PLANT AND EQUIPMENT

Plant and Equipment are assets with a long life that are used to generate income and not intended for resale. Included in the cost of these assets are freight, transit insurance, installation, trial run costs, and other costs reasonable and necessary to place said assets in position and condition for use. In deciding whether something is a Capital Expenditure and therefore depreciable or a Revenue Expenditure to be immediately expensed, remember asset use over more than one accounting cycle makes them depreciable while use over less than a cycle requires immediate expense. Assets are categorized and expensed as follows:

<table>
<thead>
<tr>
<th>Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>None (Land improvements are depreciable)</td>
</tr>
<tr>
<td>Depreciation</td>
</tr>
<tr>
<td>Depletion</td>
</tr>
<tr>
<td>Amortization</td>
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</tbody>
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I. DEPRECIATION METHODS

Accounting principles allow for the proportional by time recovery of depreciable assets (Straight Line Method) or for accelerated recovery using the Sum-of-the-Years-Digits Method or the Double Declining Balance Method. The asset’s actual loss in value is not meant to be accounted for. Historical costing requires depreciation be stored in Accumulative Depreciation.

Shortly after starting his Emporium, Darin invested in a 286 computer/cash register for $6,000 with no residual value and an IRS recommended useful life of 5 years. Darin expected to make 300,000 sales transactions over 5 years with 25,000 transactions the first year. Darin’s depreciation options were as follows:

SUM-OF-THE-YEARS-DIGITS METHOD

\[ D = \frac{n}{n\sum} (C - RV) \]

\[ \sum = 1 + 2 + 3 + 4 + 5 = 15 \]

First Year = \[ \frac{5}{15} (6000 - 0) = \frac{5}{15} (6000) = 2000 \]

Second Year = \[ \frac{4}{15} (6000 - 2400) = \frac{4}{15} (3600) = 864 \]

Third Year = \[ \frac{3}{15} (6000 - 3840) = \frac{3}{15} (2160) = 648 \]

Fourth Year = \[ \frac{2}{15} (6000 - 4794) = \frac{2}{15} (1206) = 176 \]

Last Year = \[ \frac{1}{15} (6000 - 5518) = \frac{1}{15} (882) = 58.8 \]

Total = \[ 2000 + 864 + 648 + 176 + 58.8 = 3,728.8 \]

DOUBLE DECLINING BALANCE METHOD

\[ D = \frac{2}{n} (C - AD) \]

First Year = \[ \frac{2}{5} (6000 - 0) = \frac{2}{5} (6000) = 2400 \]

Second Year = \[ \frac{2}{5} (6000 - 2400) = \frac{2}{5} (3600) = 1440 \]

Third Year = \[ \frac{2}{5} (6000 - 3840) = \frac{2}{5} (2160) = 648 \]

Fourth Year = \[ \frac{2}{5} (6000 - 4794) = \frac{2}{5} (1206) = 176 \]

Last Year = \[ \frac{2}{5} (6000 - 5518) = \frac{2}{5} (882) = 110.4 \]

Total = \[ 2400 + 1440 + 648 + 176 + 110.4 = 5,774.4 \]

PARTIAL DEPRECIATION USING STRAIGHT LINE METHOD

Given same data only purchased Oct. 1st

First Year: \[ \frac{1}{12} \times (6000 - 0) = \frac{1}{12} \times 6000 = 500 \]

Years 2, 3, 4, 5: \[ \frac{9}{n} \times (6000 - 1200) = \frac{9}{n} \times 4800 = \frac{43200}{n} \]

Year 6: \[ \frac{9}{12} \times (6000 - 5518) = \frac{1}{2} \times 1482 = 741 \]

Total: \[ 500 + \frac{43200}{n} + 741 = 5000 + \frac{43200}{n} \]

Note: Could have switched to Straight Line Method after the third year. In addition, double the Straight Line rate is the maximum allowable depreciation per year and is not allowable on most assets. The IRS supplies recommended guidelines concerning the useful life of most assets.

II. REVISIGN DEPRECIATION

Suppose after 2 years, the useful life of the Computer/cash register is lowered from 5 to 4 years. The remaining $3,600 Book Value should be written off over 2 years. The Straight Line Method yields the following revised depreciation:

Cost $6,000
Less two years' depreciation $2,400
Book Value $3,600

Remaining Life $3,600 - 0 = $1,800//year

First Year = \[ \frac{1}{2} \times (6000 - 0) = \frac{1}{2} \times 6000 = 3000 \]

Years 2, 3, 4: \[ \frac{3}{5} \times (6000 - 1200) = \frac{3}{5} \times 4800 = 2880 \]

Year 5: \[ \frac{3}{5} \times (6000 - 1200) = \frac{3}{5} \times 4800 = 2880 \]

Total: \[ 3000 + 2880 + 2880 = 8760 \]