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NOTE

Since the original publication of this article, a number of texts cited herein have revised their land-grant maps and explanations of the land-grant transactions.

THE RAILROAD LAND GRANT LEGEND IN AMERICAN HISTORY TEXTS

By ROBERT S. HENRY *

In 1850, the United States government had a public domain of approximately 1,400,000,000 acres, vacant, unoccupied, and, for lack of transportation, largely unusable and unsalable.¹ Between that year and the end of 1871, the government undertook to use a portion of this land to encourage and assist the building of railroads in vacant or sparsely settled sections, in the same way in which previously it had aided the building of wagon roads and canals. The resulting series of transactions came to be known as the Federal railroad land grants, a subject frequently mentioned in high school and college texts which are the first, last, and only works on the history of their country read by many, if not most, Americans. This paper is the result of an examination of the treatment of the Federal land grant transactions in thirty-seven representative texts.

Since the treatment of a subject of this sort in such works must be brief, and even, in a sense, incidental, accuracy both as to the essential facts themselves and as to their place and proportion in the whole setting becomes all the more important. This inquiry is directed, therefore, to these facts and the manner of their treatment. It is limited to the Federal land grants because those are the grants which, for the most part, are discussed in the works examined, and are the grants about which the most complete information has been compiled, published, and made available.

A balanced story of the Federal land grant transactions re-

* Mr. Henry wishes to acknowledge the assistance given him in preparing this article by Carlton J. Corliss and L. I. McDougale, his associates in the Association of American Railroads.

¹ On June 30, 1852, the public domain remaining unsold or not used for public purposes amounted to 1,387,534,000 acres. From the opening of the land office in 1812 up to that time, the government had sold only 102,113,861 acres. Grants to wagon roads and canals had amounted to 10,007,677 acres. J. D. B. DeBow, Superintendent of the U. S. Census, *Statistical View of the United States . . . Being a Compendium of the Seventh Census* (Washington, 1854), 191.

quires reasonably correct answers to these questions, at the very least:

How much land was granted to railroads, and what proportion was this of the whole public domain?

What proportion of the railroad mileage of the country received land grants from the government?

What was this land worth?

What were the terms and conditions of the grants? Were they gifts, or did the government get as well as give?

HOW MUCH LAND?

The first of these questions, purely a matter of recorded fact, deals with the amount of land granted to railroads by the United States government. In the standard general work on the subject, Donaldson's *Public Domain*, published by the government in 1884, the total amount of land that would be necessary to fulfill all the acts granting lands to railroads was estimated at 155,504,994 acres.² The amount of land actually patented to railroads, however, fell substantially short of this acreage, for a variety of reasons — noncompletion of the lines or other failure to comply with the conditions of the grants, or lack of sufficient acreage within the designated limits to fulfill the terms of the grants. The acreage to which the railroads actually received title appears in the annual reports of the Commissioner of the General Land Office, the latest such report showing a total of 131,350,534 acres.³

² Thomas Donaldson, *The Public Domain* (Washington, 1884), 753.

³ U. S. General Land Office, *Annual Report of the Commissioner*, June 30, 1943, table 76. Corresponding figures, with slight variations from year to year, appear in this entire series of reports. The report cited is for the latest year available. In addition to Federal land grants, it is estimated that railroads received from the states grants totaling 48,883,372 acres. U. S. Federal Coordinator of Transportation, *Public Aids to Transportation*, 1938, Vol. II, 32, and Table 13, p. 115, based on Federal or state records to June 30, 1933. The state land grants are not dealt with in this discussion. For a detailed and careful study of the state grants of Texas, which were by far the most significant, see S. G. Reed, *A History of the Texas Railroads* (Houston, 1941), Chap. XXIV. Right-of-way grants, by which the Federal government granted to pioneer railroads running through the public domain strips of land from 80 to 400 feet wide (the most common grants being 200 feet wide) for right-of-way purposes, are mentioned in some of the works examined but are not dealt with in this study. While in the aggregate they amounted to a considerable acreage, the grants were of so little value without railroads, and they were relatively such a

Of the thirty-seven American history textbooks examined, twenty-four make specific reference to the area granted to railroads by the Federal government. Of these twenty-four, one gives clear and approximately correct figures as to the whole area granted, while one other comes within 10 percent of the correct figure.⁴ Two others which do not state the area as a whole, give correct partial figures.⁵ In seven works, a substantially correct statement at one place is contradicted elsewhere, either by another larger figure or by a graphic presentation which greatly exaggerates the area granted.⁶ Eight others show the area granted, either graphically or in text, or both, as anywhere from nearly one-fifth more than it was, up to about four times the correct area.⁷ Five give partial figures only, which either are incorrect or are so presented as to give a misleading impression.⁸ Others make neither arithmetical nor graphic pre-mior part of the whole picture, that no separate discussion of them seems necessary. Donaldson, 286-7, 769-71, 940-43, 1262-3. *Public Aids to Transportation*, II, 48-51.

⁴ Ralph Volney Harlow, *The Growth of the United States* (2 vols., New York, 1943), II, 15, gives 132,500,000 acres. George M. Stephenson, *American History to 1865* (New York, 1940), 407, compares the grants with states having a total area of 144,224,000 acres.

⁵ Carl Russell Fish and Howard E. Wilson, *History of the United States* (New York, 1936), 545; John D. Hicks, *The Federal Union: A History of the United States to 1865* (Boston, 1937), 552.

⁶ Charles H. Coleman and Edgar B. Wesley, *America's Road to Now* (Boston, 1942), 401, 502; Harold U. Faulkner, Tyler Kepner, and Hall Bartlett, *The American Way of Life* (New York, 1941), 296-7; Harold U. Faulkner and Tyler Kepner, *America, Its History and People* (New York, 1942), 388, 455; Willis Mason West and Ruth West, *The American People* (Boston, 1937), Map Underline facing p. 474, 554-5; Melville Freeman and Eston V. Tubbs, *The Story of Our Republic* (Philadelphia, 1943), Part II, 47, 68; Charles A. and Mary R. Beard, *The Making of American Civilization* (New York, 1942), 552; Edward C. Kirkland, *A History of American Economic Life* (New York, 1941), 379.

⁷ Asa Earl Martin, *History of the United States* (2 vols., Boston, 1938), II, 122; Charles A. Beard and William C. Bagley, *The History of the American People* (New York, 1943), 501; Rolla M. Tryon, Charles R. Lingley, and Frances Morehouse, *The American Nation Yesterday and Today* (Boston, 1942), 439; Louis M. Hacker and Benjamin B. Kendrick, *The United States Since 1865* (New York, 1943), 160; William A. Hamm, *The American People* (Boston, 1939), 517-18; David Saville Muzey, *The United States of America* (2 vols., Boston, 1937), II, 27; Samuel Eliot Morison and Henry Steele Commager, *The Growth of the American Republic* (2 vols., New York, 1937), II, 112 and map facing p. 112; George Earl Freeland and James Truslow Adams, *America's Progress in Civilization* (New York, 1942), map facing p. 324.

⁸ John T. Greenan and Albert B. Meredith, *Everyday Problems of American Democracy* (Boston, 1943), 451; Arthur Meier Schlesinger, *Political and Social Growth*

sensation of the area granted, but rely entirely on adjectives. In most of the books, in fact, such adjectives as "huge," "vast," "enormous," "staggering," and "breath-taking" are parts of the treatment of the subject of area.

LAND GRANT MAPS, RIGHT AND WRONG

The most potent source of this exaggerated impression of the size of land grants, and the prevailing confusion of thought and inaccuracies of statement in their measurement, seems to be uncritical acceptance of land grant maps which are incorrectly understood and described by the text writers.

To understand the official land grant maps, it is necessary to bear in mind the "checkerboard pattern" in which land was granted to the railroads. First, there were original, or primary, limits within which the grantees were to receive alternate sections, non-mineral in character, or a total of one-half the area within a strip of land of a given width lying on both sides of the track, provided these sections had not previously been granted or otherwise disposed of, or reserved from grant for other public purposes, such as school grants, forest, and other reservations. In lieu of the land which had been previously disposed of or was reserved, the grantee was to be allowed to select a like amount of land from a contiguous zone — the so-called indemnity limits.⁹ (It is necessary to bear in mind, also, the fact that the official maps include not only grants to railroads, but also grants for wagon roads, canals, and river improvements.) The four principal patterns followed, with variations, in the several different land grant acts were:

of the American People, 1865-1940 (New York, 1943), 47; Gertrude Van Duyn Southworth and John Van Duyn Southworth, *American History, from the Discovery of America to the Present Day* (Syracuse, 1940), 226. In the three works above, the areas granted to the original Pacific railroads are shown as 100 million acres, as against actual grants to these routes of less than three-fourths that amount. Dwight Lowell Dumond, *A History of the United States* (New York, 1942), 535, states the grants to the first Pacific railroad as 33 million acres, as against an actual grant of slightly more than 18 million acres. Jacob Lewis Stockton, *A Topical Survey of American History* (New York, 1944), 148, takes as an example the grants to the railroad which received almost one-third of all the lands granted by the government to railroads, raises the amount of this grant from its actual figure of 36 million to 47 million acres, and then declares that "other roads were granted proportionate amounts."

⁹ Donaldson, 261-2, 274-9, 756-63.

1. Grants of alternate sections of land in primary strips embracing the area within *six* miles on either side of the proposed railroad, with indemnity limits outside thereof extending fifteen or twenty miles from the railroad.
2. Grants of alternate sections of land in primary strips embracing the area within *ten* miles on either side of the proposed railroad, some without indemnity limits, others with indemnity limits outside thereof extending twenty or thirty miles from the railroad.
3. Grants of alternate sections of land in primary strips embracing the area within *twenty* miles on either side of the proposed railroad, some without indemnity limits, others with indemnity limits outside thereof extending twenty-five, thirty, or fifty miles from the railroad.
4. Grants of alternate sections of land in primary strips embracing the area within *forty* miles on either side of the proposed railroad, with indemnity limits outside thereof extending fifty, and in some cases sixty, miles from the railroad. This pattern applied to territories only.

Under Pattern 1, for instance, the railroad received the equivalent of six sections of land (three on either side of the railroad) within the primary strips if available; otherwise within the indemnity limits. In no case did the railroad receive more than six sections per mile of road. Thus, where the primary and indemnity limits embraced an area forty miles in width, the railroad actually received a maximum of only slightly less than one-seventh of that area, or the equivalent of a solid strip six miles in width.

Under Pattern 3, the railroad was granted the equivalent of twenty sections of land (ten on either side of the railroad) within the primary strips if available; otherwise within the indemnity limits. Where the indemnity limits extended fifty miles from the railroad, the maximum area that the railroad could receive was one-fifth of the total area embraced by the primary and indemnity strips.

The earliest of the general land grant maps, apparently, was published by the government in 1878, in connection with a report on arid lands. Revised and brought up to date, it was again published by the government in 1883, and is included in Donaldson's well-known and widely available *Public Domain*. Again brought up to date, the map was republished in 1913 by the United States

Department of Commerce and Labor in its report on *The Lumber Industry*.¹⁰

Each of these maps showed the limits of both the primary and indemnity zones, while the latest of the maps, that of 1913, showed also, by a special hatching, the grants which had been forfeited for noncompletion of the roads within the terms of the acts making the grant and under which, therefore, no railroad had received lands. The whole was covered, on this map, by the correctly descriptive caption: "Map of the United States showing the limits within which land grants were made by the Federal Government to aid in the construction of railroads and wagon roads." The map also carried a legend explaining that "the maximum amount of land obtainable was one-half that within the primary limits, the lands granted being in the alternate survey sections. The maximum was often not obtained."

The last sentence refers to the fact that in many of the grants, especially in the older and more settled land grant states, it was not possible to locate the maximum acreage allowed even within the indemnity limits. The situation is thus outlined on page 222 of the 1913 report referred to:

In this connection the caution is repeated against assuming that the entire area within the limits shown on the map was granted to the railroads. The first set of heavy lines on each side of a road indicates the "primary limits" of the grant . . . within which limits it was to receive each alternate section (or part thereof) not already disposed of or reserved. The possible maximum of a grant, therefore, was half of the land within the primary limits. The second set of heavy lines, seen farther out on each side of the road in many grants, indicates the "indemnity limits" referred to above within which the railroad could select vacant alternate sections (or parts thereof) to make up for lands within the primary limits that had been previously disposed of or reserved. Often so much land had been disposed of or reserved both in the primary and the indemnity limits that a road received considerably less than its possible maximum. In Iowa so much land had

¹⁰ The original government map and its two revisions and republications are as follows: (1) accompanying an historical article by Willis Drummond on "Land Grants in Aid of Internal Improvements," published in connection with the report of Major J. W. Powell on the "Lands of the Arid Region of the United States," *House Executive Document No. 73, 45 Cong., 2 Sess., 1878*; (2) Donaldson, facing p. 949; and (3) U. S. Department of Commerce and Labor, Bureau of Corporations, *The Lumber Industry: Part I—Standing Timber* (Washington, 1913), 222 and facing.

already been disposed of at private sale, under warrants and to settlers, that although the State appears practically covered by grants, only a little more than one-eighth its area was received by the railroads. But in regions where there was less of prior purchase and settlement the railroads secured a higher proportion; in some cases the whole of the possible maximum.¹¹

The several government publications of the map became the basis of two privately published maps, that of Professors Hart and Bolton in their series of American history maps published in 1919,¹² and that in Paullin's *Atlas of the Historical Geography of the United States*,¹³ published in 1932, both of which are careful to give like information, either on the map itself or in accompanying explanatory material.

Even with the most scrupulous explanation, however, it is difficult not to get an exaggerated impression of size from maps which show a shaded area twice as great as the actual grants, as in the case of the Hart map, and approximately four times as great, as in the case of the government publications and the Paullin map. Without such understanding and explanation, the maps become downright wrong. And, unfortunately for popular understanding of the facts of history, it is in this misleading form and with incorrect captions that almost all land grant maps have been circulated.

The first such use of the map, apparently, was in the presidential year of 1884, when the Democratic party issued a campaign poster featuring what purported to be a map of lands granted to railroads, but was actually a map of the extreme limits of the widest zones within which some lands might have been granted not only to railroads but also to wagon roads and river improvements, under the caption: "How the Public Domain Has Been

¹¹ One publication (not included in the present study) which printed the usual land grant map did so with the caption: "The black bands on the map show the land that the government granted to the railroads. Notice that almost the entire State of Iowa was given to them"—an interesting example of the error against which particular warning is given in the explanation quoted. *Building America: Railroads* (New York, 1940), V, No. 6, p. 174.

¹² Albert Bushnell Hart, assisted by David Maydole Matteson and Herbert Eugene Bolton, *A Teacher's Manual Accompanying the Hart-Bolton American History Maps* (Chicago, 1919), 87-8, and Map A-18: "Western Statehood and Land Grants to Railroads."

¹³ Charles O. Paullin, *Atlas of the Historical Geography of the United States* (Washington, 1932), 39-40, and plate 56-D.

Squandered — Map showing the 139,403,026 acres of the people's land . . . worth at \$2 an acre \$278,806,052 given by Republican Congresses to Railroad Corporations. . . ."¹⁴

Apparently those who compiled the poster overlooked the fact that the shaded area on the featured map represented about four times the number of acres stated in the accompanying text. The figures given in the text, however, are completely overshadowed by the pictorial impression of the map itself — an interesting example of the validity of the Chinese proverb as to the comparative force and effectiveness of words and pictures.

This effective pictorial exaggeration is perpetuated in the maps subsequently appearing in history texts. Nine of the works examined in this study present maps which include wagon road and river improvement grants as well as those for railroads, and which show the full area of the indemnity limits of both completed and noncompleted grants, without explanation or distinction as between primary and indemnity zones, and with captions which, in all but two cases, unqualifiedly describe the shaded strips as showing lands granted to railroads.¹⁵

One work, indeed, enlarges upon its erroneous caption by declaring that "the nation gave the railroad builders a kingdom in land. No such lavish generosity was ever dreamed of before. The map on page 68 tells better than words what vast areas were presented to the railroad companies."¹⁶

The two books which qualify the statement that the shaded areas of the map show lands granted to railroads point out that they were to receive only alternate sections, or one-half the area shown, but show on their maps not the primary limits but the much more extensive indemnity limits.

Accompanying this article are two maps identified by number. Map No. 1 is typical of the sort published in many of the textbooks examined. In contrast, Map No. 2 is drawn so as to show

¹⁴ Democratic Party Platform, 1884, *How the Public Domain Has Been Squandered*, broadside, with land grant map.

¹⁵ The seven works which show the whole of the shaded portions of the map as representing lands granted to railroads are Faulkner and Kepner, 455; Faulkner, Kepner, and Bartlett, 296; Morison and Commager, II, facing p. 112; Hamm, 518; Muzzey, II, 27; Freeman and Tubbs, Part II, 68; Freeland and Adams, facing p. 324. The two works which state that the railroads received only half the area shown are Coleman and Wesley, 401; West and West, map underline facing p. 474.

¹⁶ Freeman and Tubbs, Part II, 47.

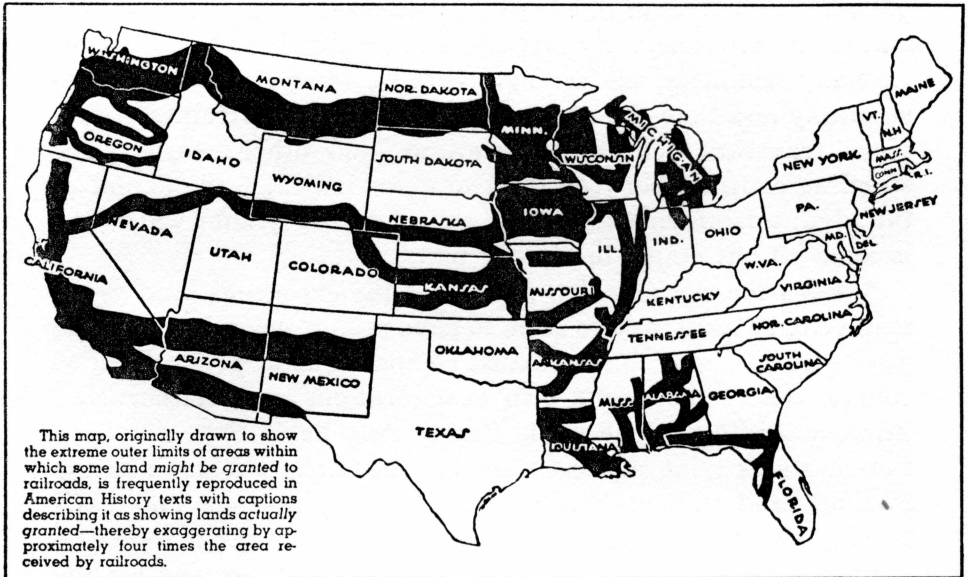
the approximate location of the grants which were actually completed. The widths of lines are proportioned to show the equivalent of the areas actually certified and patented to the railroads. In many instances, the acreage certified and patented was considerably less than the acreage granted, due to forfeitures, previous transfers, federal reservations, and other causes. The startling contrast between the two maps indicates the extent of the vivid misinformation about railroad land grants which has become all but staple in history texts.

Besides the works which reproduce the erroneous land grant map (No. 1) itself, others seem to have used it uncritically as the source of information for textual comparisons of area which, of course, reflect the map's own exaggerations and inaccuracies. Thus, according to one work, "more than half of the northern tier of states lying against Canada from Lake Michigan to the Pacific" and "about half of New Mexico, Arizona and California," were included in Federal land grants.¹⁷ That would be approximately 272,000,000 acres in only eight states, and yet the same work gives the total area of all the Federal railroad grants in twenty-six states as only 155,000,000 acres — which itself is one-sixth more than the railroads actually received.

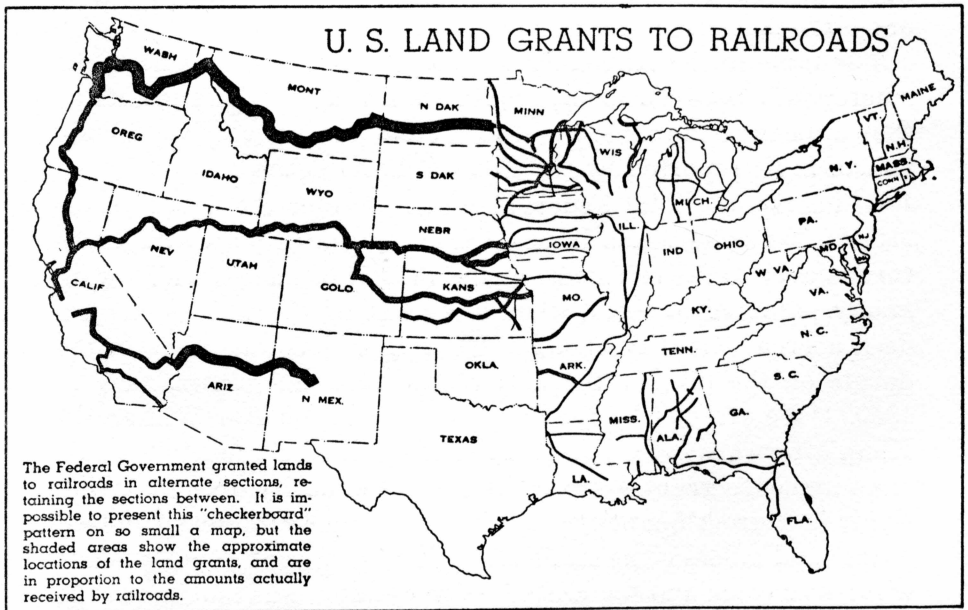
The table in the Appendix to this paper shows, by states, the discrepancy between the approximate acreage of land grants as they appear on Map No. 1 and the actual acreage received by the railroads as reported by the General Land Office.

Of course, the total Federal grants, whether the figure be the 155,000,000 acres which it was originally contemplated might be turned over to the railroads, or the 131,351,000 acres which were finally patented to them, when looked at by themselves, are indeed a great quantity of land. That objection was made in the debate on the bill for the first of the railroad grants, back in 1850. "We are met by the objection," said Senator William R. King, afterwards vice president of the United States, "that this is an immense grant — that it is a great quantity of land. Well, sir, it is a great quantity; but it will be there for five hundred years; and unless some mode of the kind proposed be adopted, it will never command ten cents." The Senator was looking at the land involved not as an absolute quantity but as a portion of a

¹⁷ Beard and Beard, 552.



MAP NO. 1



MAP NO. 2

domain which, as he said, "can never be of any value . . . unless some direct communication by railroad, or some other way, is made."¹⁸

That was the way the land grant transaction was looked upon by the men who urged its adoption in the beginning — the Whigs, Henry Clay and William H. Seward among them, and the Democrats, Stephen A. Douglas, Thomas H. Benton, and Lewis Cass. It was the way in which it was regarded by Abraham Lincoln, in whose administration and with whose approval the policy found its widest use and application. Part of a domain, immense in itself, was to be used to give value to the vastly more immense whole.

This point of comparison, so essential to any proper understanding of the transaction, is almost wholly lost sight of in the works examined. Only three of the twenty-four which discuss the area of the Federal land grants, in fact, in any way relate the areas granted to the size of the public domain as a whole, and but one of the three gives the proportion correctly. Of the others, one says that the land grants were "one-seventh" of the public domain, and another 14 per cent.¹⁹ The actual figure was less than one-tenth.

A fourth work lumps the area of railroad land grants with grants for wagon roads, canals, and river improvements, to arrive at a total of 337,740,000 acres, "equal," the author says, "to one-sixth of the total area of the United States and three times that of France."²⁰ The acreage given checks with no official report on the subject, but the Federal grants to railroads — on which the whole attention of the passage is focused — are much less than half the area mentioned.

¹⁸ *The Congressional Globe*, 31 Cong., 1 Sess., April 29, 1850, pp. 845-6.

¹⁹ Coleman and Wesley, 502, gives correct figures for the areas of the land grants to railroads and the public domain. The other works referred to are Muzzey, II, 27, and West and West, map underline facing p. 474.

²⁰ Beard and Bagley, 501. In a number of the books examined, areas are compared not with the areas of such states as those in which the lands were located, but with foreign countries, as in this case, or with thickly settled eastern states, a favorite selection for that purpose being the six New England states, New York, and Pennsylvania combined. While such comparisons might be arithmetically accurate, they do not present so true a picture as would comparisons with western acreage, such as used in two works: Coleman and Wesley, 401; Schlesinger, 47.

HOW MUCH RAILROAD WAS BUILT WITH THE
AID OF LAND GRANTS?

The second, and equally simple, question deals with the extent of railroad mileage, the construction of which was aided by the government's land grants. Such grants were made in aid of a total of 18,738 miles of railroad line²¹ — less than 8 per cent of the total mileage of railroads built in the United States. The fact that more than 92 per cent of all the railroad mileage in the United States was built without the aid of an acre of Federal land grants is nowhere brought out in the texts examined — an omission which tends to throw the land grant transaction out of all proportion as a factor in the development of the national network of railroads.

The same tendency to exaggerate the government's financial part in railroad building appears in the treatment of the bond aid extended to six of the companies chartered to build the pioneer "Pacific" railroads. The government made a loan of its bonds to these railroads, in the total amount of \$64,623,512. The roads were to pay 6 per cent interest on the bonds and to pay them off. During the long period of development and light traffic they were not always able to meet these charges, but in the final settlement in 1898 and 1899 the government collected \$63,023,512 of principal plus \$104,722,978 in interest — a total repayment of \$167,746,490 on an initial loan of \$64,623,512.²² Professor Hugo R. Meyer of Harvard was well justified in saying that "for the government the whole outcome has been financially not less than brilliant"²³ — but none of this appears in the treatment of the transaction in the texts. Thirty-four of the thirty-seven texts examined mention the bond aid to these Pacific roads. In one-third of the works, it is not made clear whether the financial assistance referred to was a loan or a gift. Three describe the

²¹ U. S. General Land Office, *Notice of Releases of Land Grant Claims by Railroad Carriers*, May 17, 1941. Similar figures appear in earlier statements and reports of the General Land Office and other governmental departments and agencies concerned. In Lewis Henry Haney, *A Congressional History of Railways in the United States* (2 vols., Madison, Wis., 1910), II, 14, the total mileage is given as 17,724 miles. The total route mileage of railroads on December 31, 1943 in the United States was 227,999 miles. Interstate Commerce Commission, *Statistics of Railways in the United States* (Annual).

²² *Public Aids to Transportation*, II, 59, and table 19, p. 138.

²³ Hugo R. Meyer, "The Settlements with the Pacific Railways," *Quarterly Journal of Economics*, XIII (July, 1899), 443-4.

aid definitely as gifts — which they were not.²⁴ Twenty-one refer to the transactions as loans, but only four²⁵ mention the fact that the loans were repaid, while three²⁶ make the positively erroneous statement that the loans were never repaid.²⁷

WHAT WERE THE LAND GRANTS WORTH?

One measure of the value of the lands granted — though no one would contend that it is the correct one — would be the cost to the government of acquiring them, which, according to Donaldson, was an average of 23.3 cents an acre.²⁸ On that basis, the 131,351,000 acres which the railroads received could be said to be worth less than \$31,000,000.

Another possible measure is the standard “minimum” price at which the government offered the public domain for sale in the land grant period. This price was \$1.25 an acre, though the government was never able to realize even this figure as an average selling price. But if the new railroad companies had bought from the government the 131,350,534 acres actually re-

²⁴ Howard C. Hill, *The Life and Work of the Citizen* (Boston, 1942), 392; Jeremiah S. Young and Edwin M. Barton, *Growing in Citizenship* (New York, 1941), 521; Sister of St. Joseph, *American History* (St. Augustine, Fla., 1932), Book II, 116.

²⁵ Repayment is mentioned in Hacker and Kendrick, 161; George M. Stephenson, *American History Since 1865* (New York, 1939), 84; Kirkland, 380; Morison and Commager, II, 113.

²⁶ West and West, 464; Bruce Winton Knight, *Economic Principles in Practice* (New York, 1942), 262; W. E. Woodward, *A New American History* (Garden City, N. Y., 1938), 618.

²⁷ The same sort of disregard of repayment may be observed in the treatment of the government loans made to the railroads at the close of World War I, in connection with the difficult transition from government to private operation at that time. These loans, which totaled \$1,080,575,000, are mentioned in three of the books examined. All of this huge sum except \$28,698,000 has been repaid, with a total of \$220,891,000 in interest (*Annual Report of the Secretary of the Treasury . . . for fiscal year ended June 30, 1944*, p. 173), but the fact is mentioned in none of the texts. The more recent depression loans made by the Reconstruction Finance Corporation and other federal agencies receive the same type of treatment. Twenty books mention the fact that these loans were made. More than three-fourths of the loans made have been repaid or sold to the public, with a profit to the government in interest. Mention of repayment of any sort is made in only two of the books: Kirkland, 743; Hicks, II, 671.

²⁸ Donaldson, 21 and 524. This figure for cost of acquisition covers not only purchase price and payments to Indian tribes, but also costs of surveying and disposition.

ceived, and had paid the full established price, the lands would have cost them \$164,188,167.

Still another measure of the value of the lands during the period of the grants is to be found in the Graduation Act, under which the price of lands long on the market and unsold was graduated downward, starting with a price of \$1 an acre after ten years, and ending with a price of 12 1/2 cents an acre for lands unsold after thirty years. Total sales in the years 1854-1862, during which the Act was in effect, even under such price arrangements as these, were only 25,696,420 acres.²⁹

A more correct measure of value is the one applied in all ordinary transfers between buyer and seller — the worth of the land granted and received at the time of sale. During the period in which the land grants were being made to the railroads, the average sale price of government lands in the land grant states was less than \$1 an acre.³⁰ Applying that price to the lands granted to the railroads gives a value as of the time of the grants, of less than \$130,000,000.

It is sometimes contended that the measure of value in this case should be the amount finally realized by the railroads on their lands, after the roads had been built and after years of colonizing, advertising, sales effort, and development costs had been put upon them.³¹ There is no more basis for setting up such a measure of value than there would be for putting it at the 23 cents an acre which it cost the government to acquire the lands

²⁹ Donaldson, 205-206, 291; *Public Aids to Transportation*, II, 35.

³⁰ The latest and most complete calculation of proceeds of Federal land sales during the period 1850-1871, when the land grants were made, shows an average sale price of 97.2 cents per acre. This calculation, however, is not restricted to the sale of lands in the land grant states, but covers also lands sold during this period in the older and more settled states. Eliminating these sales, the average per acre from sales of Federal public lands in railroad land grant states during this period was 94 cents per acre. From report of Federal Coordinator of Transportation, *Public Aids to Transportation*, II, 36.

³¹ The extent of the effort and expense to which railroads went in marketing and settling their granted lands is indicated in the studies of Paul W. Gates, *The Illinois Central Railroad and its Colonization Work* (Cambridge, 1934); James B. Hedges, "The Colonization Work of the Northern Pacific Railroad," *MISSISSIPPI VALLEY HISTORICAL REVIEW*, XIII (December, 1926), 311-42, and "Promotion of Immigration to the Pacific Northwest by the Railroads," *ibid.*, XV (September, 1928), 183-203; Richard C. Overton, *Burlington West: A Colonization History of the Burlington Railroad* (Cambridge, 1941). The somewhat similar situation in Canada is treated in James B. Hedges, *Building the Canadian West: The Land and Colonization Work of the Canadian Pacific Railway* (New York, 1939).

in the first place, but because the point is raised in some of the works examined, it may be noted that the average realizations of the railroads from their Federal land grants, plus the estimated value of the lands remaining unsold, was put at \$3.38 an acre according to one government study,⁸² while in another report, including both state and Federal grants, the average is \$2.81 an acre.⁸³

Few of the works examined deal in detail with the question of value. An impression of richness is built up with such adjectives as "lavish," "munificent," and "princely," but figures are scarce. One suggests a value of two dollars an acre, which is the same figure used in the Democratic campaign document of 1884.⁸⁴ Others undertake to measure value by what the railroads realized from the lands when sold. One work states this as an "average price of \$4.76 an acre."⁸⁵ Another quotes a "careful investigator" to the effect that it "has been under rather than over ten dollars an acre," out of which there had to come the costs of selling, from all of which the author concludes that "the actual financial assistance to the railroads from the land grants has probably been overestimated."⁸⁶

The real contribution of the Federal land grants to the spread of the rails in the West and the newer South was not the cash realized upon them, but the fact that they furnished a basis of credit which got the job started and made it possible to get it done. The land grant acreage could be certified, patented, and sold only as the railroad itself was completed, in sections, and then could be sold mostly on long time credit. The selling price had to be low to get it sold at all, and the expense of sale was necessarily high. The net realizations from the sales, particu-

⁸² U. S. Board of Investigation and Research, *Report and Comments on H. R. 4184 . . . to the Committee on Interstate and Foreign Commerce of the House of Representatives*, March 9, 1944, p. 28, shows net proceeds of sales of both Federal and state land grant lands to December 31, 1941 of \$434,806,671, plus an estimated value of the unsold grant lands of \$60,684,032. Of this total of \$495,490,703, the sum of \$55,090,652 is attributed to state land grants and \$440,400,051 to Federal land grants.

⁸³ The report of the Federal Coordinator of Transportation, *Public Aids to Transportation*, II, 52, estimated the "aid received from all such grants," that is, state as well as Federal, at \$516,144,749. This includes both proceeds of sales under Federal and state land and right-of-way grants, and also the estimated net value of lands still held by the railroads on December 31, 1927.

⁸⁴ Hacker and Kendrick, 161.

⁸⁵ Harlow, II, 15.

⁸⁶ Kirkland, 381.

larly during the period of construction, were but a tiny fraction of the cost of building the railroads. Thus, the Auditor of Railroad Accounts of the Department of the Interior reported that up to 1880 the several companies going to make up the five pioneer "Pacific" routes had sold only \$36,383,795 worth of land. "The lands have been sold in small tracts, some for cash, but most of them on time," the Auditor wrote in describing the sales of one of the several companies concerned. The cost up to that time of building the several Pacific routes is shown in the same report as having been \$465,584,029. This, the Auditor thought and so reported, was excessive, or at least much more than similar roads could have been built for when the report was made. Even the lesser figure of \$168,045,000, which he estimated as enough to reproduce the roads, however, was considerably more than four times the realizations from land sales up to that date. Looking to the future, the Auditor estimated that the value of the railroad lands unsold in 1880 was \$78,889,940, making a total estimated value for all lands sold and to be sold of \$115,273,735, as against a total estimated cost of the several "Pacific" railroads, to completion, of \$634,165,613. The Auditor thought that similar railroads could be built for \$286,819,300, but even this figure is more than double the estimated total realizations from the lands granted to the "Pacific's."⁸⁷

The estimated worth of all lands which these and all other land grant railroads had received, or were to receive, from the Federal government was estimated by the Interior Department's Auditor as of November 1, 1880, at \$391,804,610.⁸⁸ By way of comparison, the total investment in railroads in the United States in that year was \$4,653,609,000.⁸⁹

THE NATURE OF THE LAND GRANT TRANSACTION

The questions dealt with so far — that is, the amount of land granted and its relationship to the whole, the extent of the railroads thus aided and their relationship to the whole, and the

⁸⁷ Department of Interior, Office of Auditor of Railroad Accounts, *Report on the Quantity and Value of Public Lands Granted by Congress to Aid in the Construction of the Pacific Railroad* (Washington, Jan. 26, 1881); Donaldson, 912-33 (figures on 932).

⁸⁸ *Ibid.*, 753.

⁸⁹ Interstate Commerce Commission, Bureau of Statistics, *Railway Statistics Before 1890*, Statement No. 32151 (Washington, Dec., 1932), 4.

value of the aid so extended — are, after all, matters of detail. While these details are more important than the treatment accorded them in so many of the works examined would indicate, they are not of the essence of the land grant transaction. The main question is, what was the nature of that transaction? Were the Federal land grants gifts? Or were they trades by which the government got, as well as gave, direct consideration?

No reference is made here to the immense indirect benefits arising from the early building of the railroads so aided, but only to the direct monetary return which the government of the United States received for the lands which it granted.⁴⁰

Almost without exception, the works examined treat the transactions as “gifts,” or “donations,” or, as some put it, “free” or “outright” gifts, without in any way referring to the fact that the railroads which received these “gifts” or “donations” were required to haul mail and government freight and passengers at less than their regular charges.⁴¹

While the conditions of the several grants vary, in the overwhelming majority of cases the Acts of Congress making grants to railroads adopted the phraseology of the earlier canal and wagon road grants in requiring that the railroad to be built should “be and remain a public highway for the use of the government of the United States, free from toll or other charge upon the transportation of any property or troops of the United States.” The effect of this clause, as finally determined by the Supreme Court, was that the government was entitled to the use of the roadbed without toll, by analogy to the free right of passage for its vehicles or boats over grant-aided wagon roads and canals, but that this did not extend so far as to require the rail-

⁴⁰ These indirect returns to the government are suggestively outlined in U. S. General Land Office, *Transportation: Information Concerning Land Grants for Roads, Canals, River Improvement and Railroads*, Information Bulletin, 1939 Series, No. 5 (Washington, 1940), 1-2. While no figures are available, and the point is developed in none of the reports and studies examined, it is obvious that transfer of lands from Federal to private ownership had a substantial effect upon the taxable resources of the states, territories, and local governments. Only in recent years, with the increasing tendency in the other direction, with property passing from private to government ownership, has the importance of this fact begun to be appreciated.

⁴¹ This is true of twenty-six of the texts examined. Only two, Stephenson, *American History to 1865*, 407, and Robert I. Adriance, *Using the Wealth of the World* (Boston, 1943), 268, make reference to deductions from railroad rates because of land grants.

road company to provide and operate without charge the engines, cars, and other equipment needed for transportation over the railroads.⁴²

Under a formula subsequently worked out by the United States Court of Claims, the deduction from ordinary charges on account of this provision of the land grant acts was established at 50 per cent.⁴³ Still later, by a series of Acts of Congress, the same percentage of deduction from commercial rates was made applicable to the limited number of land grant roads whose grants did not contain the "toll-free" provision in this form,⁴⁴ while even railroads which received no land grant whatever from the government have long since entered into "equalization agreements" by which they also undertake to handle government traffic at the same rates applying by law on the land grant lines.⁴⁵ Compensation for handling mail on land grant lines was fixed by Act of Congress in 1876 at 80 per cent of the rates applying on other railroads.⁴⁶

In the Transportation Act of 1940, the Congress eliminated these provisions in so far as they applied to mail pay and to rates on the government's civilian passenger and freight traffic. Deductions of 50 per cent were continued, however, on the charges for transportation of military and naval personnel and property moving for military and naval and not for civil uses.⁴⁷

The resulting situation is thus described by a Committee of the House of Representatives in the most recent statement on the subject:

Certain of our railroads, because of lands granted by the Government many years ago to aid in the construction of lines of road now owned by them, are under statutory obligation to transport certain specified classes of Government traffic over such land-grant lines at 50 percent of their established tariff charges for such transportation. While that

⁴² *Lake Superior and Mississippi Railroad vs. United States*, 93 *U. S. Reports*, 442, October term, 1876. Decided Jan. 15, 1877.

⁴³ *Atchison, Topeka & Santa Fe Railroad vs. United States*, 15 *Court of Claims*, 126, December term, 1879.

⁴⁴ The first of these Acts of Congress was adopted July 16, 1892. 27 *Statutes at Large*, 174, 180.

⁴⁵ Since 1914 this agreement has been between the government and the railroads collectively.

⁴⁶ 19 *Statutes at Large*, 78-82.

⁴⁷ Transportation Act of 1940, Part II, Section 321 (a), 54 *Statutes at Large*, Vol. I, 954.

statutory requirement applies to only 14,411 miles of railroad, the reduced charges for which it provides have been extended to many times that mileage as the result of so-called equalization agreements entered into with the Government by other railroads to enable them to handle Government traffic.⁴⁸

Thus it is that although less than 10 per cent of railroad mileage received grants of land, either Federal or state, the whole railroad system of the nation has paid for them a direct monetary return far exceeding the value of the lands granted.

"It is probable," said the Congressional Committee report already referred to, "that the railroads have contributed over \$900,000,000 in payment of the lands which were transferred to them under the Land Grant Acts. This is double the amount received for the lands sold by the railroads plus the estimated value of such lands still under railroad ownership. Former Commissioner Eastman estimated that the total value of the lands at the time they were granted . . . was not more than \$126,000,000."⁴⁹

The total of deductions was not so large when the texts examined were written, of course, but even the fact that deductions are made is completely ignored in all but two of the books examined.

THE MAJOR FACT

The net result of the treatment of the land grant transaction as a whole is to present to the student a picture of a wastrel Uncle Sam scattering his substance with reckless extravagance, instead of the much more nearly correct picture of a canny landowner using part of his holdings to increase immeasurably the value of the rest, not as a gift but on terms which constituted a bargain shrewder than he realized. As far back as 1859, indeed, Charles Russell Lowell wrote that with the continued movement of troops and military supplies into the West "it may be found that even with the most liberal construction of the grant, the government has not been so 'munificent' as sharp." The same observer noted, about the same time, "that he who buildeth a

⁴⁸ Committee on Interstate and Foreign Commerce, *House of Representatives, Report No. 393*, 79 Cong., 1 Sess., March 26, 1945, pp. 1-2. [NOTE: The legislation dealt with in this report was enacted by Congress and approved on December 12, 1945, and deductions on account of land grants were terminated on October 1, 1946.]

⁴⁹ The several authorities for the details of this statement as to the amount of the direct return to the government from the land grant acts are given in detail in *ibid.*, 4.

railroad west of the Mississippi must also find a population and build up business.”⁵⁰

The “best and highest interests of the people of the United States in regard to this domain,” said William H. Seward in the Senate debate on the passage of the first land grant bill, “is not to derive from it the highest amount of current revenue” from the sales of lands, “[b]ut it is to bring them into cultivation and settlement in the shortest space of time and under the most favorable auspices.”⁵¹

To that end, the land grant device was adopted. Its adoption was sought not only by the people of the West and the newer parts of the South, but also by the people of the manufacturing East.⁵² In its administration there were errors and abuses, both on the part of government authorities and on the part of railroads, as revealed, for example, in connection with the movement for forfeiture of land grants which reached its height in the 1880's. But the essential thing is that through the use of land grants, the result sought was accomplished. It may not have been the wisest way to achieve these results, though no one even yet has suggested a better way by which a nation long on land and short on cash and credit could have enlisted the driving forces, which, in the short space of less than a generation, laced the West with rails. It may not have been the wisest way, but it worked. The job was done.

While the existing monographs on the actual working out of specific grants confirm this fact,⁵³ few of the texts examined take note of it. Two books note the need of some such device for getting railroads built ahead of settlement.⁵⁴ Four refer to the value added to the lands retained by the government.⁵⁵ Another, although treating the grants as the bestowal of “great gifts of land,” recognized that “the transcontinental railroads opened

⁵⁰ Overton, 156, 159.

⁵¹ *Cong. Globe*, 31 Cong., 1 Sess., April 29, 1850, p. 851.

⁵² This may be substantiated by sectional analysis of the vote in Congress on the land grant acts. See, for example, the 1856 vote on four grants in Iowa. Overton, 73-86.

⁵³ See works cited in footnote 31, above.

⁵⁴ Coleman and Wesley, 401; Dumond, 535.

⁵⁵ Kirkland, 378, 380; Stephenson, *American History to 1865*, 407; Fish and Wilson, 355; Richard J. Purcell, *The American Nation* (Boston, 1937), 529.

the way for settlers.”⁵⁶ Two others, while questioning the wisdom of the “gifts” to the railroads, nevertheless recognized the part which the grants played in the earlier development of the country.⁵⁷ Although joining in the almost universal description of the land grants as gifts, one book declared that the railroads “earned” what they got, and that it was a “wise use of the public domain.”⁵⁸

But for the most part, this essential element in the transaction — its very heart, indeed — is ignored or glossed over in the history texts which form the foundation of the American citizen’s idea of the history of his own nation and the forces which have shaped and builded it. From most of these texts, no one could learn that here was a transaction by which lands constituting less than one-tenth of the nation’s public domain were granted to railroads constituting less than 8 per cent of the United States mileage, not as gifts but under terms and conditions by which the government received a direct monetary return far greater than the value of the lands granted.

This direct monetary return, however, is by far the smallest part of the gain to the government and the people of the United States from the working out of the land grant transaction. When the policy was first adopted, nearly two and one-half centuries after the beginnings of permanent settlement on the Atlantic seaboard, the frontier of the United States was but a little way beyond the Mississippi River — still not half way across the continent. And then, within less than a generation, the frontier almost literally leaped across the Great Plains, the mountains, and the vast areas which the old maps showed as the “Great American Desert.” Such a difference in the rate of settlement was not due to any one thing, of course, but obviously the most effective cause was the fact of the transportation service of the railroads.

The land grants did not build these railroads, but they furnished a basis of credit which made it possible for them to be built. So doing, they did what never had been done before —

⁵⁶ Roy F. and Jeannette P. Nichols, *A Short History of American Democracy* (New York, 1943), 270, 272.

⁵⁷ Eugene C. Barker, William E. Dodd, and Henry Steele Commager, *Our Nation’s Development* (Evanston, Ill., 1937), 387; Kirkland, 381.

⁵⁸ Purcell, 532.

provided transportation ahead of settlement. The result is almost beyond measurement. It was to be found in a startling reduction in the cost of transportation, as is abundantly shown in the reports of the Quartermaster General of the Army during that period.⁵⁹ And a result "beyond any estimate the Quartermaster General can make," as W. T. Sherman, then General-in-Chief of the Armies reported, was to be found in the "opening up to settlement of regions now wild, which would give homes and employment to . . . industrious people."⁶⁰ It was to be found

⁵⁹ From letter from Quartermaster-General M. C. Meigs to Secretary of War William W. Belknap, Jan. 28, 1873 in *H. E. Ex. Doc. No. 169*, 42 Cong., 3 Sess., Vol. 9, relating to savings to the War Department in transportation costs from July 1, 1866, to Jan. 28, 1873, as a result of the building of the Union Pacific Railroad:

The average rates per mile for troops are, on through business, 5 2/10 cents; on local business, 8 cents, being an average of 6 3/5 cents per man per mile. The average rates per mile for troops by the Overland Stage Company were, on through business, 12 1/2 cents; on local business, 15 cents, being an average of 13 3/4 cents per mile per man.

Assuming that all of these troops would have traveled by stage, in the absence of the railroad (which is by no means probable), the total estimated cost by stage is shown by the following, based on the averaged rates above stated:

Average rate per man per mile: rail	6 3/5 cents
Average rate per man per mile: stage	13 3/4 cents
Actual cost for troops at railroad rates	\$1,446,262.25
Estimated cost at stage rates	\$3,013,046.35

The average rates per 100 pounds per 100 miles charged for freight by the railroad during the period required are, on through business, 19 cents; on local business, 62 cents, being an average of 40 1/2 cents per 100 pounds per 100 miles by railroad.

. . . the estimated cost of the transportation of the freight moved by the Union Pacific Railroad, including express charges as shown above, . . . would be as follows:

Rates per 100 pounds per 100 miles: railroad rates	40 1/2 cents
Rates per 100 pounds per 100 miles: wagon rates	\$1.46
Actual cost of freight at railroad rates	\$1,896,589.57
Estimated cost at wagon rates	\$6,837,088.32

Showing a total estimated cost for moving the troops and supplies by stage and wagon of	\$9,850,134.67
Total actual cost by railroad	\$3,342,851.82

Estimated difference . . .
equivalent to about 66 per cent. \$6,507,282.85

⁶⁰ Reports from General W. T. Sherman and the Quartermaster-General transmit-

in the value added to land and its products. It was to be found in the transformation of nontaxable resources into property which furnishes the principal tax-base for the support of the state and local governments of half a continent.

More important even than these was the contribution of the land grant railroads to military security and national unity. Indeed, as General Sherman once wrote, at the time of its building the Pacific Railway was "looked upon as a military necessity and as the only thing positively essential to the binding together of the republic."⁶¹

Almost without exception, however, the history textbooks have failed to develop this major and essential fact that, whatever may have been its shortcomings, the land grant policy touched off national and individual energies which in a few short years accomplished the greatest engineering, construction, and colonization project ever undertaken up to that time, a project which transformed the West from a wilderness to a civilized community and welded the nation into one.

ted May 12, 1880, by Secretary of War Alexander Ramsey to Hon. R. M. McLane, Chairman, House of Representatives Committee on the Pacific Railroads. Original letters are on file in the Clerk's Office, House of Representatives. General Sherman's letter is reprinted in *Railway World*, May 22, 1880, pp. 492-3, as follows:

I have the honor to acknowledge the receipt, by reference, from you of the resolution of the House committee on Pacific railroads, calling for information as to the probable saving in money to the military authorities by the completion of the Northern Pacific Railroad from Bismarck westward, and its general effect on the military and Indian services in that quarter. . . . In a military sense, the immediate extension of this railroad from Bismarck to the Yellowstone, and up the valley of that river as high as the mouth of the Big Horn, will be beyond any estimate the Quartermaster-General can make, because this railroad will transport men and supplies for ten if not twelve months of the year, while the Missouri river and the Yellowstone are barely navigable by light draft boats for two or at most three months. . . . It is equally important to the military and civil interests of the whole country that Montana should fill up with hardy farmers, and this will be an immediate result of the extension westward of this northern railroad. . . . I am unable to make even an approximate estimate of the saving in cost of transportation of men and military stores by the completion of this railroad, but this bears a small proportion to the great result of opening up to settlement regions now wild, which would give homes and employment to two or three millions of industrious people.

⁶¹ Letter from General W. T. Sherman, dated Jan. 16, 1867, to Major-General Grenville M. Dodge, in *How We Built the Union Pacific Railway*, Senate Doc. No. 447, 61 Cong., 2 Sess., 14.

APPENDIX

FEDERAL LAND GRANTS TO RAILROADS ¹

State	Total Acreage ²	Apparent area shown on Map No. 1 (p. 180)		Actual area shown on Map No. 2 (p. 180)	
		Acres	Per Cent of State Area	Acres ³	Per Cent of State Area
Alabama	33,029,760	14,863,392	45	2,747,479	8.3
Arizona	72,901,760	34,263,827	47	7,695,203	10.6
Arkansas	33,985,280	12,574,554	37	2,586,970	7.6
California	101,563,520	40,625,408	40	11,585,393	11.4
Colorado	66,718,080	6,671,808	10	3,757,673	5.6
Florida	37,478,400	10,868,736	29	2,218,705	5.9
Idaho	53,476,480	8,021,472	15	1,320,591	2.5
Illinois	36,096,000	12,633,600	35	2,595,133	7.2
Indiana	23,226,240	2,322,624 ⁴	10	-----	---
Iowa	36,019,200	32,417,280	90	4,711,328	13.1
Kansas	52,656,640	32,647,117	62	8,234,013	15.6
Louisiana	31,054,720	20,496,115	66	1,375,000	4.4
Michigan	37,258,240	27,943,680	75	3,134,058	8.4
Minnesota	53,803,520	37,662,464	70	9,953,008	18.5
Mississippi	30,538,240	6,718,413	22	1,075,345	3.5
Missouri	44,591,360	12,485,581	28	2,328,674	5.2
Montana	94,168,320	44,259,110	47	14,736,919	15.6
Nebraska	49,431,680	13,840,870	28	7,272,623	14.7
Nevada	70,745,600	8,489,472	12	5,086,283	7.2
New Mexico	77,866,240	26,474,522	34	3,355,179	4.3
North Dakota	45,225,600	22,612,800	50	10,697,490	23.7
Oregon	62,067,840	24,827,136	40	3,655,390	5.9
South Dakota	49,310,080	2,465,504 ⁵	5	-----	---
Utah	54,346,240	4,347,699	8	2,230,085	4.1
Washington	43,642,880	29,240,730	67	9,582,878	22.0
Wisconsin	35,938,560	24,438,221	68	3,666,062	10.2
Wyoming	62,664,960	13,786,291	22	5,749,051	9.2
TOTAL	1,389,805,440	527,998,426	38	131,350,534	9.5

¹ As reported in U. S. General Land Office Information Bulletin, 1939 Series, No. 5, *Transportation*. . . .

² Table 1, *Report of Commissioner of General Land Office . . . June 30, 1943*.

³ *Ibid.*, Tables 76 and 77.

⁴ No Federal lands in Indiana were granted to railroads.

⁵ 443,312 acres of the Winona & St. Peter R. R. extending into Dakota Territory (now part of South Dakota) are included with Minnesota by the General Land Office. No other railroad company received a land grant in South Dakota.

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