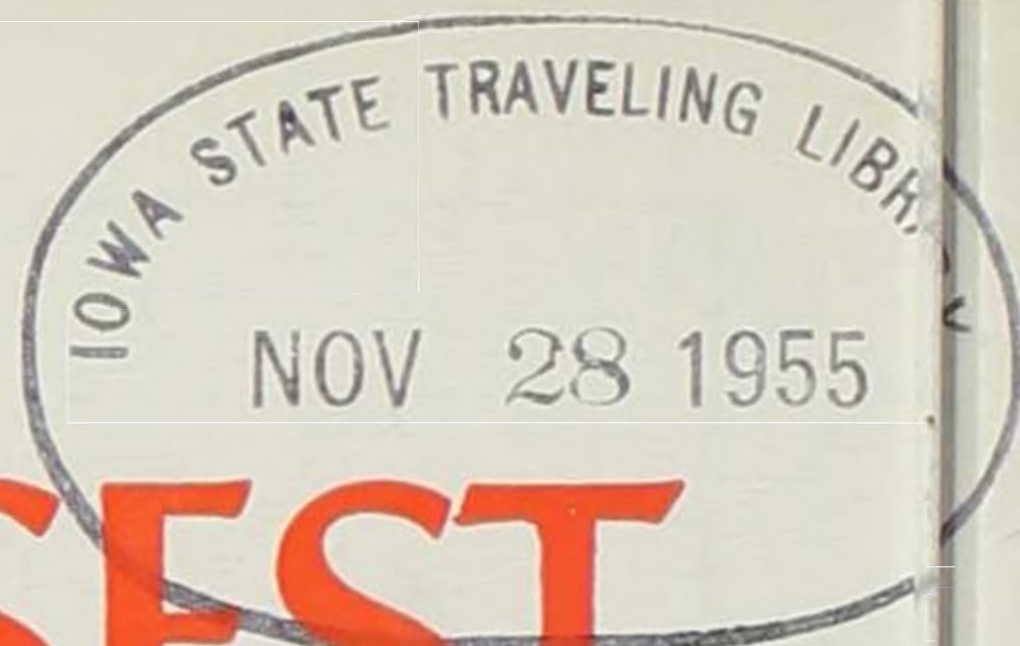


CIRCULATION



The PALIMPSEST



Observing the Tenth Anniversary of the *Pioneer Zephyr*

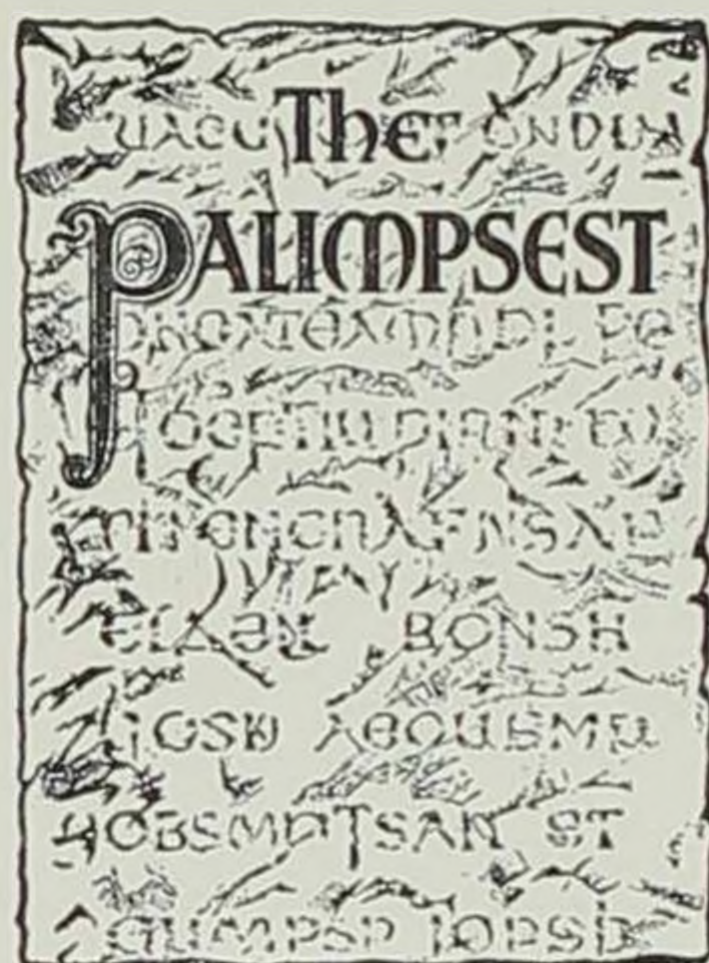
RALPH BUDD: RAILROAD ENTREPRENEUR

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The Meaning of Palimpsest

In early times a palimpsest was a parchment or other material from which one or more writings had been erased to give room for later records. But the erasures were not always complete; and so it became the fascinating task of scholars not only to translate the later records but also to reconstruct the original writings by deciphering the dim fragments of letters partly erased and partly covered by subsequent texts.

The history of Iowa may be likened to a palimpsest which holds the record of successive generations. To decipher these records of the past, reconstruct them, and tell the stories which they contain is the task of those who write history.

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Cover

Front — Left to right: C. R. Osborne, vice-president, Electro-Motive Corporation; Ralph Budd, and Charles F. Kettering, General Motors. Courtesy Burlington Lines.

Back — Outside: From *The Third Annual Catalogue of Highland Park Normal College, 1892-1893*.

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THE PALIMPSEST

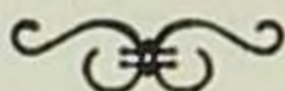
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Glimpses

For Ralph Budd, president of the Burlington, April 15, 1941, was a long, tiring day — but not without its compensations. It had started in the Omaha station well before breakfast when reporters had piled aboard his business car to hear about the new *Silver Streak Zephyr* that was to be christened that afternoon, and to pick up what news they could about railroads in general and the Burlington in particular. After the last of them, along with photographers, had left, there were the inevitable calls on shippers, followed by a luncheon at one of the civic clubs.

Ralph Budd was the featured speaker. Instead of uttering time-worn generalities, he chose to discuss why a railroad that was, and is, one of the principal coal carriers of the region should switch to Diesel engines and, of course, to Diesel fuel oil. In the audience was many a dealer with coal to sell. But Ralph Budd spoke his piece with quiet logic. When he got through his coal dealer friends were generous enough to admit what they

had not fully appreciated before. If the switch caused an initial decrease in coal consumption, the use of Diesels would so improve rail service that the entire economy, including coal, would eventually gain immensely.

But the noonday luncheon was simply a prelude. Under a bright sun in the Omaha station Ralph Budd christened and sent on its way the gleaming new *Silver Streak*, lineal descendant of the little *Pioneer Zephyr* that had made railroad history when on the very same run from Lincoln and Omaha to Kansas City it had inaugurated Diesel service on a regular basis for the entire nation on November 11, 1934.

When the ceremonies were over, it was nearly time for No. 6 to leave for Chicago. There would be fewer stops, and a much faster ride on No. 30 that left two hours later, but Budd was never a man to tie his business car to a hot-shot express. Hence he rolled out of town on the slower train. On board were Edward G. Budd — builder of the *Zephyrs*, but no relation to the Burlington's president — two or three officers with their assistants and, of course, Barney Henry, his faithful and efficient secretary whose diplomacy and good humor were legendary.

It *had* been a hard day, yet for Ralph Budd the most important job was just beginning. What lessons had the day taught? What suggestions had shippers made that were worth pondering?

Was the Burlington making the most of each opportunity or could there be a change here, an adjustment there? What lay behind those questions from the reporters, and how satisfactorily were they answered? What did the coal people think about the Burlington's position on Diesels? Was the new train so designed as to meet most precisely the needs and comforts of the traveling public? If it proved as successful as its predecessor, what would the next step toward expanded service be?

So the questions came from Ralph Budd, put, as was his fashion, to the high and the lowly among the company. Out came ideas to be hammered at until their mettle could be tested. There was nothing unusual about the procedure. It was what those present expected because of their host's insatiable curiosity and his quiet determination to learn. In the process, Budd instructed everyone else.

Only when the long evening meal was over and the "committee" had moved back to the business car's lounge did the conversation take a lighter vein. But, on this particular trip, not for long. Unannounced through the narrow door from the dining car came a lanky man — in his early sixties, perhaps, — apparently a farmer bound for the city. Someone started to say that this was a business car, but Ralph Budd's eye caught him in time. With a friendly nod to all, the farmer seated

himself comfortably and made himself at home. Gradually Budd engaged him in conversation. The colloquy gravitated to crops, then to problems of shipping. Before long the farmer was animatedly expounding his views of Burlington service, some of them cheering, some not so welcome to hear, but all of them obviously sincere.

As usual, Budd was on the trail of information. It must have been a full hour later when the farmer, who had thoroughly enjoyed himself, said so, stretched, and took his leave. How pleasant, he must have thought, to find another Iowan who seemed so interested in the very things that concerned him most. Even if the lounge cars on the Burlington were rather small, they lacked nothing in congeniality.

Among those who were left after the farmer went to bed, little more was said; the host was not the only one who had had an opportunity to see his railroad as others saw it. The only difference was, he had made that opportunity.

Yet in the atmosphere he created that evening, nothing seemed out of the ordinary at all. And in that important respect the episode was typical; what Ralph Budd did appeared wholly natural, certainly to him. Perhaps that is why he seems perpetually puzzled why others should be moved to honor him for doing what, in his estimation, is simply the job at hand. Asked once whether he had any particular philosophy, he first replied he

didn't think so. "Of course," he added, "I've always thought that you get farther if you do whatever you can as well as you can and maybe something else will come along later." To him, it is just that simple.

But is it? His instinctively scrupulous adherence to the spirit of a contract as well as to its letter is a case in point. During the war he was once standing on a wintry day outside the Burlington offices trying to find a taxi to reach an important engagement. Finally one hove in sight, but across the street and headed in the wrong direction. Somebody waved, the driver nodded, and went on down the street to turn around. A moment later an empty cab headed toward town drew up in front of the group and one of the Colonel's party jumped to the door. "Not that one," said Budd, "we made a deal with that other fellow." And there, in the wintry blast, the group stood until the first man had managed to turn around and come back.

But insatiable curiosity, innate humility, and respect for the spoken word hardly begin to tell the story. Ralph Budd is a Republican with a capital R, but he is just as ardent a democrat with a small d. Many an overburdened traveler on a Burlington suburban train had his baggage taken off the car by a quiet spoken, medium-sized man usually wearing a gray topcoat and soft fedora, with a twinkle in his eye. Nor was there an ele-

vator operator or cleaning woman in No. 547 Jackson Boulevard who didn't regard "the boss" in much the same light as an over-the-fence neighbor. Not that they didn't respect him; they did. But somehow he managed to make everyone feel that he, like them, was first of all an ordinary human; he seemed to be as much concerned about Jackie Robinson's batting average and the sitter problem as he was in track alignment. His story, indeed, speaks for itself.

RICHARD C. OVERTON

Iowa Years

Ralph Budd was born on August 20, 1879, on a farm about four miles from the Cedar River, near the town of Washburn and some seven miles from Waterloo, Iowa. His father, Charles Wesley Budd, was descended from English, Scotch, and Welsh colonists who had settled in Burlington, New Jersey, in 1668. Charles' forebears had moved first to Ohio, then on to Iowa in 1854. Ralph Budd's mother, Mary Ann (Warner), was born in Maryland not long after her parents had arrived from Germany. They came to Iowa during the Civil War.

From the outset there must have been plenty of activity around the household, for young Ralph had an older brother and sister, two younger sisters, and a younger brother — six in all. And their mother was determined that each should make the most of the vast opportunity she saw inherent in frontier Iowa. Of all her lively brood, she may have felt that Ralph was particularly fitted to translate her hopes into reality. At any rate, as he has often testified, that quiet determination of hers has been the most prolonged and consistent influence on him ever since.

Farm life in the corn-and-hog country during

the '80's and '90's was, by modern standards, a simple, neighborly affair. Down the road lived Ralph's Uncle Job, from whose farm the school grounds were taken, the Danes, the Lichtys, the Shaulises and the Stoys. All of them had children who were playmates of Ralph's. Together they scuffed out "roads" through the thick leaves that carpeted the maple grove north of the house in the autumn, or visited the imaginary Mr. Hickorynut and Mr. Butternut who lived in the sandy "caves" along the road that led to the Danes' house. Sometimes Ralph would hitch up the two-wheel cart and drive off to the Cedar River to fish, particularly when his maternal grandfather — an ardent angler — came to visit. They seldom caught anything larger than a sunfish or bullhead, though occasionally they would hook a pickerel or a pike. Prairie chickens were plentiful then, too, and Ralph used to accompany his older brother John on shooting expeditions. On his own he trapped squirrels and pocket gophers.

But there was work to do on the farm, and Ralph took his turn at all the usual chores. Because he was so patient with the animals, his particular job was to coax the heifers into being milked. Apparently courtesy and self-control were already part of his make-up; he seemed to know instinctively that only gentleness and consideration would bring cooperation from domestic animals, and that no amount of short temper

would hasten the ripening of the farmer's corn.

The whole Budd family was active in the Presbyterian Church and Sunday School at Washburn. As a boy Ralph attended the local country school about three-quarters of a mile from his house where Mathilda Gibson, Sarah McMurray and Rolla Patterson, among others, took him through the three R's and beyond. These teachers, Budd recalls, were for the most part adequate; "some of them were excellent." He particularly admired Miss Gibson who taught him in the early grades. "We were given to understand," he says, that "it was a privilege to go to school and very important that we worked at our lessons. . . . One book I have kept and still enjoy reading is *Appleton's Fifth Reader*. The selections from standard works — classics in prose and poetry — were such as to instill in a child the desire and taste for more extensive reading of the books quoted. I think any who missed reading those Appleton school readers missed a real opportunity and privilege."

During recess the children flocked to the school yard to play games. In those days, country boys and girls rarely had a chance to get together except at school, and they made the most of every moment. The boys played a sort of baseball, but not very well; they had virtually no equipment.

In 1893 the Budd family moved to Des Moines. Ralph, aged 13, immediately took advantage of

one opportunity the city offered by getting himself an early morning paper route from the Des Moines *Leader*. He saved his money and before long surprised the family by coming home with a girl's bicycle. In explanation he said that he as well as his sister Helen could ride a girl's wheel, and thus they could both enjoy it while he earned enough more for one of his own, which he promptly did. That fall, just turned 14, Ralph entered North High. There his country school training together with his native ability stood him in good stead; in addition to his freshman work he took plane geometry with the juniors and found it easy enough.

During his high school days he once took a job during a Christmas vacation at the news stand in the Equitable Building at Sixth and Locust — now the Bankers' Life of Des Moines. One day a customer paid for a five-cent purchase with a five-dollar gold piece and hurried away. Ralph called after him, but the man paid no attention. Thereupon the lad took off in pursuit, finally caught up, and explained the situation. Typically enough, the man was at first irritated, insisting he had paid correctly; when he checked his pocket book, however, he was glad enough to have his money back.

In addition to his school work and extra-curricular activities, Budd quietly went ahead with what was steadily crystallizing into a major interest. His older brother John, who had been graduated

from Highland Park College in Des Moines as a civil engineer, was doing among other things a good deal of work near the city surveying coal mines and showing, on maps, where the underground workings were located. While still at high school Ralph helped him with this and, in fact, any sort of engineering work he was permitted to do. Meanwhile he attended lectures at Highland Park. "It probably was not very regular but at the time it seemed logical and a simple thing to take advantage of living right at the college and among the faculty members." So it was that his combined high school and college took him only six years, for he was graduated from Highland Park in 1899.

In college, Ralph followed in his brother's footsteps and specialized in civil engineering under Professor Frank W. Hanna. Dr. Clifton Scott taught him physics, and Sherman R. Macy chemistry. But even science majors at the turn of the century had to undergo rigorous training in the classics and humanities. James R. Hanna — Frank's brother and later mayor of Des Moines — taught Budd Latin; L. T. Eaton was in charge of his English, while President O. H. Longwell gave logic and grammar. Fortunately for the young student, all these men lived very near the Budds' home on Euclid Avenue so that Ralph came to know them well outside the classroom; he always maintained a warm friendship with them.

But Budd was far from the "all work; no play" type. His wide circle of undergraduate friends included particularly Robert E. McCollum, John W. Colebird, Stella Brockway, Blanche Griselle, W. O. Loudenslager, John L. Hamery, Maude Bechtell, Harvey Ross and — most important of all — Georgia Marshall, whom he was to marry before long.

Greek letter societies were not permitted at Highland Park so, nothing daunted, Budd and some of his friends organized the Kitchi-Gammi Literary Society, with a strictly Indian name. Though one of the youngest members, Budd was president of the organization throughout his college years, and so enthusiastic about it that he even taught his five-year-old sister the Kitchi-Gammi yell with instructions to give it wherever she went. This she faithfully did to the acute embarrassment of her long-suffering mother.

Despite these varied diversions, Budd's interest in engineering grew steadily. Meanwhile his brother John had turned to railroad location, running the line of the present Rock Island north of Des Moines. From there he went into western Nebraska to locate the Burlington's track between Bridgeport and Brush, and later moved on to Wyoming where he worked on what was to have been a Burlington extension to the West Coast. Ralph was fascinated by his brother's exploits and while in college bombarded the Burlington engineer in

charge for a job during vacations which, he hoped, might become permanent after graduation. But all he got back was a series of polite letters saying that his application had been received and placed on file. A generation was to pass before the C.B. &Q. would invite Ralph Budd to join the organization, and then in quite a different post than as a member of a locating crew.

RICHARD C. OVERTON

On the Way Up

The example of John's experience, however, determined Ralph Budd's career. After graduation he found a regular berth through his brother with the Chicago Great Western Railway.

"The division engineer at Des Moines," Budd recalls, "was H. B. Merriam. He was a fine engineer — I believe a graduate of M.I.T. I met him through my brother and got a job as a draftsman in his office about the end of the year 1899. I worked in that office as draftsman until about April, 1900, and then when they were putting men out on the road for summer field work I talked to Merriam and told him that I thought I was not a very good draftsman, but that I might be a good field man because I had done more field work than I had drafting. The upshot of it was that he let me go out on one of the parties that he was organizing to ballast track and relay rail between Des Moines and Oelwein. My job was staking out the work which consisted of taking out wooden trestles and replacing them with fills and culverts, staking out gravel pits so as to measure the amount of gravel that was taken out for ballast, running the curves so that the track would be put on the proper alignment before being surfaced, and then setting the grade stakes. It was an all-around job as assistant engineer."

Like all railroad work, this meant traveling. Budd and the others who lived in Des Moines would go out Sunday night, stay at the small ho-

tels along the way during the week, and return home Saturday. The pay, even for those days, was hardly magnificent: Ralph Budd started at \$45 a month, plus expenses limited to \$30, just about enough to cover the cost while out on the line.

In no time the young engineer proved his worth. By the end of the season he was getting \$75 a month plus expenses. One reason was his patient determination to learn. It was at just about that time that A. N. Talbot brought out in pamphlet form a book on the railroad spiral with a method of fitting it to existing curves that was of immense practical value. Realizing this, Budd got hold of the book when it first came out and carried it around with him until it wore out. From this experience a friendship developed with Talbot which grew stronger with the years. Budd insists that Talbot was one of the railroads' great benefactors through his lifelong work on railroad track at the University of Illinois.

Budd's skill in applying Talbot's technique contributed to his steady advancement during the three years he spent with the Chicago Great Western. His work commanded attention and in 1902 he was offered and accepted a position with the Rock Island which was then building its line between St. Louis and Kansas City. In 1903 he became the first division engineer of that line.

His performance on the Rock Island established

his reputation in the eyes of those who were eventually to give him his greatest opportunities. Yet Budd cannot recall any particularly notable accomplishments on his part. Characteristically enough, he simply says it was his good fortune to meet, on the Rock Island, a series of exceptionally fine men. Among them John F. Stevens, then vice-president, and one of the greatest engineers of the day, will be remembered for his earlier discovery of Marias Pass for the Great Northern. With the keen perception of an engineer, Stevens liked what he saw of Budd's work. Consequently, when Stevens became chief engineer of the Panama Canal and needed a man to take charge of the engineering for the railroad that crossed the Isthmus, he sent for the young man who had served him so well on the Rock Island. The decision of Congress in 1906 to build a canal with locks, rather than at sea level, meant that most of the excavation would be done with steam shovels and that the material taken out would be hauled away by train. At that sort of work Budd was an expert.

The original railroad across the Isthmus was completed in 1855 to accommodate the hordes seeking a short cut to California. But the track that had once served the pioneers so well was not the type to carry the huge burden thrust upon it with the building of the Canal. Hence Budd's first job was to strengthen the old road, then

double track it and build spurs as needed to carry away the material excavated from the big Culebra and other cuts. It was exciting work.

In April, 1907, Stevens returned to the United States and was succeeded by General (then Major) George W. Goethals. Budd stayed on, and at the end of that year Goethals commissioned him to locate and build an entirely new railroad around the side of Gatun Lake to replace the old line that would be submerged as the lake filled.

Driving a new line through the tangled jungles was tedious business on account of the rapid growth and the heat, yet it had to be done quickly so as not to delay work on the Gatun locks and dam. Suffice it to say that the line was built well in advance of the deadline at a minimum elevation of 95 feet above the sea or 10 feet above the future Gatun Lake.

Budd liked Panama. Perhaps his best insurance against loneliness was the fact that his growing family was there with him. In December, 1900, just turned 21, he had married Georgia Marshall. Their older son, Robert, was born in the fall of 1903, next came a daughter, Margaret, and in the fall of 1907 a younger son, John. The Budds had a house in Panama, and although there was an annual vacation in the States, the family was on the Isthmus most of the time.

In August, 1909, with the new railroad well under way, Ralph Budd took his wife and chil-

dren to Maine for a summer vacation. He was planning to return to Panama, but while away he received an invitation from Stevens, then in the Pacific Northwest, to undertake reconnaissance work on the Oregon Trunk, a line James J. Hill was projecting southward from the Columbia River to Bend, Oregon, and beyond as an extension of the Great Northern and Northern Pacific railways. Recognizing the potential of the region, and anxious to work again for his old chief, Budd sent his resignation to Panama and headed west.

At the time, the Oregon Trunk was under construction from Wishram, a station on the Spokane, Portland & Seattle on the north bank of the Columbia, southward for 150 miles along the Deschutes River to Bend. The immediate question was whether to extend the California-bound line directly south from Bend, or to start it at some point on a projected western extension of the Burlington that would traverse an almost straight line from Orin Junction, Wyoming, across Idaho, on to Burns, Oregon, and finally into Portland through Bend. The Burlington, incidentally, had been purchased in 1901 by the Great Northern and Northern Pacific, and with them constituted the so-called "Hill Lines."

During the seven months following August, 1909, Budd covered the vast reaches of central and southeastern Oregon in and on virtually every sort of conveyance. His first assignment was to

strike directly southward from Bend to the Feather River. This he did, carrying his survey through Chemult, Klamath Falls, on to Bieber, California, and thence to Keddie on the present main line of the Western Pacific, then under construction. It is significant that the existing line between Bend and Keddie was eventually built exactly on the line Budd recommended.

But the 350 miles between Bend and Keddie was but a part of Budd's assignment. He next turned to the western end of the projected Burlington extension, and made an even longer reconnaissance eastward from Bend through Burns and along the Malheur Canyon to the eastern boundary of the state. Finally Budd reconnoitered another 350-mile line southward from Burns to a point on the Feather River via Susanville with the thought that if the east-west line were built this might be a desirable entry into California. Early in 1910 Budd became chief engineer of the Oregon Trunk, and a little later in the same year, chief engineer of the Spokane, Portland & Seattle as well.

Not long after, Budd first met James J. Hill. The experience made a vivid impression on the younger man. Hill, at the time, was already well past seventy, yet both his mind and body were as alert and resilient as a coiled spring. During the two days he spent inspecting the road, his one good gimlet-like eye seemed to look through as

well as at each and every detail. His questions were endless. But there was nothing high and mighty about Hill; he could listen as well as ask, and he paid as close attention to a track layer who knew his job as he did to the top boss. He had the gift of making everyone feel part of a team.

One point Hill made abundantly clear during his trip; the importance of getting as good a line as humanly possible. "This is not a railroad that is being built up into the plateau of central Oregon to stop there," he insisted. "It's the Oregon Trunk." As usual Hill's imagination refused to be satisfied with the completion of minor short-run projects. His business was building empires. It is safe to say that the ideas and ways of doing things revealed by Hill on that trip were by no means lost on Ralph Budd.

RICHARD C. OVERTON

With the Great Northern

Like John F. Stevens, James J. Hill had an extraordinary ability for picking promising men. Hence it was not surprising that late in 1912 he should invite Budd, then 33, to come to St. Paul as assistant to the president of the Great Northern. At first Budd had charge of capital expenditures and contracts, but before long he became chief engineer of the system as well. By the end of a year, it was apparent that there was more than enough for one man — even a Ralph Budd — to do as assistant to the president. Hence the two assignments were again separated so that Budd could concentrate his efforts in the executive office. Actually, Hill had retired as president in 1907. But the Empire Builder continued to serve on the board until his death in 1916, and as Budd put it, “was really the power there as long as he lived.”

In 1918 Budd became executive vice-president. During the period of federal control, he actually occupied two positions: that of assistant regional director of the Central Western District, whose headquarters were in Chicago, and executive vice president of the Great Northern Corporation. It was from this latter post that he was elected presi-

dent of the Great Northern Railway in 1919, at the age of forty.

Ralph Budd's election to this major post, though a complete surprise to him, had been ordained long since by none other than Hill himself. It seems that shortly before his death Hill had called on George F. Baker, Sr., president of the First National Bank of New York and for years Hill's most trusted financial adviser. Hill told Baker that he had spent a good deal of time and energy in training Ralph Budd for the top position on the road, and that when the time came to look for a new president, Budd was their man. Thus by specific designation Budd inherited the office and responsibilities of the Empire Builder.

The heritage was indeed magnificent, nor did it consist simply in a superb physical property with immense earning power. Hill had seen to it, in an apparently casual way, that his prospective business heir should have a thorough grounding in his own precepts. While Budd was chief engineer, Hill frequently asked him to go along on drives around the Twin Cities, usually on a Saturday afternoon. Presumably these were to inspect the varied properties of the railroad in and around the metropolitan area and to talk over the countless plans for the future that were always coursing through Hill's mind. But the old titan had lessons to teach, too. Over and over again his specific discussions pointed up the lesson that the prime ob-

jective of a railroad was to produce the maximum transportation service with the minimum amount of effort. That meant direct lines, low grades, easy curves, balanced traffic, modern equipment, the most efficient motive power available, and meticulous maintenance. The reverse side of the medal, of course, was Hill's vigorous intolerance of waste.

It was natural that Budd, as president of the Great Northern, should continue policies originated by Hill. But in addition Budd planned and carried through a succession of additional major projects that bore the stamp of his imagination and became distinctive of his administration.

In many ways the most spectacular achievement was construction of the new Cascade Tunnel in central Washington. The original line had climbed over the range with eight switchbacks until, in 1900, the first Cascade Tunnel, slightly over two and a half miles in length, was completed. But Budd felt, in the mid-twenties, that even this improved facility was a handicap to the prompt movement of highly competitive traffic. Consequently in 1926, he secured approval of the Great Northern board to build the new tunnel and make extensive line changes in the Cascade Mountains. The entire job was completed in the amazingly short time of three years. The new Cascade Tunnel, 7.79 miles from portal to portal, became and has since remained the longest in the Western

Hemisphere. Actually, the tunnel itself was only part of a major line relocation which saved almost nine miles in all, eliminated over a thousand feet of rise and fall, and took out curvature equivalent to ten complete circles.

Spectacular as the tunnel was and is, one of its by-products was eventually destined to make even more of an impact on American railroading. During construction, men working far underground were dependent entirely on air pumped in to them; the pumps used electrical power brought in over lines that crossed the mountains. This was a continual risk because the mountains were subject to very bad slides. Consequently Budd constantly worried about what would happen to the men inside the mountain if a slide should cut off the power. To meet that contingency several stationary Diesel engines were installed which could produce enough current to operate the pumps. Those machines, of course, were extremely heavy, but in principle were the same as those eventually used to drive locomotives.

Once the Diesels were installed, Budd discovered that they were not only extremely dependable, but could produce power as cheaply as it could be purchased. Consequently he decided to operate them continuously to take the peak load and thus reduce costs. The metal of which these Diesels were made was, of course, so heavy in relation to horsepower that such an engine was im-

practical for mounting on a locomotive frame. Budd was deeply impressed with Diesel performance, however, and carefully noted the results in his mind for future use.

No sooner had the Cascade Tunnel been completed, in January, 1929, than the Great Northern applied for permission to build approximately 88 miles southward from Klamath Falls to Bieber, California. At the same time the Western Pacific sought authority to build north from Keddie, on their main line, to a junction with the Great Northern at Bieber. This, of course, was the southern portion of the Bend-Keddie line that Ralph Budd had surveyed twenty years before. The project was duly authorized and the through route completed in 1931. To the Great Northern and the Western Pacific the new line opened up an extensive pine lumber producing territory and (together with the Great Northern line from Bend to Klamath Falls which was opened in 1927, and the Santa Fe south of Stockton, California) it brought service to a huge area that had previously lacked any railway facilities at all. In addition, the three roads provided a new railroad route between California and the Northwest.

A third major project of Budd's administration was the proposed merger of the Great Northern and Northern Pacific into the Great Northern Pacific Railway. When the I.C.C. finally gave its answer after prolonged hearings, its approval

was made dependent upon the willingness of the northern lines to relinquish control of the C. B. & Q. That condition was too high a price to pay, for the Burlington not only supplied an entry into Chicago, but served as well as a perfect complement, traffic-wise, for the two northern lines. Thus, although it was estimated the proposed combined company would have meant a saving of over ten million dollars annually that would have been reflected in lower railway rates and faster service, the proposal was abandoned.

No one needed permission, however, to improve service. For years the Great Northern had been considered primarily a freight line. But the fact was that the Great Northern served an immense territory, and in those days when there were no good highways and no airplanes, it was necessary for the road to supply a great deal of local passenger service, which it did. Consequently its passenger earnings were substantial but it did not feature fast, through service. The *Oriental Limited*, to be sure, ran between Chicago and Seattle on the standard 72-hour schedule, but it was second in popularity to the long-established *North Coast Limited* on the rival Northern Pacific. Furthermore, as highways were improved, and automobiles increasingly took away local business, it seemed to Budd necessary to develop faster, up-to-date through passenger service, not only to hold business and bring up revenues, but to create

good will, particularly on the part of shippers, and thus back up the solicitation of freight traffic. Budd reasoned the Great Northern had an excellent track, an easy crossing of the mountains on a short line, and an extraordinarily scenic route, particularly through Glacier Park, while the territory west of Fargo and Minot was sparsely settled so that few stops would be necessary, thus contributing to comfort on a fast through schedule.

Completion of the new Cascade Tunnel seemed a logical time to establish a first-rate through train. So it was that in June, 1929, the *Empire Builder* was inaugurated on a schedule that saved an entire business day. As Budd foresaw, the train immediately became popular. At the same time a concerted drive for additional passenger business was launched with a Coast-to-Coast broadcast series entitled "The Empire Builder Program." Each episode featured a pioneer who had made his mark in the road's territory. Great effort and care went into the writing of the scripts, because Budd insisted that each should be absolutely authentic historically.

Despite his keen appreciation of the direct and collateral effects of top-flight passenger service, Budd knew as well as his famous predecessor that freight traffic was the railroad's staff of life. On the Great Northern, more than half the tonnage moved consisted of products of mines, most of it

iron ore from the Mesabi region destined to the company's Allouez docks at the head of Lake Superior. If, reasoned Budd, this particular traffic was of such crucial importance to the company, any gain in efficiency in handling it would produce proportionately important results. Consequently he proposed that the standard ore-carrying car, which up to that time had had a capacity of 50 tons or less, be replaced by cars of 70 tons capacity or more. The suggestion was carried out, and was copied by other ore-carrying roads.

The scope of Ralph Budd's interests has always been extraordinary. In 1930, for example, he was invited to inspect the Soviet Railway System. The resulting report was a virtual almanac of the Russian economy as it then existed; the conclusion: that in the long run Russia should adopt American rather than European methods. Whatever the Soviets learned from this analysis may never be known, but for Budd the experience was intensely illuminating and provided thereafter a cross-bearing of tremendous value.

RICHARD C. OVERTON

The Burlington Presidency

As executive vice-president and then president of the Great Northern, Budd had been a director of the Chicago, Burlington & Quincy since 1916. Consequently he was thoroughly familiar with the property and problems of the vast system that linked Chicago with the Twin Cities, Denver, and Kansas City, and, through its subsidiaries (the Colorado & Southern and Fort Worth & Denver City), with Amarillo, Fort Worth, Dallas, Houston, and Galveston. Actually the C.B.&Q. alone was and is longer than either of the companies that own it; in 1932 it operated 9,262 miles of road as compared with 8,409 for the Great Northern and 6,736 for the Northern Pacific. In addition, the C.B.&Q. controlled, as it does today, the Colorado & Southern and the Fort Worth & Denver City which then had a combined mileage of 2,052, making a total of 11,314 for the Burlington Lines. As of 1932, freight tonnage moved by the Burlington System slightly exceeded the combined total of that moved by the Great Northern and Northern Pacific; Burlington Lines' gross revenues in that year were over half again as much as for the Great Northern, and almost double that of the Northern Pacific. Thus, when Ralph Budd be-

came president of the Burlington Lines on January 1, 1932, he was stepping into an even more responsible and more powerful position than he held as president of the Great Northern.

The condition of the Burlington in 1932, however, was a challenge indeed. From its very earliest days, the railroad had been extraordinarily prosperous. Throughout its first half century it was carefully and conservatively managed by John Murray Forbes of Boston and his associates. As a member of the so-called Hill Lines since 1901, it had not only maintained its earlier traditions, but benefited by the guidance of one of the most efficient managerial groups in the country. Furthermore, the system occupied a territory that supplied extremely well-balanced traffic; it served the heart of the corn and wheat area, linked the major manufacturing and distributing centers of the Midwest, and was well placed to receive a steady flow of coal and lumber traffic. On the other hand, as a "Granger road" it was peculiarly sensitive to agricultural depression. When Budd arrived, the Burlington Lines' freight revenues of over one hundred twenty-seven million dollars in 1930 were on their way down to seventy-three million in 1932. Budd rolled up his sleeves and went to work.

The very first thing he did was to reduce the number of operating divisions from seventeen to eleven, thus simplifying administration. Mean-

while he turned his eyes to the western end of the system where, it seemed to him, the road was missing a golden opportunity.

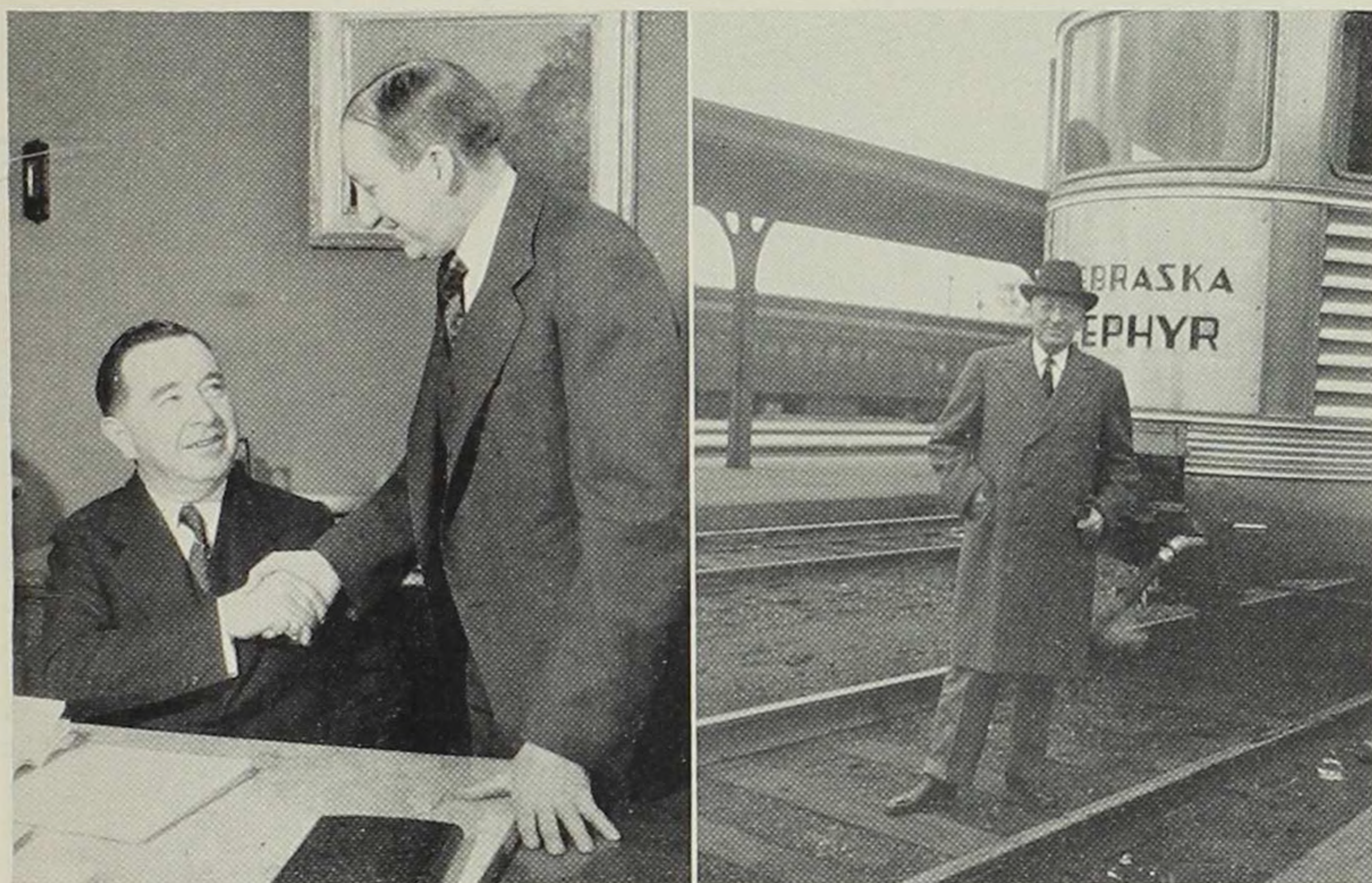
Ever since 1882 the Burlington had been the short route between Chicago and Denver. This splendid main line of over a thousand miles was obviously one of the greatest potential earners on the system. Yet the Burlington's share of through traffic moving between Chicago and the West Coast via Denver was pitifully small. The reason was obvious: the essential link between Denver and Salt Lake City (where connection could be made with both the Western Pacific and the Southern Pacific) was the Denver & Rio Grande Western which, from Denver, first went south to Colorado Springs where it interchanged traffic with the Rock Island, then further south to Pueblo where it interchanged traffic with the Missouri Pacific. Only there did it turn westward over the mountains toward Salt Lake City. Since the Rio Grande received the same rate on through traffic whether picked up at Denver, Colorado Springs, or Pueblo, that company naturally favored traffic which it had to haul for the least distance, namely that of the Missouri Pacific, with the Rock Island next in order. The Burlington ran a very poor third. Budd's problem was to figure out a way by which the Burlington could attract a really substantial share of this transcontinental movement.

At first glance the situation seemed hopeless,

but there was a simple solution. In 1928 the Denver & Salt Lake Railroad, which ran directly west from Denver, had completed the six mile Moffatt Tunnel through the Rockies. On the other side of the mountains the line continued due west as far as Orestod before it veered northward toward Steamboat Springs and Craig. Yet Orestod was only some forty miles from the main line of the Rio Grande at Dotsero between Pueblo and Salt Lake City. If that gap could be filled it would shorten the combined Denver & Salt Lake-Denver & Rio Grande line between Denver and Salt Lake by one hundred seventy-five miles, as well as provide a route with a maximum grade of 2% as against the 3% eastbound grade by way of Pueblo and over Tennessee Pass. So far as the Rio Grande was concerned, construction of a cutoff would mean that Denver would be closer to Salt Lake than either Colorado Springs or Pueblo, and that therefore the Rio Grande would have to haul traffic to and from the Burlington over a less distance than traffic to or from either the Rock Island or the Missouri Pacific.

But how could the Rio Grande be induced to construct this cutoff? At that time it was controlled equally by the Western Pacific and the Missouri Pacific. There seemed little likelihood that the latter interests would permit the Rio Grande to short-circuit their own transcontinental route.

RALPH BUDD: RAILROAD MAN



Courtesy Great Northern, and Burlington

At the left Ralph Budd (standing) shakes hands on January 1, 1932, with William P. Kenney, his successor as president of the Great Northern Railway. Budd became president of the Burlington Lines, where he is pictured in 1948 standing in front of the *Zephyr* streamliners that he made famous.



Courtesy Burlington Lines

Around 1940 the builders of the Burlington's famous *Pioneer Zephyr* discussed the far-reaching results of that experiment. Left to right: H. L. Hamilton, president of the Electro-Motive Corporation, Ralph Budd, president of the Burlington Lines, and Edward G. Budd, president of the E. G. Budd Company.

RALPH BUDD'S CLASS PICTURE IN 1885



The students of District 8, Orange Township, Black Hawk County, in the summer of 1885. Seated in front, Olive Budd, left, Effie Shaulis, right. First row, left to right: Helen Budd, Alice Shaulis, Rhoda Dane, Mathilda Gibson (the teacher), Ralph Budd, Elsie Dane, and Mildred Dane. Second row, left to right: Roger Stoy, Esther Budd, Lottie Shaulis, Fred Dane, Effie

Courtesy Miss Helen U. Budd

left, Effie Shaulis, right. First row, left to right: Helen Budd, Alice Shaulis, Rhoda Dane, Mathilda Gibson (the teacher), Ralph Budd, Elsie Dane, and Mildred Dane. Second row, left to right: Roger Stoy, Esther Budd, Lottie Shaulis, Fred Dane, Effie Roberts, Albert Dane, and Charles Dane.

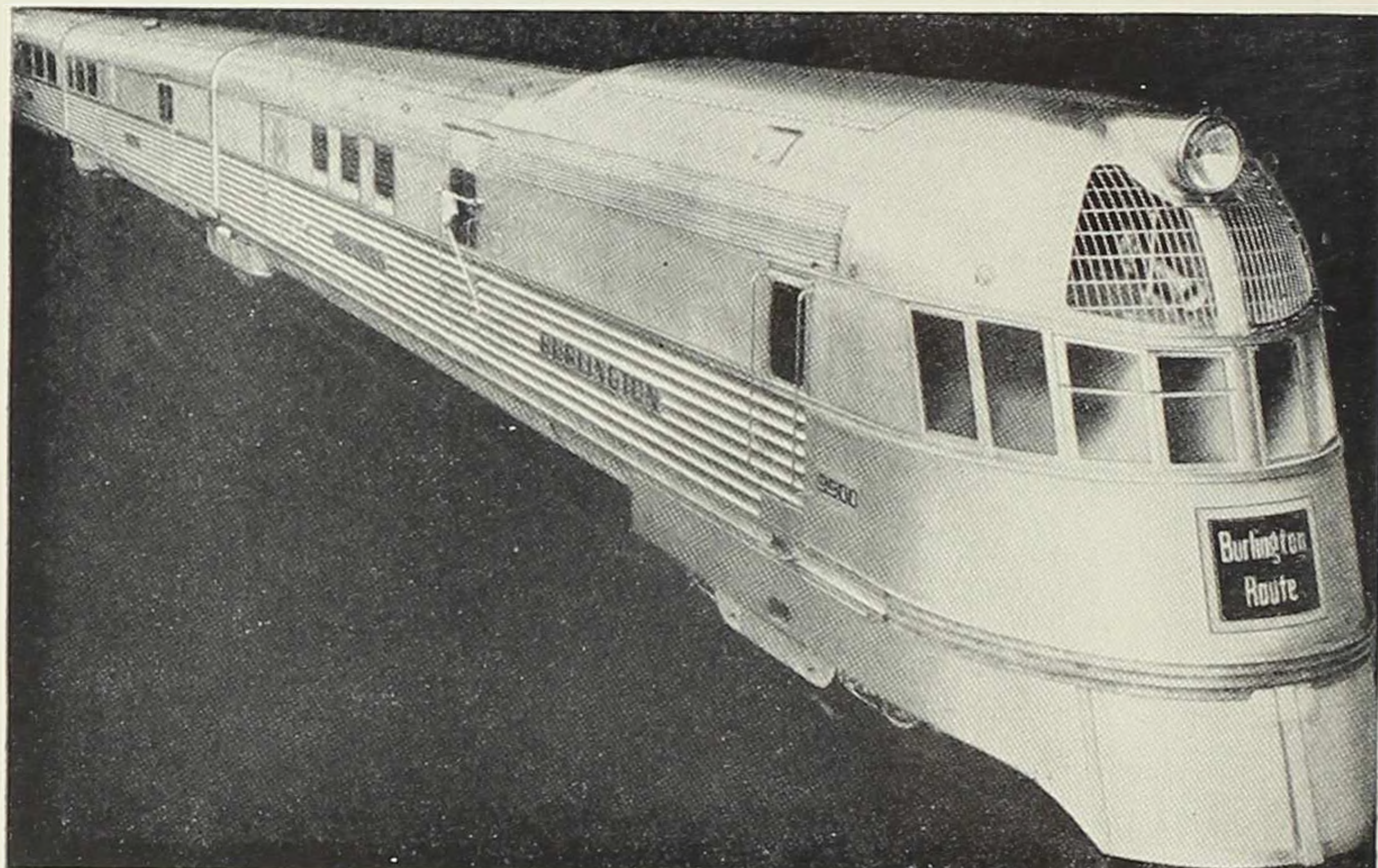
THE BUDD FAMILY IN 1902



This family portrait was taken in Des Moines on July 3, 1902. Seated, from left to right, are Esther, Mrs. Mary Ann Budd, Beulah, Mr. Charles Wesley Budd, and Helen. Standing, from left to right, are James, John, and Ralph.

Courtesy Miss Helen U. Budd

TWO OF RALPH BUDD'S INNOVATIONS



Courtesy Burlington Lines

The original Burlington *Zephyr* which inaugurated a new age in railroad history when it sped from Denver to Chicago on May 26, 1934, in thirteen hours and five minutes.



Courtesy Burlington Lines

Another first for the Burlington during Ralph Budd's administration was the introduction of the dome car in 1945, greatly adding to the pleasure of passengers in scenic regions.

As it happened, however, the man who effectively controlled the Western Pacific was Arthur Curtiss James. He was also a director of the Burlington, and had long been a close friend of Ralph Budd and a vigorous supporter of the Great Northern. Consequently he shared Budd's earnest desire to develop Denver as a gateway for Rio Grande-Burlington traffic. So it was that from the moment Budd became president of the Burlington, he sought James' aid in forcing construction of the cutoff. James was willing enough, but could hardly find fault with the perfectly reasonable improvements the Rio Grande was making on its existing main line. It was Budd who finally provided the answer. "I've been most of my life on a railroad that is either owned equally by two other railroads, or on one that owns equally some railroads," he told James, "and I've learned that one party in such a deal can stop improvement work, but it takes two of them to go ahead and do it."

James immediately grasped the point. Without criticizing what the Rio Grande was doing on its Pueblo Line, he simply insisted that equal consideration be given to the cutoff. At first it was objected that the terrain to be covered was so rugged that construction was virtually impossible. But the maps and profiles showed that the line was, as Budd put it, "just an ordinary Rocky Mountain canyon route," not nearly so rugged as

the Deschutes Canyon and not approaching in difficulties the Feather River Canyon. Work began almost at once, and in 1934 the Dotsero Cutoff was completed and put into service.

Within the next few years the Burlington's transcontinental business through Denver quadrupled. Whereas Denver had previously been ranked behind Chicago, Kansas City, the Twin Cities, St. Louis, and even Billings as an interchange point, it moved by 1942 into the number three position, and at times threatened even Kansas City for second place. There was perhaps no better indication of the new importance of the Denver gateway than the fact that the Rock Island shifted its interchange from Colorado Springs to Denver. Incidentally, the opening of the Denver gateway for transcontinental traffic proved to be an enormous boon in World War II; had the short line not been in existence, the total defense effort would have been seriously handicapped.

Without any doubt Budd's most important achievement while on the Burlington, and indeed over the course of his long career, was the inauguration of the first streamlined train to be powered by a Diesel-electric locomotive. Perhaps no major innovation, unless it were the development of the electric light, has been so much the product of one man's imagination and courage.

No one knew better than Ralph Budd that the

railroads' profits came from freight, hence everything possible was done to increase freight traffic and to handle it at low cost. The passenger business, however, presented a serious problem on account of its steady decline and the great difficulty encountered in reducing service when the traffic failed to support it. Budd's idea was to attract passenger travel by faster and better service and at the same time reduce the cost of service. To that end, a light-weight high-speed streamlined train was proposed.

The best people to build such a train, he reasoned, were those who had already gained some experience in light-weight body construction in the automotive field; the old established railway car builders were still too wedded to the theory of massive weight and traditional design. So it was that early in 1933 the Burlington ordered from the Edward G. Budd Company in Philadelphia a 3-car stainless steel train to be built along aerodynamic lines, to weigh less than 170,000 pounds, and to have a total seating capacity of seventy. Its cost was estimated at approximately \$200,000.

As yet, however, it had not been decided how to power the new train. The Union Pacific, which was also building a streamliner, had settled upon a gas distillate engine, a precedent that the Burlington might have followed. But as one historian of the Diesel has put it, "Budd was ready for something new." He turned to the Electro-Motive

Corporation, and at Cleveland was shown two eight-cylinder Diesels then being constructed for exhibition at the Chicago Fair. With the superb performance of the Cascade Tunnel Diesels fresh in his mind, Budd felt he was on the right track. As soon as the engines were installed, he watched and checked their performance with an eagle eye.

The job those engines were doing, of course, was a far cry from the demands that would be put on them in locomotive service. But Budd decided they could be adapted to provide power for a train. At first Electro-Motive officers were dubious, but they well realized what a revolutionary advance could be made if the experiment worked; they accepted the order, and challenge, that Budd gave them in mid-June, 1933. "Thus it happened," wrote an Electro-Motive spokesman some years later, "that a railroad president forced the issue and speeded the acceptance of Diesel motive power for the nation's railroads."

The *Pioneer Zephyr* was delivered to the Burlington in Philadelphia on April 7, 1934. On its first trial trip it reached a speed of 104 miles an hour, and thereupon set out for a tour of the country where thousands flocked to see it. The event that startled the nation, however, was this little train's non-stop run from Denver to Chicago on May 26, 1934. Probably no single comparable event in modern times has had more advance publicity and at the same time less experience on which

to predicate a successful outcome. Budd's proposal was daring to say the least; his idea was to leave Denver at dawn and, without a single stop, run the *Zephyr* on to the stage of the World's Fair on the shores of Lake Michigan for the closing scene in the Pageant "Wings of a Century." Until then, the fastest scheduled steam run was approximately 26 hours, yet if the little *Zephyr* were to do what Budd promised, it would have to cover 1,015 miles in not more than fourteen hours. Nevertheless, the commitment was made, and it was literally true that on the appointed day the eyes of the nation were upon Denver.

How that run almost failed before it ever got started has become a legend, for to the horror of all concerned it was discovered, some twelve hours before the scheduled starting time, that one of the motor armature bearings was cracked and would have to be replaced. As the hours ticked away, no such bearing could be found. Not until evening was it discovered that the Union Pacific people had a motor in Omaha from which, sportsmanlike rivals that they were, they would be willing to pull the necessary bearing; conceivably it could be brought by chartered plane to Denver in time for installation. That was the state of things when Ralph Budd went on the air to make a pre-arranged broadcast about the morrow's trip. Down at the shop where the essential bearing had not yet arrived, the workers clustered around the

radio wondering what Budd would say. His opening remark told the story: "Tomorrow at dawn we'll be on our way!" He went on to invite people all along the right of way to watch the new train flash by. If ever a man burned his bridges behind him, this was the time. It was past midnight when the new bearing arrived. At 5:05 a.m. the next morning the *Pioneer Zephyr*, more than an hour late, left Denver.

For awhile speed had to be held down to 50 miles an hour to allow the new bearing to work itself in, but when it once did so, the little train gathered momentum. All along the right of way, and at the 1,600-odd grade crossings, were crowds to watch. Hour after hour the *Zephyr* sped on, while Ralph Budd, among other things, calmly shaved with a straight-edged razor simply to find out whether the train was running as smoothly as he thought it would. It was.

Yet, just when all seemed going well, someone inadvertently slammed a door on an electric cable, setting up a short circuit that burned out the starting mechanism. Frantically men searched for a piece of wire and in the nick of time spliced the break; when the job was done the *Zephyr* had slowed to 15 miles an hour.

That was not the only near-stop, but it was the most serious. By a combination of quick thinking, brilliant improvisation, and just plain determination, the little *Zephyr* kept going until, at 7:10

p.m., thirteen hours and five minutes after leaving Denver, it reached the Chicago city limits. Without stopping it went on to the lake front and at exactly 8:09 p.m. rolled on to the stage of the Wings of the Century. Bedlam broke loose. A new age had dawned for the railroads.

Throughout Ralph Budd's administration, the Burlington was in the forefront of Diesel development. By the time he retired in 1949 over 80% of the system's passenger trains and over half of its freight trains were Diesel powered, while the fastest regularly scheduled train in the nation rode Burlington rails between Chicago and the Twin Cities. What the Diesel engine meant in carrying the enormous burden of World War II traffic could hardly be estimated. Today it is merely a matter of a year or two before all regularly scheduled operations on the Burlington, and on virtually every other road, will be handled by Diesel power.

Ralph Budd would be the last man in the world to call this a one-man revolution. Facts, however, speak louder than pleas of modesty, facts that brought to Budd the highest honors bestowed by the nation's national engineering societies for his "vision and courageous leadership in advancing the technological frontiers of high speed railroad transportation."

So many specific achievements of Ralph Budd were spectacular in themselves that attention is

easily diverted from the common denominator policies that underlay particular projects. In respect to railroad lines, for example, Budd was always convinced that maximum use should be made of the most efficient route between any two points rather than dispersing effort and expense over duplicate or less efficient lines. Consequently he was persistently in favor of intelligent consolidation of railroads. By the same token, he was in favor of letting each type of carrier specialize in the sort of transportation for which it was best fitted.

The opening of the Denver gateway and the coordination of through freight service on the part of the Burlington, Rio Grande, and Western Pacific was a case in point. Nor was Budd the man to rest on his oars if a promising start warranted further effort in the same direction. If the Dotsero Cutoff route was a good one for freight, why not take advantage of it for through passenger service? The scenery through the heart of the Rockies and along the Feather River Canyon through the Sierras in California was unsurpassed, and although the length of that route would not permit competition time-wise with the Union Pacific-Southern Pacific to San Francisco, there might be many people who would prefer a more leisurely, more comfortable, and far more scenic journey. Consequently, in June, 1939, Budd persuaded the Rio Grande and Western Pacific to join the Burlington in establishing a through daily train known

as the *Exposition Flyer*. Inaugurated originally simply to run during the summers, it became so popular that it was retained as a year-around train. Just ten years later it was replaced with the spanking new stainless steel *California Zephyr*, one of the most popular transcontinental trains on the continent.

Quite a different undertaking, yet one linked to it so far as basic policy was concerned was the attempt of the Burlington and six other railroads to take over the tottering Minneapolis & St. Louis. The main line of this road proceeded in a wide, round-about arc southward from the Twin Cities and then eastward to Peoria. Under prosperous conditions it carried overflow traffic from more direct routes, and sought to capitalize on the fact that it by-passed the crowded Chicago area. But during the depression it had become hopelessly bankrupt, and showed little prospect of being able to recover and continue as an independent system. Consequently Budd eagerly seized upon a plan devised by John Barriger, then in charge of railroad matters for the Reconstruction Finance Corporation, for parcelling out approximately one thousand miles of the M.&St.L. to seven major adjoining carriers. The remaining three hundred miles, for which there seemed little justification, were to be abandoned. Under the proposed scheme, among other things, the Burlington would gain a shorter line between Peoria and Iowa.

In Ralph Budd's opinion, the plan was eminently logical. It would, as he put it, have cleared out dead wood from the railroad forest, and would have enabled neighboring carriers—which obviously had to remain in business anyway—to provide far better service in a more rational fashion than the ailing Minneapolis & St. Louis could do. The entire project, furthermore, was squarely in line with the coordination principles set out in the Transportation Act of 1920.

Naturally enough, however, the new and vigorous receiver of the M.&St.L., Lucian Sprague (who, incidentally, learned his railroading on the Burlington) as well as many of the local communities strongly opposed the plan and in 1938 it was denied by the Interstate Commerce Commission. Although the road has since made a gratifying recovery, Budd still feels that a splendid opportunity was missed to rationalize the railway plant.

Rearrangement of railway lines was by no means the only way to achieve coordination of the total transportation effort. As president of the Great Northern, Budd had been one of the first to substitute busses for branch line passenger trains. And as a director of the Burlington he had, of course, supported incorporation of the Burlington Transportation Company in 1929 with power to operate busses on the public highways. In 1934, through bus service was extended to Omaha, Denver, and on to Los Angeles.

In 1937, in line with Budd's policy of coordination, Burlington Transportation Company joined with similar organizations controlled by the Santa Fe and the Missouri Pacific to form the National Trailways System which thereupon became, and still is, the most active competitor of the Greyhound Lines. Budd realized, however, that the operation of such an extensive bus system was a separate undertaking in itself; the major interest of the railroad in busses was to provide supplementary service for the patrons in its area, as well as a feeder system for its main line. When it became apparent that the Trailways would provide this service even if they were independent, the Burlington (in 1946) sold out its interest in the organization at a handsome profit.

The relation of trucks to Burlington rail service, however, was a different proposition. Trucks could perform a permanent feeder service to the main line, and in many instances act as substitutes for way freights on lines which might well be abandoned. Hence in 1935 the original Burlington Transportation Company (initially organized simply to operate busses) established a truck division. When the transportation company was sold it conveyed all its truck rights and property to a new, wholly-owned subsidiary of the C. B. & Q. known as the Burlington Truck Lines, Inc. This organization has expanded steadily since that time and now conducts a full-fledged truck

business in competition with independent truck lines, and offers as well a feeder and supplementary service for the entire Burlington system. Incidentally, as early as 1940 the C.B.&Q. was transporting its truck trailers on flat cars between Chicago and Kansas City and to such major intermediate points as Galesburg.

Although the Burlington had little difficulty in securing approval for acquisition and development of its truck lines, it failed to gain authority for a logical supplementary passenger service. In July, 1943, Budd sought to set up helicopter service from such cities as Peoria and Des Moines to nearby division points on the Burlington main line like Galesburg and Ottumwa where all trains stop. But because the C. B. & Q. already owned a bus service, the government contended that approval of the proposed helicopter plan would constitute a monopoly of transportation despite Budd's vigorous contention that there were already many other competing services such as independent bus lines, air lines, and the private automobile. These arguments were to no avail, however, and the rather exciting proposal was turned down.

Another attempt on Budd's part to rationalize an unwieldy situation met with obstacles of a different sort. To all intents and purposes the main route from Denver southeastward through Colorado Springs, Trinidad, the Texas Panhandle, Fort Worth, Dallas, and Houston, was a unified

transportation agency. It had been conceived as such by the two forceful men who built it, Governor John Evans of Colorado and General Grenville Dodge, and from the time of its completion in 1888, had operated as such. From a corporate standpoint, however, it was two separate entities: the Colorado & Southern from Denver southward to the Texas state line, and from there on the Fort Worth & Denver City Railway, even though the C. & S. owned virtually all the stock of the Texas road.

During the depression years these two western subsidiaries suffered heavily not only from depressed conditions but from long droughts; the C. & S. in particular found itself in desperate financial straits toward the end of the 1930's. Under the circumstances, it seemed obvious to Budd that tremendous economies could be effected by unified operation. Because the C. & S. charter was far more flexible than that of its Texas partner, the logical step was to lease the Fort Worth & Denver to the C. & S., and in 1939 that company asked the I.C.C. for permission to do so.

Thereupon a veritable storm broke loose in Texas. Amon Carter, powerful journalist and civic leader in Fort Worth, dubbed the proposal a "Burlington Blitzkrieg," threatened to have the line boycotted by shippers, and even proposed building a parallel highway to be christened, in derision, the "Ralph Budd Highway." Not even

a personal visit on Budd's part could mollify Carter or his fellow Texans, who regarded the proposal as a mortal affront to the sovereignty of the Lone Star State. The I.C.C., however, impressed by the obvious economies that could be realized, at first authorized the proposal. The Texans, of course, appealed the decision and while the matter was pending the Transportation Act of 1940, which carried an amendment concerning the protection of jobs, became law. The Act furnished a reason for reopening the proceedings and in due course the I.C.C. rejected the proposal.

As always, Budd accepted the outcome philosophically and in the next two years worked out an ingenious proposal for refinancing the Colorado & Southern separately and putting it on the way to recovery. One novel aspect of that debt adjustment plan was the Burlington's pledge not to declare or accept dividends from the Colorado & Southern during the life of the plan. Actually the C.B.&Q. had no obligation whatever toward the bondholders of the C.&S., but it was Budd's feeling that they probably bought the bonds because the C.&S. was a part of the Burlington system, and that the ordinary dictates of fair play made it only reasonable for the Burlington voluntarily to do its part to help its subsidiary back on its feet. So well did the debt adjustment plan work that when Budd retired from the Burlington in 1949, the C.&S. was again financially sound.

Meanwhile, typically enough, Budd had persuaded Amon Carter to bury the hatchet. As a result there was no objection in Texas when, in 1951, the F.W.&D.C. sought for and obtained an amendment of its charter which enabled it to absorb the several branch lines in Texas which previously had been owned by the Colorado & Southern, and to simplify its own financial structure so that in the end most of the economies Budd had visualized in 1939 were realized.

A strikingly similar and equally important step took place on the C.B.&Q. proper in respect to the development of an efficient Chicago-Kansas City line. Way back in 1859 the old Hannibal & St. Joseph connected the cities named in its title by a railroad which was then the westernmost portion of the national network. Immediately after the Civil War a branch was built near the western end of the line almost due south to Kansas City, thus forming a through route via the C.B.&Q. from Chicago by way of Galesburg, Quincy, Palmyra, and Cameron to Kansas City; the entire mileage came under Burlington control when the C.B.&Q. acquired the Hannibal & St. Joseph in 1883. From 1869, when through service first began, until 1888, this was the most popular route between these two major cities. In the latter year, however, the Santa Fe completed its shorter line and from then on gradually took over the bulk of the traffic until, by the 1930's, the Burlington's

Chicago-Kansas City route was hopelessly outclassed.

To Ralph Budd this was an intolerable situation. Next to Chicago, Kansas City was the most important gateway on the entire system; from it ran the Burlington rails northward toward Omaha as well as northeastward toward Chicago. Even more to the point, as Budd emphatically recognized, the Chicago-Kansas City line pointed toward the heart of the Southwest, an area that was increasingly generating more traffic.

It was entirely feasible to improve this line to make it fully competitive, and Budd proposed such a plan. Various circumstances prevented immediate undertaking of the project, and then World War II necessitated further postponement. Once the war was over and materials were again available, Budd turned to the situation in northern Missouri like a hound dog in full cry. The first thing he did was to persuade Isaac B. Tigrett, president of the recently-enlarged Gulf, Mobile & Ohio, to grant to the Burlington trackage rights between Mexico and Kansas City so that the Burlington's St. Louis-Kansas City service could compete on equal terms with that of the other lines connecting those two cities. But this was only a first step, for Budd saw in it a possibility of solving the even more important Chicago-Kansas City problem. The Santa Fe had long been anxious to get into St. Louis. Why not, therefore, let the

Santa Fe into that city over the Burlington and in exchange obtain trackage rights over the Santa Fe's short line from Kansas City to Bucklin, a point on the old Hannibal & St. Joseph main line near Brookfield, Missouri?

As it turned out, the vigorous opposition of other railways serving St. Louis was sufficient to cause denial of the proposed exchange of facilities between the Burlington and Santa Fe. But hardly had the dust settled from that decision when Budd proposed building a cut-off over seventy miles long (including over forty-two miles of brand-new railroad) that would be, in effect, the chord of the arc formed by the old line through Cameron Junction. This plan the I.C.C. approved on August 18, 1949, just a fortnight before Budd's retirement from the presidency. Thus in the very last moments of his administration, his patience and tenacity found another reward. The new railroad was opened for freight service in October, 1952, and for passenger business in February, 1953. Typically enough, however, Ralph Budd refused to permit the succeeding administration to name even a siding in his honor on the new line.

To Ralph Budd, World War II brought one specific responsibility which in itself tested his mettle and experience, not to say his energy, to the extreme. In May, 1940, President Roosevelt appointed him Transportation Commissioner on the Advisory Commission to the Council of Na-

tional Defense. This meant, in effect, that he was responsible to the Federal Government for the performance of the nation's transportation plant during the crucial months of frantic preparedness. As he felt was his duty, he accepted the post immediately despite the inevitable intensification of his concurrent responsibilities as president of the Burlington. For the next year and a half he shuttled relentlessly between Chicago and Washington yet, so far as anyone could see, the back-breaking schedule failed even to dent his relaxed manner, his miraculous way of finding time to give full attention to all matters that warranted it, or his effervescent sense of humor.

The first problem Budd had to decide in Washington was whether to set up an entirely new, large organization to cover all phases of transportation throughout the country, or to use, whenever possible, existing organizations that already represented the carriers and the public. To choose the former course would have been squarely in the tradition of the contemporary administration, and might have been seized upon eagerly by anyone wishing to achieve the sort of notoriety that inevitably focuses upon the head of any large organization. But characteristically enough, Budd chose the latter alternative. The Interstate Commerce Commission, he felt, was fulfilling its functions efficiently, and he believed he could depend upon the Association of American Railroads, the

American Trucking Association, the Lake Carriers Association and others to transmit and implement his top-level plans in respect to the carriers they represented. "Clearly it was in the interest both of efficiency and economy," he concluded simply, "to make use of the existing agencies as far as possible, rather than to establish duplicate and at least to some extent rival administrations." This, indeed, was a novel approach at the time. And it succeeded admirably.

Working through existing organizations, then, Budd with a tiny staff of eleven persons (including stenographers and clerks) kept his finger on the pulse of the transportation system through a selected but highly informative series of statistical reports that reached his office daily. Armed with this information, which he could interpret into practical planning, his principal function was to make suggestions to the various carriers with the single objective of moving goods and people as rapidly and efficiently as possible.

There was a strong group within the government at Washington that firmly believed the railroads should be taken over to provide adequate transportation for the defense period and the possible war emergency to follow. Budd resisted this proposal firmly and successfully. To the statement that the railroads could not get the necessary equipment he replied that it would take no more material for the railroads to build cars and loco-

motives than for the government to do so, and that all that was necessary to insure the best service was to let the railroads have the necessary tools to work with. To the railroads he recommended that the freight car pool be increased first to 1,700,000 and then to 1,800,000 cars. The roads responded promptly and only the shortage of material prevented their reaching the goal during his administration. At the same time, and at his urging, the railroads reduced the percentage of bad order cars to the lowest level in history. Along similar lines, approximately 1,000 new locomotives were ordered and the percentage under repairs brought down. Shippers were urged to load cars promptly and to load them as heavily as possible.

In the motor carrier field, the Transportation Commissioner carried through a survey of all buses and trucks in the country and thus assembled in a single spot more detailed information on that subject than had ever before existed. Plans were also suggested and carried out for improved access highways so as to relieve congestion, particularly around defense production plants. A similar survey was made of equipment available for inland water transportation, while on the Great Lakes arrangements were completed for additional ice-breaking service that resulted, during 1941, in the longest navigation season in history; during that year the total movement of iron ore exceeded by nearly 15,000,000 tons the highest previous

record. But it was typical that in making his report Budd commented that, "In honesty it must be said that unusually favorable weather aided more in extending the season than did the facilities." What he did not point out was that had it not been for the moves he instituted, the record would have been substantially less impressive.

Other steps taken by the Transportation Commissioner can only be summarized. In order to provide adequate grain storage, a system was worked out so that grain was not loaded into cars that could not be promptly unloaded upon arrival at destination. Also to avoid congestion, all users of coal were urged to build up their stocks during the summer against the inevitable demands of winter. In order to provide enough passenger cars to move troops, railroads were urged to increase their standby fleet by discontinuing unnecessary trains and by combining others whenever it could be done without serious inconvenience to the public. At the same time Budd fought a prolonged battle to obtain vital materials for all carriers. He urged abandonment of unnecessary facilities, concentration of scrap metal, and the granting of priorities for essential parts. A great deal of attention was devoted to making an inventory of storage space available for materials and food stuffs; an inventory of quite a different kind pinpointed those strategic rail and port facilities that required special protection against possible sabotage.

With the entry of the United States into war in December, 1941, Budd's organization was taken over by the newly-created Office of Defense Transportation under the direction of Joseph B. Eastman, and once again Budd was able to devote his full time to the Burlington. No one was more emphatic than Eastman himself in recognizing and stating what Budd had done in preparing the transportation facilities of the nation for the even greater task that lay ahead.

When Ralph Budd became president of the Burlington at the beginning of 1932, its financial fortunes were at the lowest ebb in years. During the first year of his administration funded debt was nearly \$220,000,000, fixed charges nearly \$9,500,000, while gross revenues had sunk below \$80,000,000 leaving a net income of barely \$1,500,000. By 1941 moderate recovery was in sight; gross had climbed gradually to \$117,000,000 and net to over \$10,000,000. But at the same time fixed debt had reached a peak of \$251,000,000 while interest charges had mounted to \$9,800,000. The impact of war traffic inevitably brought greater revenue. In fact, gross for 1945 reached what was then an all-time high of over \$242,000,000 while net rose to over \$27,000,000.

Gratified as he was by these results, Budd realized early in the war that so long as the funded debt and interest charges remained high, the Burlington would be ill-equipped to spend what

would be needed to refurnish the plant after hostilities ceased or to withstand hard times later on. Consequently as soon as earnings warranted it, in 1942, he began purchasing and retiring outstanding bonds. In 1944 he devised and launched an inclusive program of debt reduction. As a result, in the six years 1942-1947, inclusive, funded debt, including equipment obligations, was reduced by nearly \$70,000,000, while interest charges fell from over \$9,800,000 to less than \$5,800,000. This sort of achievement can be expressed only in figures that are inevitably dull, but it was noted with profound respect in railway and investment circles. As Adams & Peck of New York observed in March, 1948, for example:

"Much of the progress achieved by the Chicago, Burlington & Quincy is directly attributable to an ultra-progressive management. This road was a pioneer in the use of Diesel locomotives, streamlined passenger trains, and fast schedule freight operations. The aggressive policy of debt reduction followed in recent years is another indication of a wideawake management."

Meanwhile, Budd continued his search for anything that would make his railway's service more efficient and more attractive. There was no more spectacular symbol of his success than the nation's first dome car.

The idea first occurred to C. R. Osborne, a General Motors executive, while riding through Glenwood Canyon in a caboose. Why, he rea-

soned, couldn't a cupola be built on a passenger car so that travelers could enjoy the very sort of magnificent scenery he was then passing? Since General Motors was not building new types of automobiles at the moment because of wartime restrictions, their styling department had time to make a mock-up of a dome car. Quite frankly, the manufacturers were highly doubtful whether the conservative railway industry would adopt anything so radical and so costly to build. "We'll show it to Budd," Osborne decided, then added, so the story goes, "If he doesn't like it we'll take an ax and chop the thing to bits."

Let Ralph Budd pick up the story from there: "After seeing it, it seemed to me it was worth trying out and I asked Mr. Osborne if there were any objections to our taking a stainless steel coach which was in Aurora, and cutting a hole through the roof and building a dome in it. He said he wouldn't object at all; . . . some of his associates were very helpful to us in making plans, and we did build a dome from a coach."

This sober account hardly tells the full story. The moment that the car was put into regular service on one of the *Twin City Zephyrs* on July 23, 1945, it made an instant hit. Another car was converted at once so as to afford simultaneous service in each direction, and before the year was out five "Vista Domes" had been ordered for each of the new *Twin City Zephyrs* as well as for each of the

six *California Zephyrs* then on order. As was the case with the Diesel engine, Budd had again captured a "first" for the Burlington.

It would take a book to tell the full story of Budd's seventeen brilliant years on the Burlington; entire chapters could well be devoted to matters that cannot be elaborated here, such as his making the system a leader in the fields of centralized traffic control, radio communication, fast freight operation, and the like, or his training of men like Fred Gurley, John Farrington, Fred Whitman, Harry Murphy, and A. E. Perlman, all of whom have gone on to head great railways. In the words of the distinguished editor of *Railway Age*, when Budd retired in 1949, the Burlington was "principally the 'lengthened shadow' of Ralph Budd."

RICHARD C. OVERTON

A Variety of Interests

When, in 1949, Budd announced that he would retire on the first of the month following his seventieth birthday on August 20, no one could persuade him to change his mind, for he himself had enforced that rule for Burlington officers. It was perfectly obvious, however, that the man who was the universally acknowledged "dean of railroaders" was a good deal more vigorous and alert than countless men half his age. No one with his intellectual curiosity and variety of interests could be expected to sit still. It was simply a question of what he would do next.

Franklin B. Snyder, president of Northwestern University, offered him a professorial lectureship with virtual *carte blanche* to give such seminars as he desired in a wide range of fields including transportation, business and government, investments, western history, and business administration. Budd gave that invitation very serious thought, yet did not accept it for the simple reason that he did not think he was qualified. There are many of his friends who still disagree on that point.

As the time for his retirement from the Burlington drew near, Budd received another invitation, this time from Mayor Martin Kennelly who asked

him to assume the chairmanship of the Chicago Transit Authority. The choice was obviously not a political one, for the Mayor was a Democrat, and Budd a Republican. Nor was the job a sine-cure. No subject was more touchy or troublesome than the hopelessly tangled public transit system of Chicago. When Budd took the job there were those who, in the nicest possible way, suggested that he must have taken leave of his senses.

But as usual he had his own excellent reasons. First of all, he thought it would be much better and more interesting to have something to do rather than just to stop working. Next, he was convinced that the Mayor was doing his best to give Chicago an honest government, that the recently created Transit Authority should have a fair chance, and that he could, perhaps, render a civic service to the community.

"It was an opportunity which one could never get on the railroad," Budd said, "of finding out whether people would be willing to pay what it cost to give transportation, . . . and whether, if they did, you would reach the point where you would encounter the law of diminishing returns because the fares would be so high. And then you could discover whether, if the community did reach that point, the people would be willing to face up to the proposition that there might be some amount which, considering its social and economic effect on the whole community, it would be fair and proper for the riders to pay, and above that something would have to be paid from the public tax fund."

Obviously for Budd the C.T.A. job was a challenge and a golden opportunity to make a meaningful experiment.

As even those who have had to pay increased fares in Chicago will admit, it was worth it. During the five years that Budd guided the destiny of C.T.A., the entire plant, and particularly its equipment, assumed a "new look." At the very outset he had to find enough money to replace the cars that ranged anywhere from thirty to fifty years of age. Only his personal standing with the financial community brought forth the desired loans. Next, of course, he ran into vigorous public criticism for his gradual raising of fares and invited a storm of brickbats whenever he suggested a change in service. But he kept moving toward his objective, meeting his bitterest critics in public debate time and again, and maintaining smooth relations both with the city authorities and with the employees. When he finally laid down the burden in the summer of 1954, Chicago had achieved its goal of 50 years in complete consolidation and modernization of its local transportation.

While serving as chairman of C.T.A., Budd was "borrowed" by the federal government on a matter of both diplomatic and economic importance. In 1951 a Joint Brazil-United States Economic Development Commission was established by the two governments to formulate plans de-

signed to overcome transportation and electric power shortages in Brazil. To evaluate the adequacy and priority of the various projects, several distinguished consultants were retained. One was Ralph Budd, who was chairman of a five-man Special Railroad Mission. All members of his group were thoroughly experienced in railway operation, and all or some of them were in Brazil from mid-December, 1952, until the following March. The report which he prepared is now being given serious consideration by Brazilian authorities.

Regardless of the burden of official duties, Ralph Budd has always found time for his principal avocation, western history. While on the Great Northern he not only sponsored Grace Flandrau's series of historical pamphlets as well as the "Empire Builder" broadcasts, but arranged and personally directed two excursions on which he invited leading historians from all over the country. During the course of these trips, monuments were dedicated to Verendrye, the French explorer, David Thompson, the great geographer, John Jacob Astor of fur trade fame, Lewis and Clark, and John F. Stevens.

On the Burlington in the mid-thirties he opened the company's extensive colonization records to historical research and in 1943 deposited in the Newberry Library some fifteen tons of invaluable source material covering the period 1849-1901.

To qualified historians who wished to work in this material, as well as in more recent data still in company files, he gave constant encouragement with the result that several books and innumerable articles have been and will be published concerning the Burlington's history.

But Budd's interest in history has been by no means at second hand. In virtually all his many public addresses he invariably placed his topic in solid historical context and, as on the Great Northern, sponsored two elaborate historical pageants for the Burlington. He was for many years an active trustee of the James Jerome Hill Reference Library in St. Paul, and still is a trustee of the Museum of Science and Industry, and the Newberry Library, both in Chicago; meanwhile he has encouraged and participated in the activities of numerous historical societies, including the Lexington Group that is devoted specifically to railway history.

In the light of this interest, it was natural that when a group of Chicago businessmen gathered to plan some sort of lakefront fair in 1948, Budd found himself at the first meeting and pounced upon the suggestion that it be made a railroad celebration centering around an historical pageant. As a member of the committee in charge he devoted long hours to planning and building the Railroad Fair. The two-year show (held over by popular demand) not only introduced several mil-

lion people to modern railroading, but was successful financially.

Since June, 1954, Ralph Budd, in the technical sense, has been "retired," and has established a home in Santa Barbara, California. The fact that he is a member of several boards of directors, including that of the Burlington, means that his counsel is still available to business, however, and he has the opportunity, which he relishes, to keep up to the minute on what is going on and to maintain his countless friendships. Like a busman on a holiday, he likes nothing better than to travel.

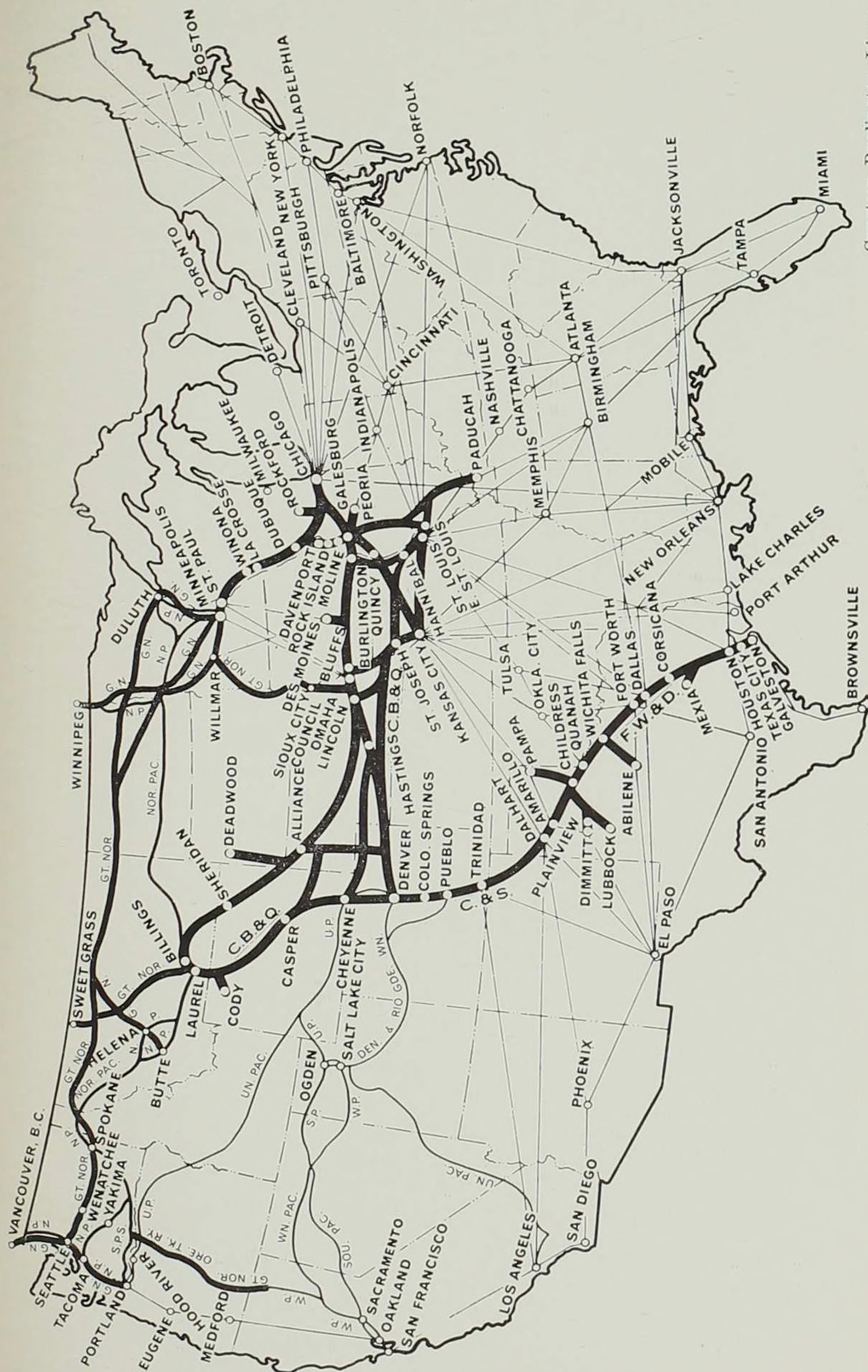
Curiously enough, his wife has never shared his peripatetic inclinations, yet like Jack Spratt and his wife, they have made an ideal combination. Their older son, Robert Budd, who lives in Bloomfield Hills, is president of the Great Lakes Greyhound Lines at Detroit, as well as an officer of various other bus companies. Their younger son John, who lives in St. Paul, is president of the Great Northern Railway. Thus, in their own ways, Ralph Budd's sons have carried on the family tradition in the field of transportation.

But it would be a mistake to think of Ralph Budd only in terms of the right of way. He is an omnivorous and critical reader and an historian in his own right. His knowledge of geography, the West, and the American Indian—as well as of the various artists who have portrayed the Great West—"confounds the experts." He has been an

ardent horseback rider, enjoys watching football, and is a baseball fan of long standing. Probably the comment most often made about him is that, no matter with whom he is talking, be they young, old, great, or humble, all feel they are conversing with somebody of their own kind.

Ralph Budd, in short, is a national figure whose achievements are indeed incredible. But he is a human who is intensely credible.

RICHARD C. OVERTON



The Burlington, Great Northern, and Northern Pacific Lines.

Courtesy Burlington Lines

1875



Highland Park Normal College, Des Moines, where Ralph Budd graduated in 1899.