primarily to calculate depreciation on farm assets and assets that exist outside the United States. GDS users, however, can elect to use the ADS system. Real estate owners can elect ADS on a property-by-property basis. However, once you elect to use the ADS method for a property you must continue to use the ADS method for that property and any replacement property you obtain in a 1031 exchange involving the relinquished (Old) property. The asset life cycle for nonresidential real property is almost the same under both systems, the GDS and ADS, but the ADS asset life cycle for residential rental property is significantly longer (40 years vs. 27.5 years). As a result, very few taxpayers elect to use the longer life cycle ADS system rather than GDS. So, my discussions from this point on will apply only to the GDS system.
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**Application of straight-line depreciation for real estate.**

The vast majority of you own residential rental property (such as a rental house or an apartment building). The rest of you own nonresidential rental property (such as an office building or a shopping center). Residential rental property is depreciated over 27.5 years. Nonresidential rental property that was placed in service before May 13, 1993, is depreciated over 31.5 years. Nonresidential rental property placed in service after that date is depreciated over 39 years. Certain components of real estate such as **Land Improvements** can be depreciated over a shorter life, such as sidewalks, driveways, fencing and landscaping.

Most real estate is depreciated using the **Straight-line (SL) Method** of depreciation. This method gives you consistent monthly depreciation deductions over the life of the asset. However, certain assets can be depreciated using the **200-Percent Double Declining Balance Method (200DDB)** which doubles the amount of depreciation you can take in the early years, but reduces depreciation in the later years. Still other assets can use the **150-Percent Declining Balance (150DB) Method**. The 150DB method increases depreciation in the early years by one-and-a-half times, again at the cost of depreciation deductions in the later years. Once you know the applicable life of your type of asset, the calculation is pretty straightforward.

**Averaging conventions.**

What happens when you buy a new asset? Do you calculate depreciation based upon the number of days you owned the property in the month or the year you bought it? No, the IRS
has **Averaging Conventions** that are simplified methods you are required to use. For most real estate you must use the mid-month (MM) averaging convention. In other words, you get a half-month’s depreciation for the month you placed your asset in service, regardless of what day of the month you bought it. For example, if you had acquired the property on the 27th of February, you would have been allowed a half-month’s depreciation for that month. But if you had acquired it on the 1st of February, you would still have been allowed only a half-month’s depreciation.

Likewise, when you sell your property you get a half-month’s depreciation for the month of the sale regardless of the day of the sale. If you depreciated your property all the way out to the end of the time you owned it, you would be allowed to take depreciation for only one half of the last month because that would be the amount of the unused depreciation.

Some assets, typically personal property, can use the mid-quarter convention (which gives you a half-quarter’s depreciation no matter when in the quarter you bought it) or the mid-year (HY) convention (which gives you a half-year’s depreciation no matter when during the year you bought it).

**Basis of your Old Property carries over to your New Property.**

Chapter Six showed you how to calculate the basis on your New Property, and one of the obvious points of that discussion (at least I hope it was obvious to you) was that the basis of your Old Property carries over, along with all the attributes of that property, to your New Property.
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Let’s see how this affects Fred and Sue’s purple duplex. At the end of 2008, the year before they sold it, their basis in the duplex looked like figure 1. See the notes below for more details and explanations.

<table>
<thead>
<tr>
<th>Date Acquired</th>
<th>Description</th>
<th>Life</th>
<th>Method (1)</th>
<th>Averaging Convention (3)</th>
<th>Purchase Price</th>
<th>Depreciation Through 12/03</th>
<th>Remaining Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/93</td>
<td>Land</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7,500</td>
<td>-</td>
<td>7,500</td>
</tr>
<tr>
<td>1/1/93</td>
<td>Building</td>
<td>27.5</td>
<td>SL</td>
<td>MM</td>
<td>38,000</td>
<td>16,526</td>
<td>21,474</td>
</tr>
<tr>
<td>1/1/93</td>
<td>Land Improvements</td>
<td>15</td>
<td>SL (2)</td>
<td>HY</td>
<td>1,500</td>
<td>1,190</td>
<td>310</td>
</tr>
<tr>
<td>3/3/98</td>
<td>Remodel</td>
<td>27.5</td>
<td>SL</td>
<td>MM</td>
<td>3,000</td>
<td>740</td>
<td>2,260</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
<td>$50,000</td>
<td>$18,456</td>
<td>$31,544</td>
</tr>
</tbody>
</table>

Fig. 1: Example of depreciation methods and averaging conventions

(1) The building and the 2002 remodel are being depreciated using the straight-line (SL) method, meaning that equal amounts of depreciation are taken every month over the life of the asset.

(2) Land improvements started out being depreciated using the 150 percent declining balance (150DB) method. Under this method, you take the undepreciated balance of the asset, divide that balance by the life of the asset (15 years in this case), and then multiply that answer by 150 percent. In 2002, at the point that the straight-line method produced a greater deduction, Fred and Sue elected to switch to the straight-line method and they have used straight-line since then.

(3) The building and the 2002 remodel are being depreciated using the mid-month (MM) averaging convention, meaning that half of a normal month’s depreciation was taken the month the property was purchased. The land improvements are being depreciated using the half-year (HY) convention, meaning that a half-year’s depreciation was taken the year of purchase.
Now remember, this is what Fred and Sue’s depreciation schedule for the purple duplex looked like at the end of 2008—the year before they sold it. This becomes the starting point for calculating depreciation for the year of the sale.

The cumulative year-by-year depreciation calculations through the end of 2008 for each of the three assets can be seen in figures 2, 3, and 4.

Fig. 2: Example of building depreciation history
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Fig. 3.

**Pro-rate depreciation on the old property for the year of sale.**

The first step in calculating depreciation for the year of sale is to determine the portion of the year during which you owned your Old Property. To do this, you need to know two things: the date of the sale and the averaging convention. Fred and Sue sold the purple duplex on December 20th of 2009. Since the original building and the remodel used the mid-month convention, they got a half-month’s depreciation for December, and since December is the 12th month, they are entitled to 11.5/12ths (or 95.83 percent) of a full year’s depreciation on those items. Both figures 2 and 5 show the normal annual depreciation to be $1,382 for 27.5 years.
Fred and Sue used the half-year (HY) convention for land improvements. That means that even though they sold the purple duplex in December, they only got half of a normal full year’s depreciation on the land improvements for 2009.

Using this information, Fred and Sue’s depreciation calculation for 2009 will look like figure 5.
(1) The term *normal depreciation* means the amount of depreciation that Fred and Sue would have taken had they owned the property all year and not sold it.

(2) For land improvements, the amount of annual depreciation that Fred and Sue started taking in 2003 when they converted to the straight-line method from the 150DB method was $89. This change is noted in figure 3.

(3) The *convention factor* is the amount of depreciation allowable due to the sale and exchange of the purple duplex. In calculating depreciation relating to the purchase of the original building and the subsequent remodel, Fred and Sue used the mid-month convention; therefore, because the sale took place in December, they got 11.5/12ths (95.83 percent) of the normal annual depreciation. The land improvements used the half-year convention, so they got half of the normal annual depreciation.

(4) The *allowable deduction* is the amount of depreciation Fred and Sue are allowed to use as a deduction on their IRS Form 1040, Schedule E (*Supplemental Income and Loss*) for the purple duplex in their 2009 tax return. Note that the values are the product of the normal depreciation times the convention factor.

Fred and Sue will enter the amount of depreciation calculated above in figure 5 on their Schedule E as shown in figure 6.
Fig. 6: Example of depreciation shown on Schedule E
Depreciation during the period before the New Property is acquired.

During the period between the date you sell your Old Property and the date you acquire your New Property, you do not take depreciation. Fred and Sue sold the purple duplex on December 20, 2009, and they bought their New Property on March 3, 2010. So, for this period of time they were not entitled to a depreciation deduction on either property.

As you saw in the example above in figure 5, we prorated depreciation for 2009 using the depreciation convention in the “Life/Method/Convention” column that we adopted when we first set up the depreciation schedule for each asset of the purple duplex. As you will see in the following section, when we set up the depreciation schedule on the New Property, we used those same conventions and prorated depreciation for 2010 based upon them.

Setting up the depreciation schedule on the New Property.

As you learned in the previous chapter on establishing the basis on the New Property, the basis and character of the Old Property rolls over to the New Property, and you continue the depreciation on the Old Property as if you still owned it. That is the general rule, and it applies if the depreciation method (i.e. straight-line) and life cycle (i.e. 27.5 years) applicable at the time you bought the New Property is the same as that when you bought the Old Property—but it applies only if the type of New Property is the same as that of the Old Property. If you bought up in your exchange, the 1031 Addition is depreciated using the life cycle, the depreciation method, and depreciation convention applicable to the New Property for the year that the property is purchased.
If applicable Life/Method/Convention of both the Old Property and the New Property are the same, you would continue depreciation (with the exception of the suspended period in the middle of the exchange) as if you still owned the Old Property. For example, if Fred and Sue bought a residential rental condo in Naples, Florida, as their replacement property, both the Old Property and the New Property are MACRS residential real estate. The asset class life cycle (27.5 years) and the depreciation method (straight-line) are the same for both. Therefore, the building and the original remodel are depreciated in 2010 as shown in figure 7.

<table>
<thead>
<tr>
<th>Purchase Date</th>
<th>Description</th>
<th>Purchase Price</th>
<th>Life/Method/Convention</th>
<th>Normal Depreciation</th>
<th>Convention Factor</th>
<th>2005 Allowable Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/93</td>
<td>Land</td>
<td>7,500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1/1/93</td>
<td>Building</td>
<td>38,000</td>
<td>27.5/SL/MM</td>
<td>1,382</td>
<td>79.17% (4)</td>
<td>1,094</td>
</tr>
<tr>
<td>3/3/98</td>
<td>Remodel</td>
<td>3,000</td>
<td>27.5/SL/MM</td>
<td>109</td>
<td>79.17%</td>
<td>86</td>
</tr>
</tbody>
</table>

Fig. 7: Example depreciation

(1) The convention factor here is determined by taking the acquisition month of March and applying the mid-month convention, meaning that Fred and Sue get a half-month’s depreciation for March and a full-month’s depreciation for the remaining nine months of the year. This gives us a factor of 9.5/12ths (79.17 percent) of a full year’s depreciation.

Notice also that the effect of this calculation is to exclude from depreciation that part of the year between the sale of the Old Property and the purchase of the New (since the sale took place in 2009, we are excluding the portion from January 1, 2010, through the mid-month of the purchase month of March).
The applicable life and method for the Old Property and the New Property are different.

If the applicable life and method for the Old Property and the New Property are different, you have to choose the appropriate life and method to use on the New Property. The IRS rule here is simple: the life and/or method that will give you the least amount of depreciation is the one you must use.

Let’s go back to the Fred and Sue example. When they bought the purple duplex in 1997 they allocated a portion of the purchase price to the beautiful landscaping. Remember land improvements from their asset list? Now they are buying a condo with no land improvements. So how do we depreciate this? By applying the lesser depreciation rule. Since there are no land improvements involved in what they are buying, we default to residential real estate for our life and method. The component land improvements was already on the straight-line method, but had it still been on the 150 percent declining balance method, we would have been required by the IRS to switch depreciation to the straight-line method because that would have produced a smaller annual deduction.

Let’s look at asset life cycles. Since land improvements has a 15-year life cycle and residential real estate a 27.5-year life, Fred and Sue will switch land improvements to the slower life (which will result in a smaller deduction). Fred and Sue had the land improvements for almost 13 years (they acquired them in 1997, and they purchased the Replacement Property in 2010). They have depreciated all but $265 of the original cost. Under the IRS depreciation rules, this remaining $265 will be depreciated over the remaining undepreciated life of approximately 15 years.

What about the averaging convention? Residential real estate uses the mid-month convention, while land improvements used the half-year convention. Which do we use? Actually, both. Under the half-year convention, July 1st is considered to be the middle of the year. So we apply the mid-
month convention to the middle of the year (July). Our convention factor then, is 5.5/12ths, or 45.83 percent.

The depreciation line for land improvements in Fred and Sue’s depreciation schedule now looks like figure 8.

<table>
<thead>
<tr>
<th>Purchase Date</th>
<th>Description</th>
<th>Purchase Price</th>
<th>Life/Method/Convention</th>
<th>Normal Depreciation</th>
<th>Convention Factor</th>
<th>2005 Allowable Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/93</td>
<td>*Land Improvements</td>
<td>7,500</td>
<td>27.5/SL MM-HY</td>
<td>18(^{(1)})</td>
<td>45.83%</td>
<td>8</td>
</tr>
</tbody>
</table>

\*Switched to 27.5 year straight line, effective 7/15/05, by Reg. 1.168-1T.\(^{(2)}\)

Fig. 8: Example depreciation line for land improvements

(1) Through the beginning of 2010, Fred and Sue had taken a total of $1,235 in normal depreciation, which left them with an undepreciated balance of $265. Because of the switch to a 27.5-year life, they have 15 years remaining in that life, which included the year 2009. Dividing $265 by 15 gives us annual depreciation of $18.

(2) Note there is an asterisk (*) on the schedule explaining what was done. I’ve found through experience that unless I make it crystal clear exactly what I have done and why, I have a tendency to go back to this calculation in a year or two and change it on the assumption that I had made a mistake earlier. An alternative way to show this would be to change the description from “land improvements” to “building,” a term consistent with typical residential real estate descriptions. There is nothing wrong with using the term “land improvements,” but I prefer the continuity that can be achieved by keeping the same description throughout.
Handling the buy-up adjustment.

So far we’ve outlined the 2010 depreciation on the basis of the property that Fred and Sue rolled over from the purple duplex to the Naples condo. The last example pertained to a buy-up. So how do we record depreciation on the buy-up? We do so by using the MACRS life, method, and convention applicable to that type of property. And we use the acquisition date as the date we placed it in service (assuming there is no reason to place it in service on a different date).

In the example with Fred and Sue, because they bought up by $37,000, that amount is their 1031 exchange adjustment. They bought the New Property on March 3, 2010, and the New Property was a rental condo, which means that it was residential real estate. Our only choice under MACRS is to use a life of 27.5 years, the straight-line method, and the mid-month convention. As a result, the line on our depreciation worksheet for the exchange adjustment will look like figure 9.

<table>
<thead>
<tr>
<th>Purchase Date</th>
<th>Description</th>
<th>Purchase Price</th>
<th>Life/Method/Convention</th>
<th>Normal Depreciation</th>
<th>Convention Factor</th>
<th>2005 Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/3/06</td>
<td>1031 Exchange Adjustment</td>
<td>$37,000</td>
<td>27.5/SL/MM</td>
<td>$1,345</td>
<td>79.17%</td>
<td>$1,065</td>
</tr>
</tbody>
</table>

Fig. 9: Example depreciation on an exchange adjustment
So now we make the final depreciation calculations for Fred and Sue’s New Property (the Naples condo). Their entire depreciation worksheet for 2009 will look like figure 10.

<table>
<thead>
<tr>
<th>Purchase Date</th>
<th>Description</th>
<th>Purchase Price</th>
<th>Life/Method/Convention</th>
<th>Normal Depreciation</th>
<th>Convention Factor</th>
<th>2005 Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/93</td>
<td>Land</td>
<td>7,500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1/1/93</td>
<td>Building</td>
<td>38,000</td>
<td>27.5/SL/MM</td>
<td>1,382</td>
<td>79.17%</td>
<td>1,094</td>
</tr>
<tr>
<td>3/3/98</td>
<td>Remodel</td>
<td>3,000</td>
<td>27.5/SL/MM</td>
<td>109</td>
<td>79.17%</td>
<td>8</td>
</tr>
<tr>
<td>1/1/93</td>
<td>*Land Improvements</td>
<td>1,500</td>
<td>27.5/SL/MM</td>
<td>18</td>
<td>45.83%</td>
<td>8</td>
</tr>
<tr>
<td>3/3/06</td>
<td>1031 Exchange Adjustment</td>
<td>37,000</td>
<td>27.5/SL/MM</td>
<td>1,345</td>
<td>79.17%</td>
<td>1,065</td>
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<td>87,000</td>
<td></td>
<td></td>
<td></td>
<td>2,253</td>
</tr>
</tbody>
</table>

*Switched to 27.5-year straight line, effective 7/15/05, by Reg. 1.168-1T.

Fig. 10: Example depreciation schedule for a buy-up

**What happens if you buy a different type of property?**

The IRS rule for the New Property in a 1031 exchange is that you always use the life and method that will give you the **least** amount of depreciation. If you buy a different type of property, you simply determine what results in the least amount of depreciation for the New Property (the replacement property). For example, if you sold a commercial property (39-year life) and bought a residential rental property (27.5-year life), you continue to use the original 39-year life because this results in the lesser annual deduction. But if you sold a residential rental property (27.5-year life) and replaced it with a commercial property (39-year life), you would switch to the longer 39-year life because that is the method that will result in the lesser annual deduction.
Handling depreciation on the New Property when your Old Property was land.

If your Old Property was land, no depreciation is taken because land is not depreciable. If you sell the land and exchange into a property with a building, you can choose from two methods that tax professionals use to determine the value of the building. In the first method, they take the property tax statement and determine the allocation using the percentage of the assessed value allocated to the building on that statement and then apply that allocation against the price they paid for the property.

In the second method, they take the price paid for the property and subtract the value of the land from the previous year’s property tax statement—the remainder is the amount associated with the building. The logic here is that taxing authorities are very good at knowing the value of land, but not as good at knowing what buildings are worth.

Whichever method you use, you allocate your basis (both the carryover basis from the Old Property and the buy-up adjustment from the exchange) to the building, with the balance being allocated to the land.

Assume that Fred and Sue sold a piece of land that they had owned for several years for $500,000, and they do a 1031 exchange into land and an office building. Their buy-up adjustment on the transaction was $1,000,000 which brought their combined basis on the New Property to $1,500,000. A review of last year’s property tax statement shows that the land with the New Property was valued at $250,000. As a result, the adjustments to arrive at the depreciable basis in the building would be as shown in figure 11.
In the figure 11 example, if the value of the new land had been $750,000, there would have been an increase in the carryover land value and a decrease in the buy-up adjustment allocated to the building.

<table>
<thead>
<tr>
<th></th>
<th>Land Adjustment</th>
<th>Basis for Tax Return</th>
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<tbody>
<tr>
<td>Old Land</td>
<td>$500,000</td>
<td>$250,000</td>
</tr>
<tr>
<td>Building (Buy-up Adjustment)</td>
<td>1,000,000</td>
<td>250,000</td>
</tr>
<tr>
<td>Total</td>
<td>1,500,000</td>
<td>1,250,000</td>
</tr>
</tbody>
</table>

Fig. 11: Example depreciation when Old Property was land

**What if you sell a building and buy bare land?**

Let’s take the opposite situation—you sell a building and you buy bare land. What do you do with the depreciation? In a situation like this, you keep your allocations between land and buildings that carry over from the Old Property, but you don’t calculate a depreciation deduction—you simply hold the calculation in suspense. If, in the future, you build a building on the land, or if you subsequently sell the land and exchange into a property that has a depreciable structure on it, you would continue your depreciation calculations right where you left off.

Those of you reading this download who are tax professionals would treat the building during this suspension period as if the building had been taken out of service—which, in effect, is what has happened here. The reason that you keep your allocation schedule for the building and other improvements is so that you know where to start if you do end up someday with a property with a depreciable structure on it. You also need to know how much depreciation recapture you are sitting on if you sell the land without doing an exchange.