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STATE OF OREGON

STATE HIGHWAY COMMISSION
Salem, Oregon



CASUAL and FACTUAL GLIMPSES
at the
BEGINNING and DEVELOPMENT
of
OREGON'S ROADS and HIGHWAYS

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F O R E W O R D

During the period of the Provisional Government (1841-1849) the few residents of the Oregon Country did what traveling was necessary by following the water courses, Indian trails or the rough hewn roads carved out by parties of exploring pioneers. During the days of the Territorial Government (1849-1859) land owners, acting by mutual agreement, built local ways contiguous to their holdings financing them by proportional assessments according to the size and estimated value of their respective properties. When Oregon gained statehood in 1859 the legislature set up a system of county road districts by which district supervisors and appraisers laid out county roads, assessing the cost by taxation levied against the contiguous and benefitted lands and by a poll tax, charged against residents of the districts, which could be paid by day labor or by money at the option of the taxpayer.

That basic system was followed, with some alterations, until the voters ratified a constitutional amendment in November 1910 authorizing counties to issue and sell bonds for the construction of county roads, the bonds to be retired, with accruing interest, by county road taxes. Under the authority of this and subsequent amendments, the various counties during following years issued bonds totalling approximately \$41,000,000.

The legislature of 1913 took the first step toward the establishment of an integrated system of state highways by setting up a state highway department under the supervision of the state board of control, - the Governor, Secretary of State and State Treasurer -- and the direct administration of a State Highway Engineer. Four years later the 1917 legislature provided for the appointment of a three member state highway commission - which still continues - to supervise the activities of the state highway department. Succeeding Commissions in the 33 years since 1917 have invested approximately half a billion dollars in the construction and maintenance of the present 7300-mile long state highway system. Only in a relatively minor degree has this program been financed from taxes levied on property. In largest measure it has been builded out of gasoline taxes and motor vehicle fees and licenses. Oregon's legislators conceived the gasoline tax and used its revenues not only to retire the millions in bonds with which early highways were constructed but to extend the program. And Oregon's

gasoline tax, adopted by the federal government, has been a main source of federal highway financing so that the millions in federal grants flowing back to help build Oregon highways is road user money, born of an Oregon idea.

Primary highways of the state, the foundation skeleton of the statewide system, have laid but lightly upon property taxation. The secondary highways, originally major county roads in the main, in their beginning made some contribution in county funds before they passed entirely under administration of the highway commission. City streets, at their inception entirely financed by local taxes, of late have joined with the counties in leaning more and more on allotted state highway funds diverted by the legislature to local road use.

The story of the initiation, and growth of the state's highway program constitutes an interesting chapter in the history of Oregon's advancing economic development. Some of its pages undoubtedly will be new matter to many who have not been officially associated with or particularly interested in highway construction, financing and administration. It is the hope of the Commission that the fragmentary glimpses touching the administration and achievements of the department during the past years will tend to lay a foundation of understanding for a clearer conception of the magnitude of the task which now confronts the Commission in the work which lies ahead.

Ralph Warren

TABLE OF CONTENTS

SECTION ONE

Chance Facts and Significant Figures From "Before the Commission" Days down To Date

SECTION TWO

The Five Construction Divisions and Their Progress - 1917 to 1948, inclusive

SECTION THREE

Glimpses at Highway History and Construction Progress Data

SECTION FOUR

What Highway Funds Are Doing for Counties and Cities and How Much

SECTION FIVE

Maintenance - An Increasingly Burdensome Charge from Continuing Overloads - heavier, faster Trucks

S E C T I O N O N E

SECTION ONE

OREGON TURNED TO THE RIGHT FROM THE VERY BEGINNING

Maybe you don't remember it but the "left hand turn" was outlawed in Oregon the second time the legislature had a chance after the adoption of the constitution.

It may have been that the lawmakers of 1862 wanted to tell the Britishers with which the landscape was fairly well sprinkled just the right direction to head in. The record is silent as to that point but the statute is plain in saying that all horses, teams and vehicles approaching one another on the public roads should "turn to the right"; and so "The American Way" came into Oregon right at the beginning of state's history.

Then, too, there was a time when the mechanized age first commenced to stick its snout into the traffic lanes of which Old Dobbin was the legally recognized boss and all puffing, snorting traffic had to stop in its tracks while the king went prancing by. That was in 1885 when the legislature decreed that any steam thresher engine, or other mechanically driven vehicle, should stop at a distance of not less than 100 feet from any horse or team approaching on the highway "and remain stationary until it has passed." That was when horses were innocent and unsophisticated, before they learned with the aged, the infirm and pedestrians generally, to take to the ditch and let the motor driven parade go hurtling by.

As early as 1885 it seems that the road builders of the state were having their troubles with "overloads" on the roads and bridges they had been building here and there. The 1885 legislature came to the help of the bridges by providing it to be unlawful for anyone to drive a steam thresher engine onto a bridge without first laying a track across, made out of planks at least 2 inches thick, by 12 inches wide and not less than 10 feet long. And somewhere along about the same period they made them remove the "lugs" off the drive wheels before rolling out onto the highway.

But do you think that the log trucks were the first headache of the road builders of Oregon? Well, don't you believe it, for it was the wood hauler, the wheat hauler, all those heavy freight handlers with the big four and six horse teams and the wagons which just dug down toward bottom of the already more or less bottomless roads.

So the legislature of 1899 came to the rescue. It passed a

law which provided that after January 1, 1900, any person who "habitually" used tires on his wagons of "not less than 3 inches wide" should be given a rebate of \$1 for each wheel for four years" on road tax.

But if the teamster drove a wagon which had a difference "of not less than 8 inches" in the width of the tread between the front and the rear wheels, and also had tires not less than 4 inches wide all around, he was given a rebate of \$2 for each wheel for four years.

Those rigs pulled a little harder on the horses, but a little easier on the pocketbook and, presumably, had a tendency to smooth out the roads.

Those were the good old days when each of the 36 county courts builded its own county roads according to its own design and the disposition of its road supervisors. It was in 1901 that the legislature provided for a levy of "not more than 10 mills" on all the property of the county assessed for state and county purposes to make up a "county road fund" and provided for the appointment of a County Road Master to boss the road building job.

Another decade rolled by before road and bridge building was standardized throughout the state by the creation of the state highway commission by the legislature of 1917.

EVERYBODY WORKED OR PUNGLED BACK IN THE DAYS OF 1860

Did you ever hear that when the state was young "every male between the ages of 21 and 50 years of age except persons who are public charges or too infirm to perform labor" had to do two days' work on the public roads of the county in which they lived, or pay \$2 for every \$2,000 of taxable property they owned or go to jail and serve it out?

That was what the legislature of 1860, (the first legislature under state government) decreed. That same session slapped a \$5 poll tax on "every negro, chinaman, kanaka or mulatto for the use of the county within which he may reside." The county clerk issued a receipt which was intended to be "a protection to such taxpayer from again paying the same or any other county." Failure to pay put the delinquent in jail and at work on the public roads of the county at the rate of one day of "faithful labor" for each 50 cents included in the total \$5 tax.

Back in those rugged days the county court divided the county up into road districts and appointed a road supervisor in each. The

supervisor made "an alphabetical list of all persons liable to perform labor on the public roads" within his district on or before March 15 of each year and gave the list to the county clerk. He "affixed to each name the amount of taxable property owned by each". Then the supervisor notified each property owner to get busy "at 8 o'clock a.m." at a definite date and place and "give one day of work for each and every \$2,000 assessed for state and county purposes" or pay \$2 for each day so charged against him, or go to the county jail.

That system rocked along from 1860 to 1899 when the legislature got still tougher and provided that "all able bodied persons" sentenced to the county jail "whether for a fine or to serve a sentence for a definite number of days" should be liable to work on the public roads, under the "full power of the county court", with the provision that those serving a definite sentence should work out the "full time" of the sentence at the rate of \$1 a day. And it was added that "not less than 8 hours shall be considered a day's labor". Any prisoner refusing to work was to be "denied all food other than bread and water until he signifies his willingness to comply", in which event he should make up for all lost time.

It was not until 1901 that the legislature authorized the counties to levy, annually, not to exceed 10 mills on the dollar of assessed values on real property within the county with which to finance county road construction.

It was not until 1919 that the legislature commenced to whittle off goodly percentages of the state highway's road user funds, originally dedicated for construction of state main highway routes alone, and divert them to be used by the counties (now 19 percent of the total) and to the cities (first 5 and now 10 percent).

These diversions, while they have materially advanced the financing of county road and city street construction, have decreased available funds for mainline state primary and secondary highways proportionately.

In the period reaching from 1917 to July 1, 1949, a total of \$9,572,828 of road user funds has been allotted to the cities of the state for their individual use in street building and upkeep, and now, under the semi-annual 10 percent allocation of the 1949 legislature, the highway commission is advancing approximately \$1,500,000 additional every six months.

The counties, since 1920 (to July 1, 1949) have been allocated a total of \$62,771,101; a grand total contribution of state highway funds for local betterment of county roads and city streets, and proportionate reduction of direct property road and street taxes of \$72,343,929.

THE "BIKE" IS GRANDPA OF OREGON ROADS

Do you remember, or did you ever stop to think, that the bicycle is the grandpapa of the Oregon State Highway financing system?

Did you ever hear of the "Century Club" away back in 1898 or so?

Well, if you didn't, or haven't, the Century Club was a bunch of strong-legged and sound-lunged, rugged pedal pushers who had achieved the distinction of pedaling their bikes for a "century run" (100 miles in one day); guys like Fred T. Merrill of Portland, Watt Shipp of Salem and a long list of others. Their favorite run was from Portland to Salem and return, or vice versa, during which endeavor they struggled up and coasted down the "New Era Hill" and other of the tough spots along the road.

So manfully did they pedal and so earnestly plead, that the 1901 legislature took pity on their straining extremities and passed a law providing for the construction of "bicycle paths on either or both sides of all public highways of the state for the use of pedestrians and bicycles."

To finance the construction, an annual tax of \$1 was levied upon "all persons riding bicycles." The bicyclist paid the \$1 to the county clerk and received a tag which, the law decreed, "must be securely fastened to the seat post of each and every bicycle."

Any untagged rider caught on the pathway or riding without the tag on the stern post after April 1 was to have a warrant issued against him with which the sheriff would seize the bicycle and sell it for the amount of the tax, and costs. The "object and intent" of the law, the legislature said, was "to provide for a highway separate from that used by teams and horsemen."

So, that statute of 1901 was the precedent for and the granddad of the present system of automotive licenses, gasoline taxes, fines and penalties which were established a decade later and dedicated to the task of constructing the highway system of the state.

And, since 1920, by command of the legislature, the state highway commission has apportioned a total of \$62,771,101 of the highway funds among the 36 counties for use in county road construction to be expended under the supervision of the various county courts and commissions.

This diversion has relieved the annual county road tax of up to 10 mills on the dollar on county property in direct proportion to the local allocations. Also it has decreased the funds available to the highway commission for use on main line state highways by the same amount of \$62,771,101 during the 1920-1949 period.

The annual contribution of road user funds to county road building has increased from \$485,678 in 1920 to \$5,557,875 in 1949 and will continue to increase as motor use revenues continue to grow.

THE EARLIEST HONKERS SPREAD THE FIRST OIL

Automobile owners of Oregon started picking up the White Man's Burden of road improvement right pronto after the gasoline buggies first made their more or less erratic appearance to the horrified reaction of Old Dobbin and the very frequent damage to the One Hoss Shay.

The early automobile owners, all 40 of them, started the movement to put the new look on the roads right after they organized the Portland Automobile Club on April 19, 1905. They were an earnest group, equipped with long linen dusters, gauntleted gloves, goggles and an insatiable desire to go places. One of those places was the Clairmont Tavern down the west side of the Willamette at Linnton. The road had the advantage of connecting with smoother city streets running past the Lewis & Clark Exposition grounds, was level, not too bumpy but "all fired dusty" in the good old summer time when it was nicest to go honking along.

The Club members early discovered that while their goggles might keep the dust out of their eyes it would not keep it out of their noses or their throats so they decided to do something about it. They took up a collection, the subscriptions footing up to \$2,205 and on or about April, 1906, spent \$1,655 (that representing all of the subscriptions paid in) in oiling a portion of the Linnton road.

This was the culmination of efforts reaching from a Memorial Day automobile race meet at the Irving track May 30, 1905, which netted \$244.10 toward the oil fund.

It is noted in the report of Lewis Russell, chairman of the Road Race and Meet Committee that the oiling had been "done at the request of 85 percent of the subscribers." He adds, "There was a loud roar principally from the people who did not subscribe and those who promised but did not materialize." It also was argued at the meeting that the "St. Johns Boulevard" on the east bank of the river should be oiled. "This would give us," it was pointed out, "circle drive of the city, down one side of the beautiful Willamette, across the St. Johns ferry and back on the other side." It also was urged "to take action about the road to Government Camp and Mt. Hood." The minutes note that the Club "had made a run" to Clairmont Tavern where "a luncheon was served gratis but only a few members had availed themselves of the opportunity." Better luck was had at a trip to the Twelve Mile House "in which 10 automobiles took part."

By that time there were 242 automobile owners in Portland and confidence was expressed that all of them could be gathered into the organization. Seemingly, too, the 242 buzz wagons (some of which were Stanley Steamers and Locomobiles) had commenced to clutter up traffic, for on May 2, 1906, the minutes note the appointment of a committee "to see the city council to try to secure an 8 mile an hour speed limit inside the fire limits and 15 miles outside of them within the city boundaries."

Such is the history of the pre-statutory papa of the road users gasoline tax, the initial point of the virtual retirement of county governments from road construction and maintenance with direct tax money:- the grand papa of what has grown into Oregon's better than \$350 million highway system since the creation of the state highway commission in 1917.

LOOKING BACKWARD ALONG THIRTY YEARS PLUS

Back in the "B. C." era, before the 1917 legislature had set up the present State Highway Commission, Major Henry L. Bowlby recorded in his first annual report of the state highway engineer that, "there are more than 37,000 miles of road in Oregon." That was on November 30, 1914, after the 1913 legislature had delegated to Governor Oswald West, state secretary Ben W. Olcott, and state treasurer Thos. B. Kay, the chore of serving as a state highway commission and building a system of state highways.

At that time they launched Major Bowlby upon the construction of the Columbia Highway, the Pacific Highway, and some secondary market roads and gave him a total of \$248,570.60 (raised by a $\frac{1}{4}$ mill state road tax) to start the job. In his report the Major notes that on November 30, 1914, he had a "balance available" of \$59,595.88.

Those were the days when contractors did their blasting with black powder and built their grades with pick and shovel, wheelbarrows, horse-drawn dump wagons and Fresno wheeled scrapers.

Major Bowlby also notes: "The rule has been that one dollar is all the damage a man is entitled to when the state or the county asks permission to build for him a modern highway." And speaking of "hard surfacing state highways" he says, "It is not necessary today, as it was four to eight years ago, to argue that the motor vehicle has come to stay and that the roads must be designed to stand this new and severe traffic." And speaking of roads in general he prophesied, "Many years will elapse before more than 10 percent of the road mileage (37,000 miles) is hard surfaced. The greater part of the attention of the county courts will always be taken up with building and maintaining earth roads."

That was 35 years ago. As of June 30, 1948, the report of State Engineer R. H. Baldock shows 4,492 miles of primary and 1,602 of secondary highways under hard surface paving -- better than 16 percent of the total road mileage in the state in 1914. In the face of this it is worthy of note that the total "county road" mileage has decreased from the 1914 total of 37,000 to 35,551 miles. Of this composite stretch of county roads, 2,660 miles are paved either with concrete or bituminous macadam or have been oiled; 13,167 miles are surfaced but un-oiled; 4,772 miles graded; leaving 14,952 miles unimproved for the counties to improve and maintain. In addition to all these, there were 17,039 miles of national forest and park roads, Indian reservation, state forest, park and military reservation roads, and non-highway city streets, only 800 miles of which are unimproved; a grand total of all classes of roads other than state highways of 52,590 miles. This does not include mileages added during 1949.

* * * * *

During 1949 highway commission revenues grossed \$31,393,000. Of this \$11,820,000 was diverted under legislative command: \$5,558,000 to the counties for county road financing; \$4,108,000 to the cities for use on city streets, \$1,035,000 to the state police, and \$1,119,000 to counties (in loans to be used by them in the repair of unusual frost damage suffered by county roads during the winter of 1948-49), leaving \$19,573,000 of gasoline tax, motor vehicle registration fees, motor transport fees and incidental revenues - state highway funds - to spend in forwarding the state highway program. It had in addition, \$6,555,000 of federal aid allotments. During the year it disbursed \$34,213,000, approximately \$8,100,000 in excess of 1949 income, this made possible by revenues accumulated during the war years due to government restrictions on construction and lack of available materials.

Of the total, \$12,116,000 were required for maintenance of 7,300 miles of the state highway system, including \$2,000,000 made necessary for repair of frost and storm damage caused by the hard winter of 1948-49. Construction and right-of-way expenditures took \$19,261,000; \$1,236,000 went to finance equipment, buildings, parks, travel information service, debt service, bridge and ferry operations.

For 1950 the Commission will have an anticipated income of \$36,978,000. It has estimated disbursements totalling \$38,178,000. Of this \$20,708,000 is set aside for construction and right-of-way financing; \$11,414,000 for maintenance of the state highway system; \$2,595,000 for capital items; \$3,461,000 for administration, operation of state parks, conduct of the travel information service, debt service, operation of drawbridges and ferries, et cetera.

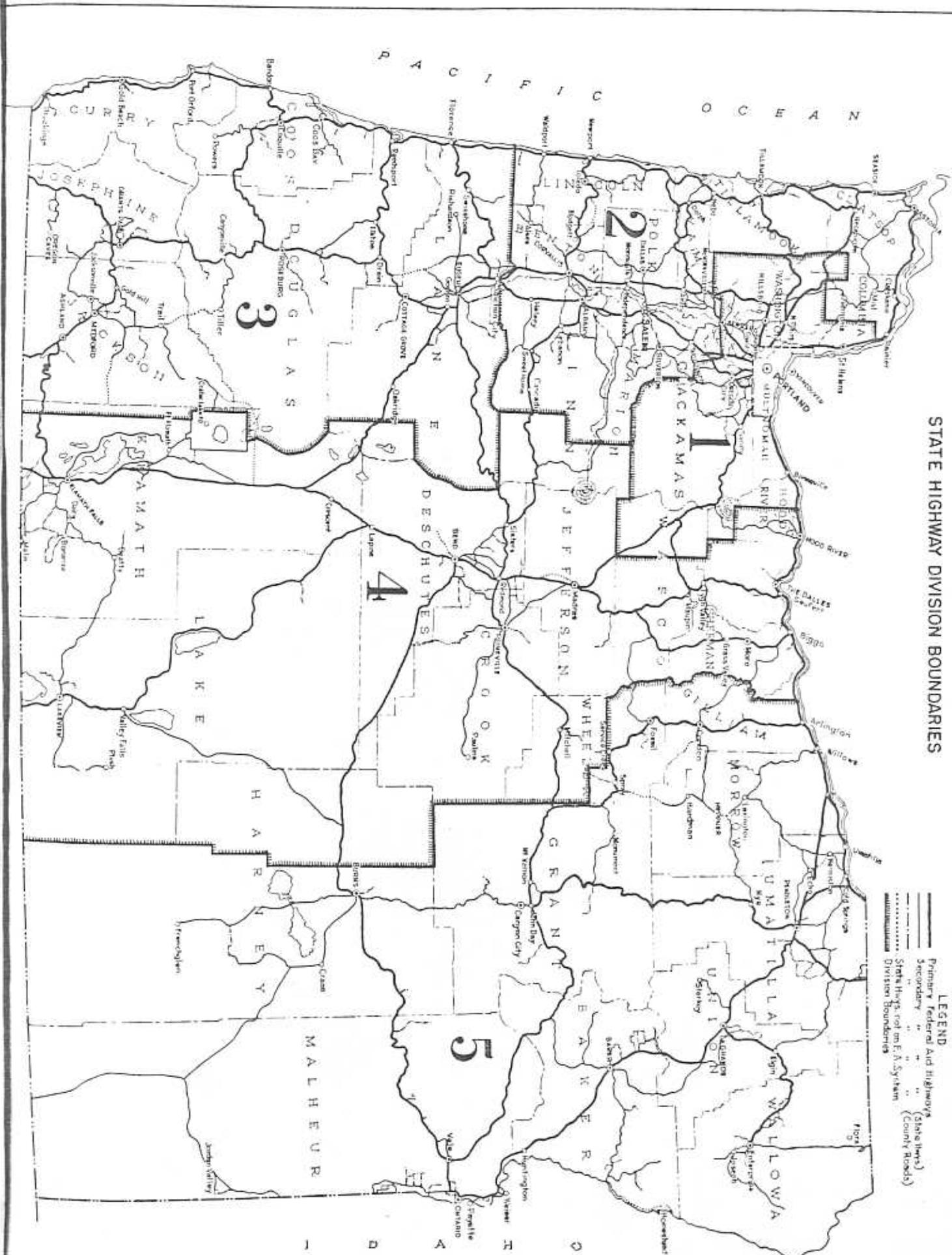
The 1950 income will come, \$30,178,000 from gas taxes, registration and motor transport fees and incidental sources, plus \$6,800,000 of federal aid allotments.

Gross revenues from road user sources are expected to reach \$40,575,000, but again this will be reduced \$7,480,000 to meet the 19 percent diversion to the road use of the counties; \$3,617,000 to finance the 10 percent diversion to the cities and \$1,018,000 to the state police.

From 1917 to the close of the fiscal year, June 30, 1948, a total of approximately \$340,000,000 had been spent for construction and maintenance of the state highway system. By the close of 1950 approximately \$90,000,000 will have been added or obligated, bringing the grand total expenditure on the state highway system by that date to approximately \$430,000,000.

STATE HIGHWAY DIVISION BOUNDARIES

- LEGEND**
- Primary Federal Aid Highways (State Hwy.)
 - Secondary " " " " (County Roads)
 - State Highways on E. A. System
 - Division Boundaries



S E C T I O N T W O

SECTION TWO

The Figures Used in the Five Following Divisions Cover the Period from 1917 to the close of the 1948 Fiscal Years

DIVISION NO. 1

Division No. 1, on the Highway Commission's work sheet, has more people in it than any of the other four. It embraces 3,962 square miles, which is approximately 3,841 square miles less than its next largest divisional neighbor. It is composed of fewer counties than any of the remaining four divisions: Part of Columbia, Hood River and Yamhill, all of Multnomah, Washington and Clackamas, together with little chips off the corners of Clatsop, Tillamook and Wasco.

Its 448 miles of primary highways fall 246 miles short of Division 2, next smallest of the five divisions; its secondary highways total 301 miles, 134 below the next high division and it stands next to the bottom in miles of county roads and city streets not on the highway program with a total of 5,403 miles inside its boundaries. And it is cluttered up with more bridges and more traffic congestion than any other division.

It has cost \$55,475,126 to construct and maintain the highways in Division 1 during the past 31 years (from 1917 to June 30, 1948) the highway commission has been in charge, which incidentally is the smallest total in the five divisions. Construction alone amounted to \$45,362,006, of which the commission paid \$23,867,032; the government \$15,568,516; the counties \$1,207,014 and miscellaneous revenues of the highway commission the remaining \$294,552. The total is balanced by \$4,424,891, coming from the 10 percent diversion of highway funds to the cities of the district for their use in street construction and repair.

The division's maintenance bill for the 31 year period totalled \$10,113,120, all of which was paid by the state except \$26,233.46 paid by the counties.

It cost \$34,306,362 to build the 448 miles of primary, (trunk line) highways of Division 1, an overall average of approximately \$76,577 a mile, the highest average mileage cost as against the next to the lowest primary construction cost in the state; explainable by the four lane construction radiating out from Portland to all points of the compass. Of

the total, the state paid \$20,730,693; the government \$12,222,481, including \$809,542 forest highway funds which were spent by the federal government; the counties \$1,092,943, and miscellaneous funds \$260,244. Total primary highway maintenance amounted to \$7,145,342, of which \$26,233 was paid by the counties.

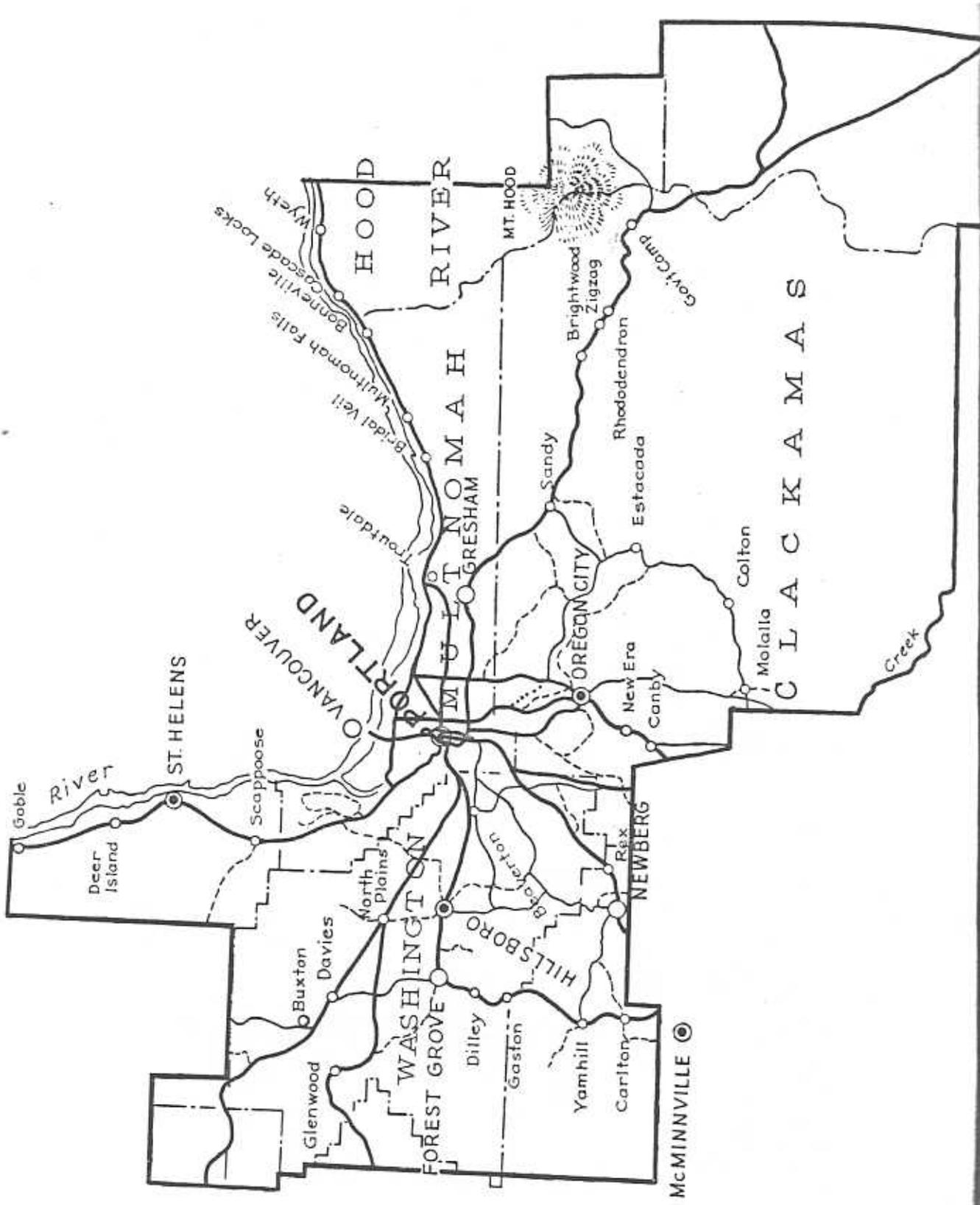
The secondary highways of the district cost \$3,849,941 to build, of which the state paid \$2,186,498; the government \$1,610,603 and the counties \$52,838. The maintenance amounted to \$2,814,454, all paid out of state highway funds.

County roads and city streets, not on the highway system, cost \$2,780,811 to build, toward which the government contributed \$1,735,431; the state \$949,840; the counties \$61,232, and miscellaneous highway revenues \$34,307. The maintenance amounted to \$153,323, all state highway funds.

The cities of the district got their 10 percent of all state highway revenues for their individual use on their streets, amounting to \$4,424,891.

Map of
DIVISION NO. 1

- LEGEND**
- Primary Federal Aid Highways (State Hwy.)
 - Secondary " " (County Road)
 - State Hwys. not on F.A. System



DIVISION NO. 2

Division 2 of the state highway commission's working map contains approximately 6,029 miles of highways and roads within its area of 7,803 square miles. As of the close of the 1948 fiscal year, the succeeding highway commissions had spent a total of \$64,134,243, in addition to \$6,423,042 Forest Highway Funds which were spent by the Bureau of Public Roads, in the construction and maintenance of this transportation network within the district which consists of the whole of Benton, Lincoln and Polk counties, and large slices of Clatsop, Columbia, Linn, Marion, Tillamook and Yamhill.

It has required \$27,695,947 of state highway funds to construct the various highways in the district together with \$22,798,060 contributed by the federal government; \$3,248,917 furnished by the counties (material portions of which came out of road user funds diverted from the highway revenues) and the sum of \$178,207 of miscellaneous highway revenues. And, to all of these amounts must be added \$1,729,297, which constitutes the 10 percent of state highway revenues diverted by the legislature to the exclusive use of the cities to be expended for the construction, maintenance and repair of streets not a part of the state highway system.

The sum of \$16,636,150 was required to maintain the roads and highways in the district during the 31-year period, of which \$16,583,179 came from state funds, \$29,174 from Government money, \$21,901 from the counties, and \$1,894 from miscellaneous revenues.

The sum of \$47,365,499 was required to construct the 694 miles of primary state highways in the district, an average of approximately \$68,250 a mile. Much of this mileage was in the Coast, the East and West Pacific highways within the district, as well as the radiating network between the various cities of the district. State Highway funds contributed better than \$23,700,000 of the total, government funds another \$20,000,000 (including over \$5,700,000 Forest Highway Funds), miscellaneous funds better than \$153,600, while the counties are credited with a total of \$3,112,151.

The primary maintenance for the period totalled \$13,000,109, of which the state contributed \$12,956,893; the counties \$21,489; the government \$19,832; and miscellaneous highway revenues \$1,894.

The secondary highways in Division 2 cost \$5,271,547 to construct; of which total \$3,097,027 was state highway funds; \$2,117,677 came from government funds; \$34,420 came from county advances, and \$22,421 from miscellaneous state revenues.

The maintenance footed up to \$3,309,793, all of which was state funds except \$5,917 from the government.

A total of \$1,284,087 was spent on the improvement of county roads and city streets not on the highway system, together with \$326,247 for their maintenance, the bulk of it state funds.

The cities were given their 10 percent for street construction in the total amount of \$1,729,297.92.

LEGEND

- Primary Federal Aid Highways
- Secondary (State Hwys)
- Secondary (County Road)
- State Hwys not on F.A. System

OREGON STATE HIGHWAY DEPARTMENT

Map of

DIVISION NO. 2



DIVISION NO. 3

During the period extending from 1917 to June 30, 1948 the total sum of \$85,293,236 has been spent in the construction and maintenance of highways, roads and streets within the boundaries of Division 3 of the highway department's working map.

Division 3 contains some rugged country within its limits, which embrace all of Coos, Curry, Douglas, Jackson and Josephine counties, together with parts of Klamath and Lane. There are 12,737 square miles of not too level territory in the first five of these counties while Klamath and Lane hold 10,567 more between the two of them.

In the 31 years during which the various highway commissions and the engineers have been making motor transport easy and increasingly available throughout Oregon, 919 miles of main trunk highways have been built in and through the seven counties of Division 3, plus 444 miles of secondary hard surfaced feeder highways, while at the same time material assistance has been given in both financing and engineering the improvement of 7,304 miles of county roads and city streets not on the state highway system.

Included in this construction is that portion of the Coast Highway from just south of Yachats to the California line; the Pacific Highway from Junction City to Ashland and beyond to the California border; the Redwood Highway from the south to Grants Pass, the east and west ways from Eugene to Florence; from Drain to Reedsport; from Roseburg to Coquille, not to mention much of the McKenzie highway, the Green Springs and the Willamette Pass roads to the east. The rugged going over these various routes is evidenced in some degree by the fact that construction expenditures on the 919 miles of primary highways over the 31-year period have averaged approximately \$62,570 a mile.

Of the total spent in the division during the 31-year period, \$65,835,461 was for construction and \$19,457,775 for maintenance. State highway funds accounted for \$34,609,486 of the construction cost, government funds \$23,963,830, the counties contributed \$5,527,394 (a sizeable portion of which came from the 19 percent contributions from the state highway road user money), while \$1,527,176 was the 10 percent also contributed by legislative diversion from highway funds for the sole use of cities on city street construction; \$207,573 was from miscellaneous sources.

All of the maintenance was paid out of state funds except \$20,188 put in by the counties and \$96,546 from federal funds.

It cost \$57,499,259 to build the primary highways, of which the state contributed, in round figures, \$31 million; the Government \$21 million, of which \$6 million was forest highway funds; and the

counties $\$4\frac{1}{2}$ million. State funds shouldered $\$16,356,522$ of the primary highway maintenance, the government approximately $\$88,000$ and the counties $\$19,000$.

It cost $\$5,160,963$ to build the 444 miles of secondary highways, of which $\$1,702,729$ was forest highway funds, while the maintenance has been $\$2,751,400$. The sum of $\$1,648,063$ has gone into improvement of county roads and city streets not on the highway system. The cities of the district have received and presumably used for street construction an additional $\$1,527,175$ of state highway funds.

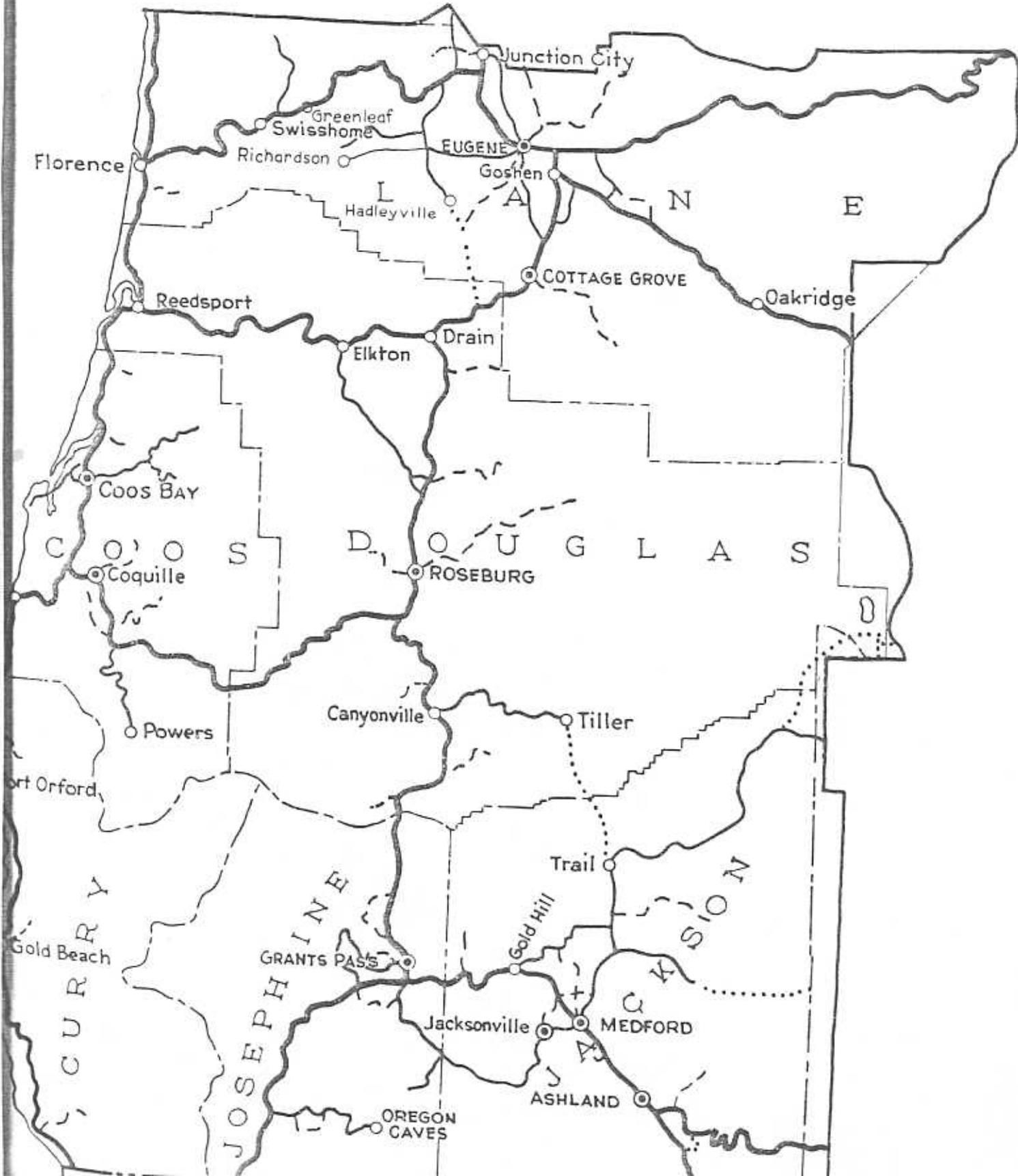
LEGEND

- Federal Aid Highways
- - - (State Hwy)
- - - (County Road)
- ... Highways not on F.A. System

OREGON STATE HIGHWAY DEPARTMENT

Map of

DIVISION NO. 3



DIVISION NO. 4

Division 4, on the State Highway Commission's working map, sprawls over approximately 30,000 square miles of rugged territory, eastward from the summit of the Cascade mountains, to embrace five contiguous counties in their entirety and to carve chunks out of another nine. Those counties which are all inside the district lines are Crook, Deschutes, Jefferson, Lake and Sherman, covering 17,275 square miles. Those which share their aggregate of 31,890 square miles are Gilliam, Harney, Hood River, Klamath, Lane, Linn, Marion, Wasco and Wheeler.

In 1917, when the highway commission started on its job of making and remaking the highway system of Oregon, the ways one went from one point to another in the 30,000 square miles of what now is Division 4 were pretty rugged, tortuous and sometimes hard to find. Between that year and June 30, 1948, the commission has built 1,345 miles of primary trunk highways, has tied 503 miles of secondary highways onto the trunk lines and has aided in the improvement of 7,218 miles of county roads and city streets not on the state highway system.

It has required a total of \$40,934,662 for the construction, and \$18,120,553 for the maintenance of these improvements; a grand total of \$59,055,215 for the district. State highway funds contributed, directly, a total of \$20,225,007 to the construction bill, plus \$857,830 (ten percent of highway revenue diverted by the legislature for city street construction) and the nineteen percent contribution of road user funds made to the counties, which amounted to \$3,445,796 during the 32-year period. Federal funds allocated to the district were \$16,159,948, while miscellaneous funds of \$146,079 made up the remainder. The state footed all of the maintenance cost except \$58,010 from the federal government and \$2,758 put in by the counties of the district.

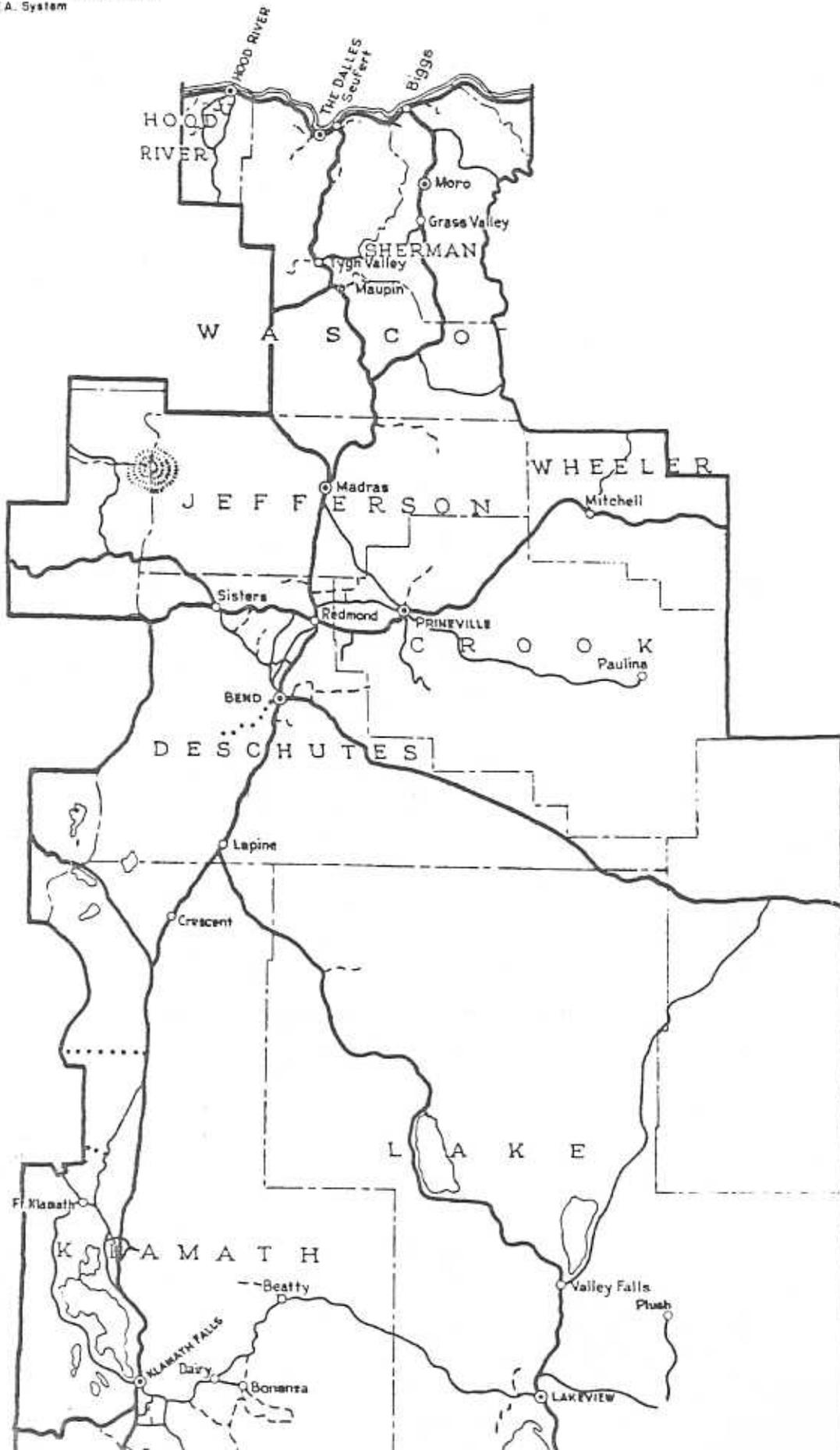
Dividing the aggregate totals up: \$31,707,590 went into the construction of the 1,345 miles of primary state highways in Division 4; \$16,273,586 into their maintenance. A total of \$2,904,670 was spent for construction of the 503 miles of secondary highways, while their maintenance cost an additional \$1,714,281. It cost \$1,557,869 to do the improvement work on the division's 7,218 miles of county roads and city streets not on the state highway system, plus \$132,684 from the state highway fund for maintenance.

Finally, \$3,906,701 was expended for forest road construction, of which the counties contributed \$279,729.

DIVISION NO. 4

LEGEND

- Primary Federal Aid Highways
- - - Secondary (State Hwys)
- · - Secondary (County Road)
- State Hwys. not an F.A. System



DIVISION NO. 5

Thirty two years ago, before the Oregon State Highway Commission started building roads out of gasoline taxes, automobile license fees and some local tax money, the nine big far eastern counties of the state had their 39,000 square miles of wide open spaces threaded here and there by what county roads their local county taxes had provided. These nine counties now comprise what is known as "Division 5" on the commission's working map, one of the five segments into which the state has been divided for purposes of efficient operation and maintenance. They are Baker, Gilliam, Grant, Harney, Malheur, Morrow, Umatilla, Union, and Wallowa.

In the years since 1917, until June 30, 1948, there have been expended on the state's highway system \$340,204,073 of state, federal, county and miscellaneous funds.

Of this gross total, \$68,093,910 has been spent in the nine counties of Division 5 on the construction and maintenance of primary and secondary highways, county roads and city streets. With the money, there has been constructed and maintained, 1,414 miles of primary (state trunk), and 795 miles of secondary highways (10,726 miles of county roads and city streets not on the highway program have been improved), - all of them built to standards set by The United States Bureau of Public Roads and the State Highway Commission. All of them either paved, hard surfaced or macadamized.

In payment for construction, the sum of \$23,616,503 came from state funds; \$18,477,718 from federal allotments; \$4,530,750 from county funds (local county taxes and diverted highway revenue combined); \$314,628 from miscellaneous revenues; and the remaining \$1,033,631 was state highway road user revenue, represented by the 10 percent allocation which was voted by the legislature for the use of the city governments on city streets.

Breaking the totals down a step further, \$19,461,071 in state funds have been expended in the construction of District 5 primary highways, while the government has contributed \$11,898,738 for the same purpose. The counties in the district contributed a total of \$3,776,153 to the same account. It has cost \$16,861,107 in state highway funds for maintenance of these main highways during the period, with the federal government adding \$47,974 and the counties but \$14,658 to the job.

The commission has spent state funds amounting to \$3,899,951 for the building of secondary highways and \$2,999,088 for their maintenance; and government funds amounting to \$2,739,631 for construction and \$2,012 for maintenance. A total of \$125,223 in county funds was spent for construction and \$2,035 for maintenance.

Turning to local roads, the commission has furnished \$255,479 of highway funds, and the federal government has furnished \$193,238 in the construction of county roads and city streets together with \$193,145 of state and a minimum dot of \$67. in federal money for maintenance. The counties contributed \$53,814 toward construction and but \$588 to maintenance throughout the district during the period.

In addition to these expenditures, the counties have furnished \$575,558 and the federal government \$3,646,110 in the construction of forest roads within the district, while the 10 percent contribution of total highway revenues diverted by the legislature since 1944 to the use of the cities for construction of city streets not on the state highway system, has added \$1,033,631 to the amounts which have been expended or allocated for constructing and maintaining the state and local transportation avenues within the 9 counties.

DIVISION NO. 5

LEGEND
 Primary Federal Aid Highways
 Secondary (State Hwys)
 Secondary (County Road)
 State Hwys not on F.A. System



S E C T I O N T H R E E

A GENERATION'S REVIEW

A generation has come to Oregon since the state took its first concerted step in the construction of a highway system of modern standardized roads. Thousands have faint, if any, knowledge of the conditions, the circumstances, the men and the means from the merger of which the present system has developed.

In the belief that a recital of some of these matters would be of interest both to those to whom it comes new and to those for whom it revives memories, a series of glances into past highway history has been compiled and is presented in their order and in the hope that it will be of value and of interest to those who may read them.

SECTION THREE

FIRST STEPS OUT OF THE MUD
1910 - 1913

Oregon took its first decisive step to lift its feet out of the winter's mud and summer's dust in November 1910, when it adopted a constitutional amendment, by an affirmative majority of 18,369 votes, granting the power to counties of the state to issue bonds for the construction of permanent roads. Two years later, at the general election in November 1912, the 144,113 voters who went to the polls put on their big show. That was the year they handled 30 proposed constitutional amendments ranging all the way from woman suffrage to abolition of the state senate, together with 30 proposed measures running all the way from fixing the 8-hour day on public works, passed by 16,430 votes, to the abolition of capital punishment, which later was turned down by a majority of 19,607 votes.

They voted, by an affirmative majority of 16,005, to issue state bonds up to 2 percent of the assessed valuation of the state for the construction of permanent state roads. At the same time they put a 2 percent limitation on the power of counties to bond themselves for county roads, that by a majority of 13,400 votes.

That done, the voters started voting "no". They swatted a proposed initiative bill giving counties unlimited power to issue bonds for roads, by a negative majority of 24,913. They turned down a bill initiated by the State Grange putting road construction and bond issuance in the hands of the county courts by a negative majority of 7,104 votes, and they heaved out a second Grange bill creating a state highway department consisting mainly of a \$3,600 a year state highway engineer and a \$12,000 annual budget. The department was to function in an advisory capacity to county courts who were to have control of road construction in their respective counties. That one had a 59,974 negative majority piled up against it. They plowed under by a 44,693 negative majority another initiative bill proposing to set up a "State Road Board", consisting of the Governor, Secretary of State and State Treasurer, who should appoint a state highway commissioner, at \$3,600 annually, the department to be financed by bonds issued at the rate of \$1 million annually. The counties were to get two-thirds of the funds raised by bonds after deducting the \$12,000 allocation to the department, which was to have absolute supervision of the expenditure of the remaining one-third, this to be divided equally between the first and second congressional districts; the first district at that time being

approximately all of Oregon west of the Cascades, the second district all of Eastern Oregon.

To wind up the day's work, the voters registered a 16,599 negative majority against another proposed initiative measure giving unlimited authority to bond counties by popular initiative vote for the purpose of raising funds for road construction to be expended by the county courts.

All of these various proposed amendments and measures were initiated by different groups, the only ones whose parentage was indicated in the voters pamphlet being the grange amendment and bill.

As a final twist the voters' approval of the 8-hour day for all public works was destined to have a very material effect in upping the costs of road construction throughout the state.

This brings the preview up to the legislative session of 1913 and its statute setting up the state highway commission with Governor West, Secretary Olcott and Treasurer Kay in command and Major Bowlby as the first state highway engineer as field general of the baby state highway program.

THE ORIGINAL HIGHWAY DEPARTMENT

The shouting and the tumult centered about the seven divergent road building initiative proposals at the 1912 November election barely had subsided when the 1913 legislature met and picked up the war clubs again.

In the November 1912 battle, the state grange had a program of its own, an amendment by which counties could bond themselves by election called by the county courts, and a proposed initiative statute providing for a state highway engineer appointed by the governor who would operate in the nature of an advisor to the different counties in their construction of county roads. That group wanted the counties to run the show, each building its own roads as, when and where it might desire.

Governor Oswald West, who was fighting strenuously and persistently that session with the controlling senate machine, had entirely different ideas about permanent road building, both in 1912 and 1913. In the former year he had been an active advocate of the "state road bonding act," which was diametrically different than the grange bill. It provided for a state highway commissioner, appointed by the governor at \$3,600

annual salary and expenses, the total not to exceed \$12,000; for the issuance of 30-year state bonds at the rate of \$1 million annually -- bond revenue together with two-thirds of the annual motor license taxes to go into the state highway fund for road construction. Two-thirds of the aggregate was to be set aside for use by the counties; one-third to be divided equally among the counties, one-third in proportion to assessed valuation and one-third in proportion to area. Counties with an assessed valuation of \$10,000,000 or more were required to show they had raised a fund equal to their share of the state highway fund apportionment in order to get it. Other counties could get their state share by putting up half the sum in county funds. One-half of the state's share was to be spent in the first and one-half in the second congressional district, there being but the two districts at that time.

This bill met the violent opposition of State Grange Master Charles Spence and many members of the state grange convention held at Roseburg not too long before the election. Governor West, who got along fairly well with Spence, went down to the convention and talked it into endorsing the \$1 million bonding bill. Elated, he boarded the train for Salem, but long before it had reached Eugene, Spence and his convention suffered a change of heart, rescinded their endorsement and turned the heat on the bill. It went into the discard by a 44,693 negative majority. West, however, had the satisfaction of seeing the Grange bill plastered on the same day with an adverse majority of 59,974 votes.

That was the picture when the 1913 legislature convened. West, chafing over the slaughter of his \$1 million dollar adopted brain child, joined hands and made medicine with Senator I. N. Day of Multnomah (the two were not supposed to be either politically or officially on speaking terms). Day was a strong advocate of a system of state highways to be financed by bonds and constructed under the direction and control of a state highway commission.

In 1913 the main battle cry of legislative candidates was the "abolition or consolidation of state boards and commissions." Accordingly, to get around that hurdle and past the grange opposition to state bonds, West and Day made the governor, secretary of state, and state treasurer into a state highway commission, set up a state highway engineer with a working organization as the highway department, and gave it all the money it could raise out of a $\frac{1}{4}$ mill state tax levy with which to carry on, approximately \$248,000 annually.

During much of this time Samuel Hill, Northern Pacific Railroad tycoon and son-in-law of the illustrious Jim Hill, had been battling for state highway construction in the state of Washington. He had put his own money into the construction of the scenic loops at Maryhill, partially financed the road to The Dalles from Goldendale, and the Washington legislature gave him some money to start the North Bank highway. But

when Hill's program ran into heavy construction costing \$30,000 a mile, both Governor Lister and the legislature developed cold feet, cut out more appropriations, so Hill came down to Salem bringing his two chief road enthusiasts with him: Major Henry L. Bowlby, West Pointer and engineer; and Samuel Lancaster, who had been sent to Europe to study European road building methods; together with Charles H. Purcell, noted bridge engineer.

Major Bowlby was appointed state highway engineer at \$3,600 a year; Lancaster went to work as his assistant at \$450 monthly and took over the location of the Multnomah end of the Columbia River Highway; Purcell commenced designing bridges for \$175 a month -- and the highway program was born.

OREGON'S INITIAL HIGHWAY MAP

The 1913 legislature when it set up the first state highway machinery specified that the state highway engineer was to make a general state highway plan of the state and within one year from the effective date of the law was to prepare a map of the main highways which, in his judgment, were of sufficient importance to be designated as a system of trunk or state roads to be improved and maintained at the cost of the state. This map was to be approved and adopted by the commission. A direct tax levy of $\frac{1}{4}$ mill on the assessed valuation of the state was provided for financing the state highway commission in its operations.

State Highway Engineer H. L. Bowlby submitted the map one year to the day from the effective date of the law, or on June 3, 1914. It was adopted September 5, 1914 by the then highway commission, Oswald West, Ben W. Olcott and T. B. Kay. This map outlined:

The Columbia Highway, starting at Seaside, running through Astoria, along the Columbia to Pendleton, then northeast through Milton to the Washington state line. A branch, not named, diverged at Pendleton to run southeast through La Grande, Baker and Huntington to the Idaho line;

The "Oregon Beach Highway," starting at Seaside and running south along the coast to the California line;

The Pacific Highway, starting at Portland and following the general line of the present highway 99-E south to Ashland and the California boundary. The "Capitol Highway" was projected along the general route of the present 99-W from Portland to Al-

bany where it joined the east side line;

The Dalles-California highway ran south from The Dalles through Redmond to Klamath Falls and California's line;

The Central Oregon highway started south from Wasco, to run through Prineville and on south to Lakeview;

Then an East-West line ran from Eugene, via the McKenzie River to Redmond and Prineville. Another projected east-west line left the Central Oregon trunk road at Millican and headed for Burns and on to Ontario.

Those trunk lines represented the state highway construction basis until the 1917 legislature set up the present three man commission, passed the \$6 million bonding act and put the highway construction into high gear.

WHO SHOVELED THE FIRST DIRT?

Just at what point Oregon's highway system first started well might be the subject of debate. Like little Topsy in Uncle Tom's Cabin it seems to have "just growed" at widely separated points in the state and at relatively the same time.

Samuel Lancaster recalls in the first annual report of the commission that road viewers had been appointed in Multnomah County May 25, 1910 at the insistence of E. Henry Wemme and other original highway enthusiasts, to map out the Columbia Highway through Multnomah County to the Hood River county line. The survey was made, the road formally declared a public highway on April 29, 1911, and a county work force built 1.8 miles of steep and crooked roadway. The county ran afoul of the Union Pacific right-of-way and work stopped.

In the fall of 1912, Simon Benson advanced \$10,000 to Governor Oswald West with which to finance his "Honor Camp" where convicts were employed to build the roadway around the base of Shell Rock Mountain in Hood River, which had been assumed to be an impassable barrier. In 1913 construction was undertaken all along the line.

The influence of Samuel Hill, railroad builder and highway enthusiast, in the mapping of the first highway routes ought not to be lightly considered. Prior to 1913 he had been actively fostering the

construction of an "international highway", to reach from Canada south through Washington, Oregon, California to the Mexican border. He built a road from Goldendale to his "castle" at Maryhill, established a ferry across the Columbia from there to Biggs, toward which he contributed largely of his own funds, and was voted money by the Washington legislature to build along the north bank of the Columbia. When his construction there ran into reaches of \$30,000 a mile the Washingtonians developed cold feet, failed to vote more money and Sam Hill came across into Oregon, bringing Major Henry L. Bowlby, Samuel Lancaster and Charles H. Purcell with him.

The 1913 legislature established the first highway department under the command of the State Board, Governor Oswald West, Secretary Ben W. Olcott and Treasurer T. B. Kay, and they took over the job by hiring Bowlby as the first state highway engineer, who, in turn, made Lancaster his assistant and put Purcell at the head of the Bridge Engineering Division.

Lancaster was assigned the task of laying out the Columbia highway through Multnomah to Hood River County, aided by \$75,000 appropriated by Multnomah County to help finance the work.

Jackson County was the first county to take advantage of the county bonding amendment by voting \$500,000 bonds in November 1913 to start at the California line and build north over the Siskiyou "as far as the money will go."

Clatsop County followed suit with \$400,000 to start at the Tillamook line, north through Seaside and Astoria and on East to the Columbia boundary.

Columbia added \$300,000 in bonds and a \$95,000 special tax to finance its section of the highway, about which a recall election swept one set of county officers out and put a new set in before the funds were applied as intended.

Hood River voted \$75,000 in bonds in July 1914. Wasco surveyed a route across the county and scheduled to construct in 1916.

Bowlby assumed office June 3, 1913 and went out March 31, 1915. State Engineer John H. Lewis was given the dual role of that and State Engineer by the 1915 legislature. He delegated the job to his assistant, E. I. Cantine, who served until January 19, 1916, when the supreme court dumped the job back into Lewis' lap where it rested until the reorganization of the department by the 1917 legislature when Herbert Nunn became the first state highway engineer, as the commission now is set up.

Rapid strides were made in construction in the period between June, 1913 and the close of 1916. Major Bowlby, in summing up results to

October 1, 1914, shows that from 1903 to October 1, 1914, a total of \$2,087,869 had been spent in bridge construction while \$19,883,259 had gone into highway construction, a large part of this having come from county bonds and county road levies. The state really took over the highway construction program, commencing with the administration of the first appointed highway commission, consisting of Simon Benson, Portland, chairman; W. L. Thompson, of Pendleton, E. J. Adams, Eugene, appointed March 6, 1917 by Governor James Withycombe.

SIMON BENSON AND CONVICTS STOPPED MOVING MOUNTAIN

Roman slaves built the Appian Way across the practically impassable marshes to Rome a couple of centuries or so B. C. and helped Rome to rest solidly on her seven hills.

Oregon convicts built the first stretch of the Columbia Highway across what had been considered the impassable toe of Shell Rock Mountain a few years "B. C." and proved that the vast pile of rubble would keep quiet and not kick the highway down hill to cover up the O. W. R. & N. railroad tracks below.

The Old Roman built his road with tithes and taxes levied on conquered people. Oswald West financed his construction with \$10,000 contributed by Simon Benson without any duress other than his vision of the future and the public welfare.

Samuel Lancaster relates part of the story in his chapter in the first report of the first state highway engineer. Oswald West chuckles about his part in the highway epic in a reminiscent vein.

Lancaster in his report tells that, "It had been urged that Shell Rock Mountain, in Hood River County, was an impassable barrier"; that if man started tickling its toe the whole mountain would go into convulsions and come writhing down.

West, bred a Democrat, believed that William Jennings Bryan was a man of truth and wisdom, and Bryan had told him the engineers building the Panama Canal had told him that the walls of the Culebra Cut would stop sliding when they had reached the "angle of repose."

That was an angle entirely foreign to the disposition of the then Governor, but it had a soothing sound; Simon Benson had the 10,000 bucks which he was willing for West to gamble with, and the Penitentiary had a lot of convicts with idle hands and no way to use them in constructive endeavor.

So, West took the 10,000 iron men donated by Mr. Benson, picked out a foreman who had been handling "working gangs" at the pen, selected convicts who were eager for an outdoor vacation and sent them up to Shell Mountain to set up an "Honor Camp" and prove Bryan's stuff about the angle of repose. When they had set up the camp, West sent up another 25 men and they went to work building a rock wall out of the toe of the mountain to keep its foot set where it ought to keep on setting.

West confides that, as a great lover of "hosses" he recruited his Honor Camp from among the "hoss thieves" who had been unfortunate in getting caught with the goods. "The way I figured," he says, "any guy who loves a hoss enough to steal it and go to jail has got enough good in him to keep a promise when he makes it." To demonstrate his faith in his theory, he loaned the camp a 22 rifle and a box of shells to shoot jack rabbits, or other game, with which to bolster up their larder and help stretch the \$10,000 over a longer period.

"And", West boasts, "We nailed down the mountain without disturbing its angle of repose, and never lost a man."

And, that is the way the Highway Commission got started around the "impassable barrier" of Shell Rock Mountain when, in the fall of 1912, as Lancaster records, "All work had ceased, for seemingly the Columbia Highway had no backers except a few 'road enthusiasts'," until interest was revived "through the splendid generosity" of Mr. Benson -- the convicts having licked the angle of repose.

In July 1914 Hood River county voted \$75,000 in bonds, which were bought, incidentally, by Benson, and final construction was started on the 4.5 miles between Wyeth and Viento Hill, between which two points the "impassable barrier" of Shell Rock Mountain no longer stood.

STRONG BACKS, SHOVELS AND OLD DOBBIN

"In the good old days" when Oregon started to build highways, road building was done with strong backs, short handled shovels and a combination of men and horsepower directly applied on the works. Bulldozers then were an inventor's dream. Road scrapers were "drags" hauled by horses and mules. Contractors "blew" stumps out of the right-of-way with black powder or dug them out with mattocks and men. Cuts were cleared and fills were made with wheelbarrows, shovels, dump wagons, slips and fresnos.

Most of the tools they used in those days are museum pieces

compared with the equipment contractors employ now; the bows and arrows of early time road building battles. Today one of the primary factors a highway contractor figures on a job is the cost of the gasoline and diesel required to run the ponderous machines he uses. Back in 1913 he figured how much hay and oats he would need to keep his horses and mules pushing against their collars. And men, lots of men, ate like horses after they had been hitched to the end of a short-handled shovel for eight hours or more, so the cost of their fodder was figured in with the hay and the oats.

In those rugged and slow moving days when Oregon's road map was started crawling over the face of the state, manpower was cheap and abundant. A man and his team would put in eight hours, sometimes more, for around \$6 a day. Pick and shovel men earned about as much in eight hours as they now get in two. That was before highway construction money started growing out of gasoline but still was a product of the wayside soil, was scarcer than shovel muscle and harder to get on a highway job.

During the first 18 months of Oregon's highway saga, Major Bowlby, the first state highway engineer, had more men available than the commission had money. He tells about it in discussing "the unemployment situation", with "hundreds of men unable to find work of any kind, and every indication that the approaching winter will be a worse one for the unemployed." He recommended the "adoption of a comprehensive plan" which he estimated would require \$100,000 to take care of 1,000 men for a period of 60 days. It would not get more than 50 percent of the work secured on a contract job, the Major estimated, "but the cities would be relieved of a great problem that is difficult to solve within the limits of a modern city."

The plan as outlined:

"There will be necessary two road camps situated comparatively close together in a part of the state where the climate is not too severe in winter. One of these camps should be outfitted similar to a contractor's camp, the men paid a nominal wage and furnished good board and bunks.

"The other camp should be a stockade camp, with more or less work for the men to do, and board given in proportion to the work done. With these camps established, all unemployed could then be given their choice of working in the first camp and receiving a moderate wage and good food for their work, or of spending the winter at the second camp where they can be kept at the least expense to the public and not become a nuisance by congregating in large numbers in the cities. Such an arrangement, rigidly enforced, would relieve those who are actually in want, and expose those who pretend they want to work but never get farther than the pretension."

So far as the record shows, Major Bowlby's successors never put his Spartan remedy into actual practice.

1917 -- AND DIRT STARTS FLYING

The state of Oregon really started throwing dirt in 1917 when the legislature put highway construction in the hands of a three-man commission appointed by the governor; passed and submitted to the people the \$6 million bond bill together with other assisting legislation.

The commission act was signed by Governor Withycombe February 19 and the first commission appointed March 1. It consisted of Simon Benson of Portland, wealthy lumberman and good roads enthusiast, who was elected chairman; W. L. Thompson, Pendleton banker; and E. J. Adams of Eugene, engaged in the building and loan and real estate business, who drew the short term expiring April 1, 1918. He was then succeeded by Robert A. Booth, lumberman, of Eugene. The commission elected Herbert Nunn as its first state highway engineer and started building highways.

The commission at the outset adopted the rule, which has been adhered to through the succeeding years, that the business of the commission should be carried on by unanimous vote of the three commissioners. It adopted the main trunk line roads, previously recommended by the legislature and outlined by preceding commissions, as the official highway system of the state. These included the Columbia and Pacific Highways, the Roosevelt (Oregon Coast), The Dalles-California, and East-West Central Oregon routes -- the system as a whole being practically that of the present mainline state highway map.

June 25, 1917, the commission went on record, as a war measure, to devote its resources to the completion of the two main trunk lines, the Columbia and Pacific Highways. It was faced with labor and material shortages which hampered contractors and made their bids so high that, in many instances, the commission was forced to carry its work forward by force account. Its equipment at the time consisted, in the main, of 3 concrete mixers, 3 road rollers, 4 rock crushers, 6 auto trucks, plus some miscellaneous tools.

The voters of the state, at a special election on June 4, 1917, cast an affirmative majority of 13,513 behind the \$6 million bonding act, and shortly thereafter \$2,190,000 of bonds were sold for highway building. In addition to this, \$400,000 of "Bean-Barrett" bonds were sold to match federal cooperative funds, these sums to be added to other funds available to the commission.

By early June of 1917, the new commission had organized and set up its office machinery, and between that time and November 30, 1918, had laid 50 miles of paved highway and 112 miles of macadam; had graded 134.5 miles of roadbed; made surveys for 902 miles of state roads; and designed 95 bridges and 15 culverts, of which 59 of the bridges and 11 of the culverts had been constructed.

In doing all this, there had been expended a grand total of \$3,597,982. This came, \$528,790 from the $\frac{1}{4}$ mill tax levy then in effect; \$281,902 from auto licenses; \$2,077,565 from the sale of bonds; and \$709,725 from county funds.

Oregon, at last, had awakened to the value of good roads as well as their economic necessity through the development of motor transport, and state and local government forces were joining hands to hasten their construction. By the close of 1918 the record shows 11 of the counties had voted the issuance of \$4,017,000 in county bonds for the improvement of county roads and state highways in collaboration with the state commission's program.

MANY BONDS MAKE FAST WORK

The two-year stretch between November 30, 1918 and November 30, 1920 saw the highway commission flush both with money and movement. In October 1919, Commissioner Thompson of Pendleton resigned because he was moving to Portland to join the First National Bank force. He was succeeded by J. N. Burgess of Pendleton, who was killed in Portland about a month later. He was succeeded by Ed. E. Kiddle of Island City, mill and grain operator there. Chairman Benson was reappointed April 1, 1920, but resigned in November, succeeded by John B. Yeon of Portland, wealthy lumberman and builder of the Yeon building in downtown Portland. Commissioner Booth became chairman following the resignation of Benson.

Started rolling in 1917 with a \$6 million bond issue back of it, plus other material financial assets, with labor loosened up by returning soldiers and materials more available, the commission started extending its lines at a much more rapid pace. In 1919 the legislature became even more generous than it had been in 1917 and upped the highway bonds by an additional \$10 million. It set a special election for June 3 and submitted an amendment to the constitution authorizing counties to bond themselves up to 6 percent of their assessed value. It submitted to a vote at the same election the \$2,500,000 Roosevelt Military Coast Highway Bonding Act and, as a final gesture, passed and

submitted the Market Roads Tax Bill, which authorized the counties to levy an ad valorem tax of 1 mill for county road construction in connection with the state program.

All these commitments were approved by the voters by large majorities and the legislature impelled by road-building momentum held a special session in January 1920, set another special election for May 21 and submitted more financing legislation to the voters. One was a further amendment to the constitution increasing the bonding limit for road financing from 2 to 4 percent of the state assessed valuation. It also submitted an additional constitutional amendment giving the power of eminent domain over land needed for public roads. As a final largess, it authorized still another \$10 million bond issue, this dependent upon ratification of the 4 percent amendment, which was ratified at the election by a large majority.

Thus armed, the commission expended during the two years, 1919 and 1920, the total sum of \$20,234,177, exclusive of market roads, in highway construction. Of this total, state funds represented \$17,658,547; county cooperation \$1,237,090; and federal aid funds \$1,320,879.

This total expenditure bought 347.2 miles of paved highway; 369.4 miles of macadam; 761.4 miles of grading. During the same time the government had expended on forest roads a total of \$1,568,241, resulting in 134 miles of grading and 57.6 miles of surfacing being completed or under construction as the year ended. A total of \$1,311,300 was expended in bridge construction and design.

The biennium closed with funds on hand and more available, many contracts under way and pending, and the highway program going forward in high gear.

OREGON'S, UNCLE SAM'S, MINDS MEET

On November 24, 1922, Oregon's highway system -- so far as federal aid is concerned -- was "jelled" when the federal bureau of roads and the Highway Commission reached "a meeting of the minds" regarding the designated highways, and the mileage, for the construction of which the government would allocate its funds. This agreement made no material change in the main or trunk line highways which had been set up by the Commission, but it established a definite basis for joint endeavor which has not since been changed except by an increase in the percentage of federal funds allowed.

The first federal aid law limited federal funds to "post roads" or roads over which the mail was to be carried. Later this was changed to "such projects as will expedite the completion of an adequate and connected system of highways, interstate in character". It required further, that before federal aid would be given, the state must set up a system of highways not to exceed 7 percent of the total highway mileage in the state and that federal money should be spent within the mileage limits of that 7 percent. Those provisions have been modified by an amendment increasing the percentage by one point whenever the designated roads were 90 percent completed.

The state in 1922 had 41,825.7 miles of public roads, which entitled it to a federal system of not to exceed 2,927.8 miles. The remainder of the road mileage was left to state, county and city financing and it is upon this crystallized program that the commissions have been laboring since 1922.

Oregon's highways in the beginning were 16 feet in width, as compared to 15 feet in California. On that standard, the close of 1922 saw the state with 837.7 miles of paved highways; 1,197.3 surfaced with macadam or gravel; 1940.2 still unimproved. In other words, "more than 50 percent of the system as then contemplated had been completed with practically all of the more important and most expensive portions entirely completed."

That was the optimistic view of the commission on November 30, 1922, when its biennial report states: "Except for the construction of one single mile of pavement (through Rainier) the Columbia River Highway is, at the end of 1922, a completed highway." "The completed cost, exclusive of those sections within cities and towns, will aggregate approximately \$11 million." "The Pacific Highway, 345 miles in length, stands practically completed; 327 miles paved, the remaining 18 miles improved to a very excellent all-season road."

The Roosevelt Highway had been "extensively improved" but not yet "opened over its entire length." Its total cost when completed was estimated at \$10 million, covering its entire 409 miles.

That was the way they felt about the highway job when the commission balanced its books as of November 30, 1922. From the beginning of the highway endeavor in 1913 up to this later date, the commission had expended \$56,809,107 in highway construction and its contingent expenses. Of this total, state funds, from bonds and other revenue sources, represented \$43,963,030; county cooperative funds, \$8,202,166; federal funds, \$4,546,530, and railroad funds \$97,381. Of this total, approximately \$31 million were expended during the 1921-22 biennium.

Up to then, the commission had been wheeling along on 16-foot highways and believed they could see the sunset of their endeavors with

their job more than half done. They did not foresee how fast, or how far, the economic world was going to travel on rubber; envision the fleets of 72,000 pound trucks, the millions of motorists, the high speed and the superhighways. They thought they almost were ready to hang up their tools. In reality, they had just outlined the backbone and a few of the ribs of their final handiwork.

HOW JUDGE DUBY GOT HIS JOB

Oregon elected a new governor in November, 1922: Walter M. Pierce, Democrat, of Union County. "According to custom," the three members of the highway commission resigned and during March and May three new commissioners took over the pilotage of the highway program. They were Judge William Duby, of Baker, elected chairman; Judge Wade H. Malone, of Corvallis, and Henry B. Van Duzer of Portland.

Maybe if a paragraph or two of heretofore unpublished political history happened to creep in at this point to break the chronology of bonds, contracts and paving mileage, it might prove an interesting diversion. Anyway, the story is that Ward Irvine, then Governor Pierce's secretary, was sent down to Portland to see former Governor Oswald West, also a Democrat, to ask what West knew about the character and qualifications of "Judge Duby." West thought that Irvine said "Judge Derby". As it happened, Andrew Jackson Derby, County Judge of Hood River County, was a warm personal friend, as well as a real Andrew Jackson Democrat, and when West finished recounting all the good points of Judge Derby, that Hood River magistrate easily could have been fitted with a man-sized halo. Irvine expressed himself as very much pleased, observing that the Governor also would welcome the information as the Judge had been highly recommended for appointment.

"When I read a day or so later of the appointment of Judge Duby, of Baker, I was totally flabbergasted," West confides. "But it was all right anyway, Judge Duby was a good man even though at the time I did not know him at all."

West also reminisces that at about the same time it came to him via the grapevine route from Salem that the Governor was hesitating between the appointment of his oldtime buddy and Democratic colleague in the state senate, Milton A. Miller, then resident in Portland and who wanted the job, and H. B. Van Duzer, Portland lumberman and prominent citizen who did not seem at all anxious to be bothered with it. Somehow -- West is somewhat naive about this phase of the story -- this circumstance got circulated around over Portland in the newspaper shops

and among civic leaders, resulting in an immediate and converging barrage upon the Governor's office urging Van Duzer's appointment on the one hand and upon Van Duzer to accept it, if offered, on the other. It came, Van Duzer accepted and served through the Pierce administration as commissioner, and as chairman through the four years of Governor I. L. Patterson's administration and on into the Meier tenure, when he resigned.

Commission Duby had served as county judge of Baker, Commissioner Malone as county judge of Benton County.

State Highway Engineer Herbert Nunn also joined his three commissioners in resigning to accept a position as City Manager in the City of Santa Barbara, California, and Roy A. Klein, who had been assistant state highway engineer and secretary to the commission, succeeded him.

LOGS WEIGHED HEAVY IN 1923

In the period embracing 1923 and up to November 30, 1926, the highway commission commenced to face rapidly developing problems of administration and control, as well as those of heavy construction. Up to December 1, 1926, it had issued \$38,700,000 of highway construction bonds. In 1922 it had commenced to feel the weight of annual principal and interest repayment charges which came out of highway revenue. It was confronted with rapidly increasing traffic on the roads it had constructed and was constructing, passenger cars including those locally owned and an incoming flood of tourist travel; freight trucks continually growing bigger and heavier -- and log trucks insistent upon loading to the weight limits allowed, and beyond.

As a result of these combined conditions, highway maintenance was shooting up, replacements and reconstruction was becoming a major item, early pavements were proving too narrow to meet the demands of bigger and faster equipment and the light roadbeds which seemed adequate in the beginning -- paving, oiled macadam, crushed rock and graveled surfaces -- were breaking under the continual beating of ever heavier and faster use.

The 1923-24 report points out that "the program of the present biennium has, in a large measure, consisted of completing unfinished contracts, placing new contracts to fill gaps in the main through highways and extending branch highways as well as maintaining previous construction so that travel may secure the maximum benefits from the

state highway investment." During the biennium, it laid but 36.7 miles of pavement, built 580 miles of gravel or crushed rock surfaced roads, did 415 miles of grading and built 115 bridges of more than 20 feet span. Forest road construction consisted of 154 miles of surfacing and 142 miles of grading.

A total of \$21,117,597, excluding market roads, was expended during the biennium, of which \$14,269,970 was state, \$3,785,883 county, \$223,876 railroad and \$2,837,866 federal aid funds.

It was noted in the 1923-4 report that 2-inch bituminous and 6-inch cement concrete pavements "were not adequate" and "must be thickened and widened to meet increasing demands of traffic." The cement standard was boosted to "7 inches with thickened edges."

"The protection of the roads against overloading and speeding requires constant vigilance," the commission discovered back in 1924, and that far back commenced to have its troubles with log haulers' overloading. Those days, the logger had to put up a bond to indemnify the commission "for any damage in excess of ordinary wear."

The commission concluded its report that it: "strongly recommends that no new roads be added to the state highway map until the present system is completed. It is believed that the present system, which represents approximately 10 percent of the public road mileage, is adequate to cover the needs of the state."

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IN 1926 HIGHWAYS "WERE ADEQUATE"

"In harmony with the demand of the people for a curtailment of public expenditures, and in view of the fact that the state highway system has now reached a state of improvement which satisfies the most pressing of the demands for modern transportation facilities, there has been during the biennial period just closed, a marked slackening or slowing down in state highway operations." This is the first sentence of the 1923-24 report of the state highway engineer.

On November 30, two years later, the commission in its summary for the preceding two years, recalls that 1926 "rounds out a full decade since the inauguration of the present state highway program," and proceeds to take inventory of the progress of those ten years. In 1916 there had been 33,917 registered motor vehicles in Oregon with license fees collected of \$146,232. Outside of Multnomah, excluding a few miles in Clatsop and Jackson counties, "there was no pavement at all." Gravel roads were

"narrow and rough"; there was no "continuity of improvement, with frequent impassable gaps". The "state highway system then existed only on paper; the Columbia Highway had just been opened as a dirt road to Hood River and to Astoria. The Mt. Hood Loop was only a vision. The Pacific Highway was impassable after the first rains, as were all roads leading to the coast. The route to Pendleton was over the hills by a circuitous route involving long steep grades."

At the close of 1926, there had been constructed 178 miles of cement and 550 miles of bituminous pavement, in the 4,468 miles of the state highway system; plus 2,137 miles of crushed rock and gravel surfacing and 2,491 miles of grading. In addition, were 371 miles of crushed rock and 461 miles of grading in the forest road program of the Bureau of Public Roads. Multnomah County and cities of more than 2,000 population, without financial assistance from the state, had paved their streets over which the state highway route ran to give a grand total of 897 miles of pavement; 576 miles of oiled macadam; 1,747 miles of crushed rock and gravel; 301 miles graded and 947 unimproved. 575 bridges over 20 feet in length had been constructed.

In the 10 years, the commission had expended, not including market road funds, \$99,001,922; of which \$12,575,876 was county; \$9,976,414 government; \$462,674 railroad and \$75,986,956 state funds. Bonded debt and interest had claimed \$15,940,531 of the state funds. In addition, upward of \$17 million of state, county and district funds had been expended under the Market Road Law.

In this period the commission adopted the plan and set the first of the concrete mile posts along the major highways indicating the distance from Portland, commencing at Broadway and Washington Streets.

A start was made at widening pavements from 16 to 20 feet to meet growing traffic demands. In 1923, 16 miles of road had been oiled, to lay dust, as an experiment; 55 miles more were added in 1924, in 1925 this was boosted by 160, and in 1926 by another 343 miles -- the birth of the oil mat and bituminous macadam surfacing, which since has spread throughout the nation.

Log overloading and heavy freight trucks, and excessive speed troubles plagued the commission then, as now.

The report ends: "The commission strongly recommends that no new state highways be added to the state highway map until the present system is completed or, at least, farther advanced. It is believed that the present system, which covers approximately 10 percent of the public road mileage, is adequate to cover the needs of the state."

"ONLY 340 MILES REMAIN UNIMPROVED"

At the close of 1930 the highway commission surveyed its accomplishments and decided that its job was almost finished. It was the close of the 14th year since the start of the program, and the commission, in its report, notes that "at the present time on the state highway system of 4,359 miles, 4,019 have been improved and only 340 miles remain unimproved". As of that date, the commission had laid 739 miles of paving (188 miles concrete and 551 of bituminous), 1,572 miles of oiled macadam, 239 of non-skid, and 2,472 of rock and gravel surface; had repaved 54 miles, done 708 miles of resurfacing and 337 miles of regrading. It notes that Multnomah and incorporated cities of not more than 2,000 population had done their own paving without state assistance. During the 14 years 558 bridges over 20 feet in length had been constructed by the commission.

During the 14-year period there had been expended a gross total of \$141,992,545, of which \$14,596,140 was county funds, \$13,222,242 government, \$563,629 miscellaneous, and \$113,610,533 state money. Of the state funds, a total of \$29,241,988 represented payments on bonded debt and interest.

It is noted that "The Pacific and West Side Pacific Highways have been considered as completed, but betterments have been necessary."

Progress had been made on the entire highway network, but already faster and heavier traffic had begun to call for widened roadways, improved curves and flatter grades. The Roosevelt Coast highway had been opened for the greater part of its length, barring heavy construction at such points as Heceta Head, and the commission foresaw a completed road in the late summer of 1932.

The Commission started in 1926 with H. B. Van Duzer as Chairman, C. E. Gates of Medford, and Robert W. Sawyer of Bend as Commissioners. In 1930, Sawyer was removed by Governor A. W. Norblad, and M. A. Lynch of Redmond was appointed to succeed him.

The first of the coast bridges, and the largest up to then undertaken by the Commission, was contracted to be constructed across the Rogue River between Cold Beach and Wedderburn in January 1930, to be completed by December 1931.

ATTRACTING OUR OWN SCRAP

Away back in 1928, almost a quarter of a century ago, automobile tires were not so rugged as now and the highways of the state were not so smooth. Also, farm wagons and horses shared the roads and over the miles they and the old Model T sprinkled hardware -- nails and screws, bolts and staples, and other puncture producing junk along the right-of-way. In those rough days, if an auto tire stuck it out for more than 3,000 miles it was rated almost as a museum piece. Punctures and blowouts were the rule, not the exception, of the day and every wise guy who went very far away from the home plate carried an extra inner tube or a patching and vulcanizing set under the driver's seat.

Roy Klein, who was state highway engineer in 1928, was a kindly and sympathetic man whose heart was hurt by the sight of so many puncture patchers sweating over their tire tools along the scenic reaches of the highway map. They sort of cluttered up the landscape, so he did something about it.

It appears that a young professor in Engineering at Washington State College at Pullman devised and constructed an electro-magnet attached to the under side of a small truck, and Roy Klein had a similar machine built for Oregon.

It is probable that very many more of today's crop of graying motorists still harbor harrowing memories of the punctures of the early 20's than visual recollections of Roy Klein's remedy, called the "nail picker". It isn't stowed away in some cosy corner of the state highway's shops but is used every year on many miles of road, and has saved many from that depressing sound, the hissing tire.

What was it? Let the record speak. It says in the 1928 report: "A new piece of equipment which has been placed in operation this year is a road magnet mounted on a truck. In six months' time this truck traversed practically all of the state highway routes and picked up many thousand pounds of metal, a large proportion of which would be productive of tire punctures." And in the 1930 report: "The use of the road magnet, begun in 1928, has been continued during the two-year period. Thousands of pounds of metal, much of which would be injurious to tires, are picked up each year." And the ancient gadget still is ready for service when and where needed.

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SIXTY-SIX THOUSAND ACRES OF PARKS

The state's system of highway parks and wayside areas was inaugurated in 1925-26 under authority of the 1925 legislature. It grew from a gift by Simon Benson of Benson Park on the Columbia Highway, plus additional gifts from other owners until by the close of 1928 a total of 97 park sites had been secured through gift, purchase, and in one case condemnation at Emigrant Springs, covering practically every section of the state. Mayer Park, of 260 acres, was a gift of Mark A. Mayer. A 197-acre tract at Emigrant Springs was condemned for \$6,900 and \$26,550 expended on buildings. During the biennium a total of \$109,183 was spent for purchase, maintenance and development throughout the state.

Back in 1927, the Commission was bothered by the growth of highway advertising signs, as now. It then adopted the uniform system of road signs and highway numbers established by the American Association of State Highway Officials. It notes that on New Years Day 1928 the Columbia River Highway was blocked by ice and snow through the gorge in Multnomah and Hood River Counties. In 1927, it developed the "non-skid" treatment for "Blacktop" pavements. In 1928, by legislative authority, it assumed Multnomah County's interest in the Interstate Bridge and made a joint ownership arrangement with the State of Washington for its operation as a "non-toll" bridge. Also, it bowed to heavier loads, faster traffic and greater wear, and started building heavier highways and adopted an 80-foot wide standard for right-of-way. It welcomed the advent of "balloon" tires as a partial remedy, at least for the increasing damage caused by increased weight and faster speed. It issued special permits to log-haulers and required bonds to guarantee repairs for excessive road damage by them, as a hoped for remedy for that headache.

ENTER "SECONDARY HIGHWAY" SYSTEM

The period from October 1, 1930 to September 30, 1932 saw some shifts and changes in the State Highway Commission. Governor Julius Meier named Leslie Scott of Portland as Chairman, Carl G. Washburne, Eugene, and E. B. Aldrich, Pendleton, as Commissioners, while R. H. Baldock succeeded Roy Klein as State Highway Engineer, and H. B. Glaisyer was appointed Secretary, they both having long been with the Commission. The Commission faced depression conditions, financed unemployment relief on inefficient day wage basis and at the same time suffered reductions in its own working personnel and general salary cuts.

During that time, also, the 1931 legislature repealed the 1919

1 mill state tax levy for construction of market roads and placed the obligation upon the commission to expend an amount equal to a 1 mill levy (then approximately \$1 million annually) from the state highway fund for construction and maintenance of "secondary highways" (previously handled by property tax levies) and set up the secondary highway system. The commission acting with the county courts, accordingly designated 2,167 miles as secondary highways with more former county highways, leaving it optional with the counties to levy on property for "county roads". All of this put a big crimp in primary highway construction since it deprived the Commission of the use of the revenues diverted to the counties for matching federal aid funds for primary highway construction. From 1920 to 1933, a total of \$33,542,057 was spent on market road construction and improvement.

In spite of all its troubles, the Commission reported a total expenditure on state highways during the biennium (1931-1932) of \$29,847,816, of which \$23,116,490 were state funds; \$443,882 county; \$6,234,835 federal, and \$52,609 miscellaneous funds. Added to this, under the forest highway program, a total of \$2,756,887 (including \$805,275 of state funds listed above) was spent, of which \$239,411 represented county cooperation and \$1,712,201 was government highway funds. Federal land highway funds totaling \$151,530 was spent on secondary highway construction.

COAST HIGHWAY BRIDGES BUILT

The Highway Commission went through a period of stress and struggle during the period ranging from October 1, 1932, to June 30, 1936. During that time the legislature set the fiscal year from July 1 to June 30 to establish uniform state accounting and the commission brought its statistics into line with this procedure. The close of 1936 marked the 20th year of the commission's activities since its beginning in 1917. That period, too, saw the birth of the "alphabet" government - the NRA, the WPA, the PWA - conceived in Washington to bolster sagging industry and ameliorate widespread unemployment by government gifts, grants in aid and loans. The 1936 report sets out gross expenditures during 1917-36 of \$231,384,678 (including the PWA coast bridge projects) of which \$15,606,540 were county funds, \$35,322,019 government, \$179,780,377 state, and \$675,740 were contributions from miscellaneous sources. Of the state funds expended \$53,084,039 were bond and interest retirements. During the 19 years ending December 31, 1935, the Bureau of Public Roads spent \$19,496,319 for construction and maintenance of forest roads on the state highway system, of which total \$12,131,607 were

federal forest road funds, \$2,177,222 county cooperative funds, and \$5,187,489 state cooperative funds.

During this time Henry F. Cabell of Portland succeeded Leslie Scott as Chairman; Judge F. L. TouVelle of Jacksonville succeeded Carl Washburne of Eugene, while Charles K. Spaulding, Salem; William Hanley of Burns; and J. C. Ainsworth of Portland served as Commissioners for brief periods.

The high spot of the four years was the financing, construction and opening of the five coast highway bridges to toll-free traffic. First planned as toll bridges to be financed by revenue bonds retirable out of toll earnings, under a contract agreement with the Public Works Administration, the Commission, under legislative authority, agreed to sell \$4,200,000 of revenue bonds to finance 70% of cost, 30% being a federal grant. Before that agreement was carried out the legislature of 1935, confronted with general public opposition to tolls, authorized the Commission to issue and sell general obligation bonds in the open market, which was done.

The five bridges were built for a total cost of \$5,435,867, (including engineering and miscellaneous charges of \$104,662) the Yaquina Bay Bridge costing \$1,301,016; Alsea-Waldport, \$778,260; Siuslaw-Florence \$527,063; Umpqua-Reedsport, \$581,467; and Coos Bay, \$2,143,391, a total of \$166,132 below the engineers' estimates.

The 1935 legislature also established the Travel Information Bureau which spent \$48,000 in advertising Oregon Scenic resources during that year resulting in a \$35 million tourist crop during 1936.

OLD COLLEGE MEMORIES CLEAR DECKS FOR OREGON COAST HIGHWAY BRIDGES

James T. Rainey, Speaker of the House in the 73rd Congress of 1934 and John T. Gavin, then a well-known lawyer at The Dalles, had been classmates through college, years before. Their close friendship endured though the breadth of the nation separated them. Rainey, in his trips to the West Coast always took time out to visit Gavin at The Dalles.

During 1933-34, when Oregon highway enthusiasts and the Highway Commission were seeking ways to finance the construction of the five Coast Bridges with which to replace the ferry service along the Coast Highway, arrangements were negotiated to secure the necessary funds through the Public Works Administration, under which the Government was to give the state an outright grant of \$1,402,000 and a loan of \$4,200,000 at 4 percent,

to be repaid with revenue bonds issued by the Highway Commission, these in turn to be retired through tolls charged motorists for use of the bridges. Some lawyers questioned the foundation of these bonds without a specific authority by congress for construction of the bridges over the navigable streams they were intended to span. Accordingly J. M. Devers, Attorney for the Commission, drafted a bill to grant this authority and took it to Washington, where, with the aid of Senator Charles L. McNary, it was passed through the senate during the closing days of the session, reaching the house committee the day before adjournment of the congress on June 18, 1934.

Coincidentally, Ex-Governor Oswald West went to Washington on one of his peripatetic trips at that time, and before leaving was given a letter of introduction to Speaker Rainey by Gavin which said that "should he come to him (Rainey) in need of political aid, to see that he got it".

West met Devers in McNary's office and was told that the bridge bill was on the rocks, with no chance of passage on that last day of the session unless it were reported favorably by the committee and brought on the floor by unanimous consent.

West borrowed a telegraph blank and wired Gavin: "Coast bridge bill, now in house, must be reported out favorably and placed on unanimous consent calendar before adjournment or it will die. Kindly wire Rainey as to our need of help." Then he gave Devers his letter of introduction, with the penciled note: "Having found it impossible to present this letter and advise you of the state of our pending coast bridge bill, I have asked Mr. Devers, Attorney for our Highway Commission to call at your office and advise you as to the situation."

In a couple of hours Devers went to Rainey's office where Mrs. Rainey, the Speaker's secretary, was busy on the telephone. Pausing, she asked him what he wished and he handed her the Gavin letter. Glancing at it, she said "I am attending to that now". She located the members of the committee, polled them and secured their favorable report for passage of the bill.

In the meantime, General Charles H. Martin, then a member of Congress, went to the Republican house leader, explained the situation and enlisted his aid to keep the Republican members quiet when the bill was called on the calendar. When the bill reached the Speaker's desk all ready to be put on the unanimous consent calendar, one lone Democratic member jumped to his feet to object.

General Martin, whose well-known regular army vocabulary is still remembered in Oregon, shouted at him:

"Sit down you # * " *&? That is my bill."

"Well, why the hell didn't you say so?" the potential objector said, and sat down.

And, that is the way the bill giving congressional sanction for the construction of the five coast bridges happened to pass the house and become a law on the concluding day of the 73rd Congress, June 18, 1934.

Later, during the 1935 legislative session, General Martin, in the meantime having become Oregon's Governor, gave his support to a measure authorizing the Highway Commission to finance the bridges through the issuance of general obligation bonds, bearing $1\frac{1}{2}$ interest - instead of the 4 percent originally contemplated under the federal loan, resulting in a saving of approximately \$1,800,000 in interest charges.

WAR CLAMPS ON BRAKES

Henry F. Cabell, of Portland, still was sitting in the Chairman's seat of the Highway Commission when the Japs struck Pearl Harbor in December 1941. When he resigned in February 1943, to join the U. S. Army, after more than seven years of service in the position as Chairman of the Oregon State Highway Commission, his tenure of office was exceeded only by that of H. B. Van Duzer, who held the post for approximately $8\frac{1}{2}$ years.

The war's demands clamped the brakes on the highway program so far as continued construction was concerned, except those emergency projects demanded as a part of the war effort to keep needed transport lanes open or extended. Oregon's resources, both in men and materials, went all out to win the war and the Highway Commission turned its reduced personnel and materiel supplies to back up the front line advances.

The close of the 1940-42 biennium also marked the end of the 25th year of the Highway Commission's program as set up by the legislature of 1917 - a convenient time, with new building shut down by the war, to take a casual glimpse at what had been done during all those years; in the nature of an inventory, or at least of a progress report.

From 1936 forward, the Oregon Commission and its engineers (contrary to the thought in some other states) had held fast to the theory that highway standards for construction should, within reason, keep pace with the growth and improvement in motor vehicles. They had widened the pavements to 22 feet, straightened curves, reduced grades, developed non-skid driving surfaces - and had adopted the most modern

design used in America and later had the satisfaction of seeing other states follow in their tracks. They had developed a merit system in the selection and training of personnel which made tenure and promotion dependent upon ability and performance rather than political influence. They had progressed far in the acquisition and development of the highway park system. The Travel Bureau, through its advertising program, had doubled and trebled the tourist travel and its consequent revenue distributed throughout the state.

In the first highway report of November 1914, Major Bowlby, first state highway Engineer, set out that Oregon then had "more than 37,000 miles of roads". Not many of these miles were improved, practically none were paved. State Highway Engineer R. H. Baldock's report as of June 30, 1942, summarizes, both in miles and in money, the march of a quarter of a century.

The report shows 4,809 miles of primary state highway, all paved or improved except 98.83 miles; 2,387 miles of secondary state highway of which but 263.72 miles were unimproved. There are listed 45,614 miles of roadways not on the state highway system, including forest roads, national parkways, county roads, city streets and rural roadways. This adds to a total of 52,810 miles of highways, roads and streets, all but approximately 12,450 of them paved or otherwise improved.

It cost approximately \$175,854,253 for construction on primary and secondary state highways and on sections of county highways improved by the state. Including maintenance and general purpose expenditures, the gross expenditures footed to approximately \$321,703,832, not including federal and county funds amounting to \$20,651,846 expended in constructing 1,957.46 miles of forest highways.

SAM BOARDMAN, FATHER OF PARKS

Sam Boardman became a resident engineer of the State Highway Department on New Years Day 1919. He became Parks Superintendent in 1929. He was 75 years of age in December 1949. He is due to retire July 1, next, under the new retirement rule. He says he is "going fishing" after that, and that he "knows all the good holes where the big fish are." He ought to, for he is the Father of the far flung system of state parks which has been built up under his loving care since the Commission commenced to build that system away back in 1925. But those who are given to guessing have the idea that his vacation will be something like the postman's; he will continue to walk around

the Parks Department and its parks, handy, where he can be consulted by his official successor for some little time yet to come.

The Park system was born in the early days of the Columbia Highway construction when Simon Benson donated to the state the tract of land now named Benson Park, at Multnomah Falls. From that start, it grew rapidly by gift and purchase, and in a few instances by condemnation, until now practically every section of the state has its park or wayside area set aside and preserved for the use and enjoyment of the citizens of Oregon and the visitors who travel the highways of the state.

The legislature of 1925 set aside a percentage of the highway revenues for the purchase, development and maintenance of the highway park system. By the end of 1928 the state had acquired 98 park sites scattered along the highway system of the state; 15 of them being outright gifts by public spirited owners and a total of approximately \$109,000 had been spent in purchase and development.

From the time of his appointment as State Parks Superintendent by the Highway Commission in 1929, Sam Boardman has been gathering the highway parks under the ownership and control of the Highway Commission.

During the period from 1917 to June 30, 1949, the total expenditure of state funds by the Highway Commission amounted to \$354,915,009. Of this total, the expenditure for acquisition, development, betterment, maintenance and operation of parks was \$2,274,344, slightly less than two-thirds of one percent of the amount spent on highways and roads. The total spent in the purchase of parks during the period was \$903,660; for improvements \$508,015, and for maintenance and operation, \$862,669.

Listed in a report of the Parks Superintendent dated June 30, 1949, are 85 major parks throughout the state which have been developed by the department, and 46 yet in their natural, or wild, state awaiting development. In addition, there are 29 developed wayside view stations, drinking fountains and memorials, together with 17 awaiting development.

As of December 31, 1947, a total of approximately 66,000 acres was owned or controlled by the Highway Commission in its park and wayside area.

BANFIELD PLANS POST WAR PROGRAM

When T. H. Banfield became chairman of the Highway Commission February 28, 1943, World War II had clamped the brakes on all highway

construction in Oregon other than that specified by the commanders of the war effort as being of an emergency nature for their assistance. During the 1943-44 biennium some 50 construction projects were carried out, all of them, other than those requested by the army chieftains, being contracts which had been awarded and were in course of completion before Pearl Harbor.

The new chairman took the gavel with two supporting freshmen on his commission team, Arthur W. Schaupp of Klamath Falls succeeding Huron W. Clough, Canyonville; and Merle R. Chessman, Astoria, following Herman Oliver of John Day on April 1, 1943.

The new commission faced adverse operating conditions on every hand. It found it to be practically impossible to secure the needed crushed rock and gravel for use in highway maintenance, due in part to the construction demands for building cantonments, naval stations, air fields, shipyards and housing facilities, and in particular to the difficulty of its contractors in securing repair parts for worn or damaged equipment. Scarcity of lumber interfered with the maintenance of bridges.

Throughout the biennium the shortage of manpower was even more serious than that of materials. Thirty percent of the department's personnel went into the armed services and still more left the department for more lucrative employment in the war industries. The maintenance forces were reduced approximately 27 percent, to overcome which the work week was increased from 44 to 48 hours and special maintenance crews were put on a 54-hour basis. Wages were increased in the lower brackets and women were employed as truck drivers, flagmen and other of the lighter tasks.

Maintenance costs jumped to 40 percent higher than the prewar rate, due to heavier wartime trucks both in war transport and in the logging field, to increased material and supplies cost, increased cost of older equipment operation and increased wages.

But, though lagging in its forward construction program, the Commission proceeded to prepare for postwar demands. It toured the state, meeting with county courts, city authorities and civic bodies asking them to formulate their suggestions for a three-year postwar construction program and report to the Commission. With its engineering personnel depleted by war service, the lack was partially filled by the employment of high school students and women so that the planning work was kept moving.

It was during this biennium that the counties and the cities began to get their definite percentage cuts out of highway road user funds. In 1943 the counties were given 15.7 percent, or \$2,311,569; the cities an allocation of 5 percent, or \$736,163. These funds, pro-

portionately allocated, are earmarked to be expended on county roads and city streets which are not on the highway system. No provision was made in the law for any report to be made to the Commission covering the expenditures of these funds by the county or the city authorities.

S E C T I O N F O U R

SECTION FOUR

HIGHWAY FUNDS FLOW IN AND OUT AGAIN:

HOW COUNTIES, CITIES SPEND THEIR TAKES NOT REPORTED

Without going too far back toward the beginning in 1917, the State Highway Commission has had a gross annual income from state sources, ranging from \$16 million plus in 1945 to \$42 million plus in 1950. This gross comes from motor license fees, gasoline and diesel taxes, motor transport fees, fines and other minor incidental receipts.

But, not all of the gross income has gone into state highway construction and maintenance. In 1945, a total of \$3½ million plus was disbursed as a contribution to the support of the State Police for traffic patrol, to counties of the state under the 19 percent legislative diversion mandate, to the cities under the 10 percent legislative command. In 1950, the joint contributions footed to an estimated total of more than \$12 million. In 1949, counties were loaned better than \$1 million, and in 1950 an additional \$8,000 of highway funds under authority of an amendment by the 1949 legislature.

In addition to the income from state sources, the commission wallet has been fattened during the 1945-50 period by contributions from county cooperative funds: starting with \$1,550 in 1945 and increasing to \$500,000 in 1950; federal cooperative funds starting at \$2 million plus in 1945 and building up to \$6,800,000 in 1950; miscellaneous funds beginning with \$861 in the first year and growing to \$287,000 in the last. The grand total of these additions amounted, during the period, to \$32,158,318.05.

Shaken down, this gave the Commission a net income of \$15,516,581 in 1945 as compared to \$36,978,000 in 1950, an increase in the five-year period of \$21,461,419.

All of the state's highway fund revenue sources yielded a gross income during the six-year period (1945-1950) of \$167,685,194.40. These sources of income, originally, had been dedicated to the construction and maintenance of highways, including bridges, on the designated state highway program. At different sessions the legislature altered this rule, first, by providing that the State Police should be given an annual percentage of the highway fund in return for traffic control work; second, 15 and then 19 percent of the fund was pared off for distribution among the 36 counties of the state in proportion to the

motor vehicles registered in each county; third, 10 percent was taken for distribution among the cities of the state on the basis of population ratio.

It is provided in the statutes diverting these amounts from the highway fund to the counties that such allocated sums are to be used by the respective county governments in the construction and maintenance of county roads not on the state highway system. Likewise, the apportionments given to the cities are to be used solely in the construction and maintenance of city streets other than those over which state highway traffic has been routed by the Commission as an integrated section of the state highway system. The effect of the shifting of these state funds from state highway construction to localized county and city use undoubtedly has been of very material assistance in county road and city street financing, though in the same proportion reducing the extension of state highway construction.

Inasmuch as the law does not require either the county or the city governments to report to any state authority the use to which they put the sums received from the highway fund, the records of the Highway Commission are unable to give any accounting of the results obtained in the development of county roads or city streets through the application of the allotments to the use intended by law.

At any rate, before the Highway Commission commenced to use its \$167,685,194 in the development and extension of the state highway program during the 1945-50 period, it peeled off the sum of \$4,621,790.51 for the State Police to use in making the highways safe for those who use them. It plunked out its 19 percent - \$28,374,978.33 - to the counties for their local use on local roads. It sweetened up the cities with their 10 percent - \$13,078,659.79 - and it loaned various county governments an additional \$1,127,237.78 for local use by direction of still another amendatory statute.

All these advances footed up to \$47,202,666.41 during the six years. They left a grand total net income for state highway work, during the six years, of \$152,640,846.04, with which to finance new state highway construction and meet the continually mounting cost of annual maintenance caused by normal wear and tear, unusual storm damage of the last two winters and the increasingly growing menace of over-weight log trucks, commercial transport, heavier and faster equipment.

The following schedule shows, in tabular and detailed form, the income of the Oregon State Highway Commission for the six calendar years of 1945 to 1950, inclusive:

OREGON STATE HIGHWAY COMMISSION

INCOME - CALENDAR YEARS 1945 TO 1950 - INCLUSIVE

Classification	1945	1946
<u>State Funds</u>		
Motor vehicle license fees	\$ 3,416,141.33	\$ 3,729,610.64
Gasoline tax	11,033,246.54	15,962,001.35
Diesel fuel tax	230,292.05	279,791.30
Motor transport fees	1,962,430.84	2,278,000.12
Fines for traffic law violations	92,046.77	137,066.31
Receipts from rentals, discounts, etc.	4,333.64	59,344.66
City allotments withheld	.....	.....
Refund of balance in State Police fund	.....	.....
Receipts from counties to apply on loans	.....	.....
Subtotal, estate funds	\$ 16,738,491.17	\$ 22,445,814.38
<u>Less Contributions</u>		
To State Police	\$ 428,111.75	\$ 338,708.71
To Counties	2,340,748.48	2,598,427.65
To Cities	745,461.30	827,524.73
Loans to counties	.....	.....
Subtotal, contributions	\$ 3,514,321.53	\$ 3,764,661.09
Total net income, state funds	\$ 13,224,169.64	\$ 18,681,153.29
<u>Cooperative Funds</u>		
County cooperative funds	\$ 1,550.00	\$ 1,550.00
Federal cooperative funds	2,290,000.27	2,339,091.54
Miscellaneous cooperative funds	861.01	385.08
Subtotal, cooperative funds	\$ 2,292,411.28	\$ 2,341,026.62
Grand total net income	\$ 15,516,580.92	\$ 21,022,179.91

*Estimated amount in 1950

1947	1948	1949	1950*
\$ 4,949,150.25	\$ 2,871,162.66	\$ 3,117,269.51	\$10,000,000.00
18,473,988.99	20,184,096.96	22,280,557.40	25,600,000.00
332,122.48	61,959.58	.....	.....
2,940,719.04	5,279,130.46	4,985,254.93	4,750,000.00
213,351.17	253,574.27	250,139.45	225,000.00
76,554.92	48,824.66	44,032.12	25,000.00
.....	250,000.00	375,000.00	250,000.00
.....	.....	.....	241,000.00
.....	.....	.....	423,000.00
<u>\$26,985,886.85</u>	<u>\$28,948,748.59</u>	<u>\$31,052,253.41</u>	<u>\$41,514,000.00</u>
\$ 766,460.09	\$ 1,035,763.45	\$ 1,034,746.51	\$ 1,018,000.00
5,318,951.55	5,078,975.14	5,557,875.51	7,480,000.00
1,116,720.52	2,663,328.79	4,108,624.45	3,617,000.00
.....	.....	1,119,237.78	8,000.00
<u>\$ 7,202,132.16</u>	<u>\$ 8,778,067.38</u>	<u>\$11,820,484.25</u>	<u>\$12,123,000.00</u>
<u>\$19,783,754.69</u>	<u>\$20,170,681.21</u>	<u>\$19,231,769.16</u>	<u>\$29,391,000.00</u>
\$ 16,200.00	\$ 19,722.70	\$ 269,590.62	\$ 500,000.00
6,771,812.00	6,180,173.46	6,555,119.04	6,800,000.00
<u>22,421.33</u>	<u>31,318.34</u>	<u>71,522.66</u>	<u>287,000.00</u>
<u>\$ 6,810,433.33</u>	<u>\$ 6,231,214.50</u>	<u>\$ 6,896,232.32</u>	<u>\$ 7,587,000.00</u>
<u>\$26,594,188.02</u>	<u>\$26,401,895.71</u>	<u>\$26,128,001.48</u>	<u>\$36,978,000.00</u>

THE CITIES GET THEIR TEN PERCENT

Highway users, during the years 1944 to June 30, 1950, inclusive, have contributed to the incorporated cities of Oregon a total of approximately \$12,900,000 for the construction and maintenance of their streets (which are not within the state highway system). This does not include the sum of \$250,000 withheld in each year, beginning the year 1948 by direction of the 1947 legislature to be spent by the Commission on city streets subjected to excessive wear due to unusually heavy industrial traffic, and to be advanced upon application made by the affected cities.

Prior to 1944 city streets not on the state highway system were improved out of revenues derived from direct city property taxes. The 1945 legislature diverted 5 percent of state highway income to use on city streets. The 1947 session increased the take to 10 percent. The allocation is made on the basis of population; with cities of 100,000 population or more on the basis of $\frac{2}{3}$ of the population.

In 1917 when the Highway Commission was created cities were given no financial assistance out of highway revenues. In 1921 the legislature provided that the commission could give assistance to streets in cities of less than 2,000 population over which main line highway traffic was routed. In 1931 the population limit was lifted and it was provided that the Commission "may" construct and "must" maintain all city streets over which highway traffic is routed.

During the period 1917 to 1948, inclusive, the Highway Commission has advanced for right-of-way, construction and maintenance of these city streets a total of \$20,574,480, and now is being obligated under the mandate of these various legislative acts to the construction and maintenance of a continually lengthening mileage of city streets, and this in addition to that portion of the highway revenue under the 5 percent diversion of the 1945 and the 10 percent diversion of the 1947 legislative sessions.

As a result of the 5 and 10 percent allocations the cities received, during 1944-48, a total of \$5,839,203. In 1949 they received \$3,733,624, and in 1950 a total of \$3,366,934.

These sums which have been diverted from state highway construction by the legislature constitute, in practical effect, a state subsidy proportionate to and in lieu of local property taxes for street improvement. That the financial assistance thus granted is material, is illustrated by the amounts received by the individual cities as follows:

<u>City</u>	<u>Population</u>	<u>1944-48</u>	<u>1949</u>	<u>1950</u>
Adams	169	\$ 1,783.78	\$ 1,112.31	\$ 998.86
Albany	5,654	59,677.37	37,212.96	33,417.56
Amity	545	5,752.42	3,935.14	4,190.49
Antelope	90	949.95	592.35	531.94
Arlington	609	6,427.93	4,008.26	3,599.45
Ashland	4,744	50,072.42	31,223.61	28,039.07
Astoria	10,389	109,564.81	68,377.34	61,403.43
Athena	754*	6,445.19	4,962.60	4,456.47
Aumsville	244*	2,135.89	1,605.93	1,442.14
Aurora	243*	2,500.74	1,599.36	1,436.23
Baker	9,342	98,603.83	61,486.29	55,215.21
Bandon	1,004	10,597.12	6,608.03	5,934.07
Banks	336*	2,607.06	2,211.46	1,985.91
Barlow	52	548.85	342.25	307.34
Bay City	538*	4,999.09	3,540.96	3,179.81
Beaverton	1,492*	14,528.59	9,819.90	8,818.36
Bend	10,021	105,770.61	65,955.27	59,228.39
Boardman	110	1,161.04	723.98	650.15
Bonanza	233	2,459.30	1,533.54	1,377.13
Brownsville	960*	9,644.96	6,318.43	5,674.01
Burns	2,566	27,083.87	16,888.65	15,166.15
Butte Falls	339	3,578.10	2,231.20	2,003.63
Canby	1,236*	12,358.58	8,134.99	7,305.28
Canyon City	312	3,293.13	2,053.49	1,844.05
Canyonville	787*	4,966.38	5,179.80	4,651.51
Carlton	964*	9,897.80	6,344.76	5,697.66
Cascade Locks	703	7,420.09	4,626.94	4,155.03
Cave Junction	243*	1,526.45	1,599.36	1,436.23
Central Point	1,156*	11,508.66	7,608.45	6,832.45
Chiloquin	741	7,821.17	4,877.05	4,379.63
Clatskanie	913*	7,472.87	6,009.10	5,396.22
Coburg	654*	4,813.04	4,304.44	3,865.42
Columbia City	327	3,451.45	2,152.21	1,932.71
Condon	918*	9,300.11	6,042.00	5,425.77
Coos Bay	5,259	55,508.19	34,613.19	31,082.94
Coquille	3,327	35,116.14	21,897.33	19,663.99
Cornelius	781*	7,844.33	5,140.32	4,616.05
Corvallis	8,392	88,576.67	55,233.67	49,600.30
Cottage Grove	2,626	27,717.15	17,283.56	15,520.88
Cove	321	3,388.11	2,112.73	1,897.25
Creswell	622*	5,780.30	4,093.82	3,676.29
Culver	181*	1,136.99	1,191.29	1,069.79
Dallas	3,579	37,775.98	23,555.93	21,153.42
Dayton	635*	6,344.88	4,179.39	3,753.12
Dayville	136	1,435.46	895.11	803.82
Delake	638*	.....	.....	3,770.85
Donald	186*	1,869.19	1,224.20	1,099.34

<u>City</u>	<u>Population</u>	<u>1944-48</u>	<u>1949</u>	<u>1950</u>
Drain	986*	\$ 7,964.67	\$ 6,489.56	\$ 5,827.68
Draperville	207*	.....	.....	638.65
Dufur	392	4,137.53	2,580.03	2,316.88
Dundee	209	2,205.97	1,375.58	1,235.27
Eagle Point	451*	3,871.42	2,968.35	2,665.60
Eastside	887*	7,798.76	5,837.97	5,242.55
Echo	454*	4,309.73	2,988.09	2,683.33
Elgin	1,175*	11,284.36	7,733.51	6,944.75
Elkton	214*	.....	1,408.48	1,264.83
Empire	707*	7,345.91	4,653.27	4,178.67
Enterprise	1,787*	18,038.32	11,761.51	10,561.94
Estacada	673*	6,696.09	4,429.49	3,977.72
Eugene	20,838	219,942.89	137,149.57	123,161.48
Fairview	463*	3,219.24	3,047.33	2,736.53
Falls City	715	7,546.75	4,705.92	4,225.96
Florence	605*	5,978.34	3,981.94	3,575.81
Forest Grove	2,449	25,848.92	16,118.60	14,474.65
Fossil	619*	5,615.21	4,074.07	3,658.55
Freewater	1,041*	10,389.07	6,851.56	6,152.75
Garibaldi	899*	5,647.25	5,916.95	5,313.47
Gaston	333	3,514.78	2,191.71	1,968.17
Gates	422*	.....	.....	1,301.99
Gearhart	614*	4,628.46	4,041.17	3,629.01
Gervais	332	3,504.22	2,418.62	2,612.41
Gladstone	1,910*	19,381.14	12,571.06	11,288.92
Glendale	557	5,879.08	3,666.01	3,292.10
Gold Beach	569*	4,428.92	3,744.99	3,363.03
Gold Hill	638*	6,093.58	4,199.12	3,770.85
Granite	86	907.71	566.03	508.29
Grants Pass	6,028	63,624.91	39,674.51	35,628.05
Grass Valley	204	2,153.20	1,342.66	1,205.73
Gresham	2,724*	26,609.42	17,928.56	16,100.00
Haines	377	3,979.20	2,481.31	2,228.23
Halfway	416	4,390.84	2,737.99	2,458.74
Halsey	305	3,219.24	2,007.42	1,802.68
Hammond	422	4,454.17	2,777.48	2,494.20
Harrisburg	860*	7,582.85	5,660.27	5,082.97
Helix	183*	1,542.26	1,204.45	1,081.61
Heppner	1,419*	14,204.24	9,339.44	8,386.89
Hermiston	2,107*	18,625.54	13,867.66	12,453.27
Hillsboro	3,747	39,549.18	24,661.64	22,146.37
Hines	677	7,145.67	4,455.82	4,001.36
Hood River	3,280	34,620.05	21,588.00	19,386.20
Hubbard	501*	4,572.22	3,297.44	2,961.13
Huntington	949*	8,710.61	6,246.03	5,609.00
Idahna	444*	.....	.....	1,369.87
Imbler	182	1,921.00	1,197.87	1,075.70

<u>City</u>	<u>Population</u>	<u>1944-48</u>	<u>1949</u>	<u>1950</u>
Independence	1,608*	16,318.27	\$ 10,583.38	\$ 9,503.97
Ione	262	2,765.38	1,724.41	1,548.53
Island City	177	1,868.22	1,164.96	1,046.15
Jacksonville	1,011*	9,602.69	6,654.10	5,975.44
Jefferson	691*	5,055.80	4,547.95	4,084.10
John Day	962*	9,068.41	6,331.60	5,685.84
Jordan Valley	274	2,892.04	1,803.39	1,619.46
Joseph	593	6,259.05	3,902.95	3,504.88
Junction City	1,415*	13,960.90	9,313.11	8,363.25
Juntura	167	1,299.89	1,099.15	987.04
Klamath Falls	16,497	174,124.09	108,578.39	97,504.31
Lafayette	560*	5,492.30	3,685.76	3,309.84
La Grande	7,747	81,768.76	50,988.47	45,788.08
Lakeview	2,466	26,028.38	16,230.48	14,575.12
Lebanon	2,729	28,804.31	17,961.48	16,129.57
Lexington	223	2,353.75	1,467.73	1,318.03
Lonerock	46	485.53	302.76	271.88
Long Creek	238	2,512.07	1,566.44	1,406.68
Lostine	204	2,153.20	1,342.66	1,205.73
Madras	795*	6,754.51	5,232.45	4,698.79
Malin	535	5,646.87	3,521.21	3,162.08
Manzanita	219*	1,375.69	1,441.39	1,294.39
Maupin	267	2,818.16	1,757.31	1,578.08
McMinnville	3,706	39,116.43	24,391.79	21,904.04
Medford	11,281	119,069.76	74,248.22	66,675.52
Merrill	648	6,839.57	4,264.95	3,829.96
Metolius	40	.....	.....	236.42
Mill City	1,223*	5,229.65	8,049.42	7,228.45
Milton	1,849*	19,225.02	12,169.58	10,928.37
Milwaukie	5,146*	45,239.88	33,869.46	30,415.05
Mitchell	219	2,311.53	1,441.39	1,294.39
Molalla	1,236*	12,134.13	8,134.99	7,305.28
Monmouth	1,072*	11,018.33	7,055.59	6,335.98
Monroe	311	3,282.57	2,046.91	1,838.14
Monument	118	741.24	776.65	697.43
Moro	309	3,261.46	2,033.75	1,826.32
Mosier	216	2,279.84	1,421.65	1,276.65
Mt. Angel	1,279*	12,815.23	8,418.00	7,559.43
Mount Vernon	447*	.....	2,942.02	2,641.96
Myrtle Creek	714*	6,369.63	4,699.34	4,220.04
Myrtle Point	1,613*	15,034.67	10,616.29	9,533.52
Nehalem	291*	2,607.06	1,915.28	1,719.94
Newberg	2,960	31,242.48	19,481.84	17,494.87
Newport	2,019	21,310.34	13,288.46	11,933.15
North Bend	4,262	44,984.96	28,051.23	25,190.24
North Powder	376	3,968.64	2,474.72	2,222.32
Nyssa	2,448*	22,115.05	16,112.02	14,468.72

<u>City</u>	<u>Population</u>	<u>1944-48</u>	<u>1949</u>	<u>1950</u>
Oakland	593*	\$ 5,293.31	\$ 3,902.95	\$ 3,504.88
Oakridge	991*	7,502.58	6,522.47	5,857.23
Oceanlake	557*	4,335.53	3,666.01	3,292.10
Ontario	3,551	37,480.43	23,371.63	20,987.93
Oregon City	6,124	64,638.18	40,306.36	36,195.45
Oswego	2,445*	23,814.24	16,092.27	14,450.99
Paisley	237	2,501.51	1,559.86	1,400.77
Pendleton	8,847	93,379.15	58,228.34	52,289.55
Philomath	876*	9,190.66	5,765.57	5,177.53
Phoenix	641*	5,872.59	4,218.87	3,788.59
Pilot Rock	478*	4,712.69	3,146.06	2,825.19
Portland	203,596**	2,148,934.30	1,340,008.83	1,203,339.32
Port Orford	755	7,968.94	4,969.18	4,462.37
Powers	762*	5,931.19	5,015.25	4,503.75
Prairie City	701*	7,168.23	4,613.77	4,143.21
Prescott	153*	.....	1,007.00	904.30
Prineville	2,358	24,888.44	15,519.66	13,936.78
Rainier	1,183	12,486.44	7,786.16	6,992.03
Redmond	2,164*	22,042.69	14,242.81	12,790.16
Reedsport	1,979*	19,341.81	13,025.19	11,696.73
Richland	254	2,680.95	1,671.76	1,501.25
Riddle	622*	4,003.40	4,093.82	3,676.29
Rockaway	952*	7,938.58	6,265.78	5,626.72
Rogue River	474*	4,614.16	3,119.73	2,801.55
Roseburg	4,924	51,972.31	32,408.32	29,102.94
St. Helens	4,304	45,428.26	28,327.66	25,438.48
St. Paul	183	1,931.55	1,204.45	1,081.61
Salem	30,908	326,230.68	203,427.34	182,679.48
Sandy	660*	6,448.03	4,343.92	3,900.88
Scappoose	502*	4,838.54	3,304.02	2,967.03
Scio	438*	4,076.80	2,882.79	2,588.77
Scotts Mills	227	2,395.96	1,494.05	1,341.67
Seaside	2,902	30,630.29	19,100.11	17,152.06
Shaniko	55	580.52	362.00	325.07
Sheridan	1,504*	15,292.62	9,898.89	8,889.28
Sherwood	563*	5,620.95	3,705.50	3,327.57
Siletz	582*	2,488.68	3,830.55	3,439.87
Silver Lake +	...	133.22	.....	.....
Silverton	2,925	30,873.06	19,251.49	17,288.00
Sisters	656*	4,120.79	4,317.60	3,877.24
Sodaville	99	1,044.94	651.58	585.13
Springfield	3,805	40,161.38	25,043.39	22,489.17
Stanfield	566*	5,073.44	3,725.24	3,345.30
Stayton	1,353*	12,598.05	8,905.04	7,996.80
Sublimity	280	2,955.36	1,842.88	1,654.92
Summerville	80	844.39	526.53	472.83
Sumpter	420	4,433.05	2,764.32	2,482.38

<u>City</u>	<u>Population</u>	<u>1944-48</u>	<u>1949</u>	<u>1950</u>
Sutherlin	1,300*	\$ 11,573.69	\$ 8,556.22	\$ 7,683.55
Sweet Home	2,141*	19,685.50	14,091.43	12,654.23
Taft	489*	.....	.....	2,890.19
Talent	716*	4,021.42	4,712.50	4,231.86
The Dalles	6,266	66,136.98	41,240.96	37,034.73
Tillamook	2,751	29,036.51	18,106.28	16,259.58
Toledo	2,288	24,149.61	15,058.94	13,523.05
Troutdale	211	2,227.06	2,082.86	3,179.81
Tualatin	238*	2,351.34	1,566.45	1,406.68
Turner	554*	4,968.37	3,646.27	3,274.38
Umatilla	370	3,905.31	3,226.98	4,391.45
Union	1,398	14,755.74	9,201.22	8,262.78
Vale	1,374*	12,675.29	9,043.26	8,120.92
Vernonia	1,420*	14,953.76	9,346.02	8,392.81
Waldport	630	6,649.58	4,146.47	3,723.57
Wallowa	992*	8,845.00	6,529.05	5,863.14
Warrenton	1,916*	17,868.65	12,610.55	11,324.38
Wasco	303	3,198.13	1,994.26	1,790.86
West Linn	2,165	22,851.35	14,249.39	12,796.07
Weston	705*	5,256.34	4,640.10	4,166.85
West Salem	2,005*	18,961.87	13,196.32	11,850.41
Wheeler	259	2,733.71	1,704.66	1,530.80
Willamina	886*	8,772.46	5,831.39	5,236.63
Woodburn	2,200*	22,616.65	14,479.75	13,002.94
Yamhill	418	4,411.95	2,751.16	2,470.56
Yoncalla	378*	3,709.85	2,487.89	2,234.14
	566,959	\$ 5,839,203.69	\$ 3,733,624.45	\$ 3,366,934.59

* Population as determined by actual count made under supervision of Secretary of State.

** 2/3 of 1940 census, as provided in Chapter 425, Oregon Laws 1947.

+ The City of Silver Lake was disincorporated in 1945.

THE COUNTIES HAVE HAD GOODLY SHARE OF ROAD USER FUNDS FOR LOCAL USE

Since the beginning of 1920 up to September 30, 1950, the various county governments of Oregon have had allocated to them for the construction and maintenance of purely county roads an aggregate sum of \$69,643,278. This has been in addition to, and entirely separate from, funds used by the State Highway Commission, including federal aid funds, in the building of primary and secondary state highways, and federal funds spent in the construction of forest roads.

Prior to the establishment of the highway commission by the legislature of 1917 all county roads were financed mainly by direct taxes levied on the tangible properties of the different counties through road levies set by the respective county governments; though before the commission's creation the relatively small net returns from motor vehicle licenses were divided among the different counties.

The 1917 legislature shunted all the net motor license fees into the state highway fund, but two years later the lawmakers gave the counties one quarter of the net fees, leaving the highway commission the remaining three quarters. From June 1933 the highway commission was given all the net revenues and the counties were given \$1,600,000 annually. This lasted four years. In 1937 the Association of County Judges and Commissioners persuaded the legislature to increase the take of the counties to 15.7 percent of the total state highway income, with the provision that the aggregate total should not be less than \$2 million annually. That plan endured until the allocation to the counties was increased to 19 percent in 1947, where it now stands.

The practical effect of this arrangement has been to give each county court assurance that it could figure, within a few dollars, on its annual allocation from the highway commission for use in building and maintaining county roads which are not on the state highway map. The sum allocated to each county acts as an offset to county road taxes of an equivalent amount. To what extent the funds thus advanced have served to solve the necessity for local financing, in whole or in a part, is uncertain owing to the fact that the law makes no provision for any report back by the county to the highway commission, or to any state agency, showing the use to which the funds were put. The commission's records show the various allocations as made, but there the record stops so far as it is concerned.

The converse effect of the 19 percent allocation procedure has been to shorten highway commission revenues available for use in constructing and maintaining state primary and secondary highways in an amount equal to the total of county allocations made each year. Stating it in another way, in the period starting with 1920 and including to September of the current year, the state commission would have

been able to devote approximately \$70 million more to the advancement of the state primary and secondary highway program than has been possible due to the diversion of the allocated totals to local use.

The general status of local road construction presently existing would seem to be illustrated by the record of a few of the counties as indicative of the whole list.

Multnomah county is reported to have a total of 1060 miles of county roads as of 1948. Of these, 619 miles were then improved, ranging from concrete paved roads to graded roads. The unimproved miles totaled 441. Multnomah's share in the allocations for 1949 and up to September 1950 foots to \$3,146,826.

Clatsop county has only 198 miles of ways rated as county roads in the 1948 record. Of these but 5 miles are reported as "unimproved." The remaining 193 miles have 11 miles of concrete, 15 miles of oiled surfacing, 162 miles of unoled surfacing and 5 miles of grading. Clatsop's county court has \$208,835 - all of the 1949 and 3/4 of the 1950 allocations to apply on winding up its county road program. Wheeler County is at the bottom of the list of funds allocated. It received but \$22,531.39 for its 1949 and 3/4 of 1950 share. Its recorded county road mileage stands at 392, of which 107 are improved and 285 are yet to be improved. It is worse off than Yamhill which rated 768 in total county road mileage, of which 760 are improved and but 8 unimproved. Yamhill's county court got \$272,695 as its share of the 1949 and 1950 allocations up to date.

A detailed statement of the amounts allocated to each county during the 19 percent period from 1947 to the 3/4 of 1950 allocations inclusive follows. It shows the amounts which have been furnished out of highway fund revenues for local county road construction and maintenance, which is in addition to, but not a part of, the state highway program as defined by statute:

APPORTIONMENTS OF MOTOR VEHICLE FEES TO COUNTIES

Amounts Received by the Counties During the Calendar Year

	<u>Calendar Year</u> <u>1947</u>	<u>Calendar Year</u> <u>1948</u>	<u>Calendar Year</u> <u>1949</u>	<u>3/4 Year</u> <u>1950*</u>	<u>TOTAL</u>
Baker	\$ 62,623.48	\$ 61,523.15	\$ 67,659.17	\$ 62,570.62	\$ 254,376.42
Benton	93,508.45	93,698.13	106,017.06	102,234.81	395,458.45
Clackamas	291,363.55	269,148.57	290,710.40	273,544.81	1,124,767.33
Clatsop	101,963.19	97,708.95	107,060.00	101,775.33	408,507.47
Columbia	87,977.66	82,573.43	88,333.51	81,152.61	340,037.21
Coos	128,767.62	128,599.35	149,169.91	146,362.46	552,899.34
Crook	27,348.98	26,789.64	31,340.41	31,965.72	117,444.75
Curry	20,610.36	20,646.85	23,052.54	23,247.03	87,556.78
Deschutes	84,306.33	79,196.49	87,098.79	83,361.73	333,963.34
Douglas	147,632.81	157,319.84	187,509.60	190,733.02	683,195.27
Gilliam	13,716.71	12,695.64	14,094.66	13,988.31	54,495.32
Grant	27,849.83	27,683.01	31,799.48	31,532.66	118,864.98
Harney	21,406.51	22,039.04	25,590.43	25,574.24	94,610.22
Hood River	52,165.85	50,689.16	54,397.30	50,198.43	207,450.74
Jackson	214,307.92	213,222.62	238,785.62	229,085.51	895,401.67
Jefferson	11,144.67	12,387.02	16,519.28	18,844.58	58,895.55
Josephine	98,279.14	98,656.03	109,656.59	103,522.18	410,113.94
Klamath	183,087.24	172,494.19	185,505.92	172,135.06	713,222.41
Lake	29,185.14	28,410.57	31,436.00	29,851.74	118,883.45
Lane	383,981.64	386,142.76	439,976.07	433,918.91	1,644,019.38
Lincoln	68,937.67	69,304.57	77,503.06	73,696.40	289,441.70
Linn	180,931.01	179,527.97	204,632.64	198,032.94	763,124.56
Malheur	86,942.10	86,968.35	96,951.58	89,554.63	360,416.66
Marion	337,548.02	325,654.33	356,038.01	338,066.27	1,357,306.63
Morrow	22,882.63	21,027.56	23,275.95	23,052.99	90,239.13
Multnomah	1,697,903.12	1,553,628.78	1,631,169.80	1,515,656.21	6,398,357.91
Polk	91,873.53	87,560.68	94,878.85	87,038.28	361,351.34
Sherman	13,723.61	12,770.98	14,304.26	14,057.34	54,856.19
Tillamook	65,133.61	64,072.74	73,311.94	71,165.46	273,683.75
Umatilla	150,357.88	145,211.01	162,281.99	161,423.78	619,274.66
Union	73,760.72	69,374.66	74,447.31	69,083.42	286,666.11
Wallowa	28,681.98	28,051.05	32,088.94	30,735.99	119,557.96
Wasco	57,595.05	55,589.77	61,081.75	59,318.19	233,584.76
Washington	212,924.89	197,623.44	218,322.12	209,754.78	838,625.23
Wheeler	9,944.67	9,876.67	11,317.79	11,213.60	42,352.73
Yamhill	138,583.98	131,108.14	140,556.78	132,137.06	542,385.96
TOTALS	\$5,318,951.55	\$5,078,975.14	\$5,557,875.51	\$5,289,587.10	\$21,245,389.30

* Payments made February 1, May 1 and August 1, 1950

S E C T I O N F I V E

SECTION FIVE

MAINTENANCE COSTS, LIKE TOOTHACHE, GIVE ANNUAL AND INCREASING PAIN

It cost the State Highway Commission's maintenance department an average of more than \$1,527 a mile to repair the damage done to the 7,272 miles of primary and secondary highways in the state during the year ending with the winter of 1949. The repair bill, in round numbers, totalled \$11,108,352. It was \$2,275,827 more than the repair bill of 1948, and there were only 20 miles more of highway in 1949 than in 1948, - new construction which needed no maintenance. Some of this is, of course, due to the devaluation of the dollar. The 1950 dollar will buy about one-half of the 1940 dollar. Then too, the remarkable increase in volume of traffic has caused more highway maintenance costs.

The winter of 1949 was a bad winter, as most folks undoubtedly will recall, and so was the winter of 1948. Snow removal, necessary to keep the main highways open to traffic through the winter, is one major cause for high maintenance costs. It will remain relatively constant, dependent upon the severity of the winter, the extension of mountain mileage and the volume of use. But it was not altogether the weather that gouged the pot-holes in the highways. It springs more directly from the continually growing use of heavier motor truck equipment, driven at increasing speeds, in many instances carrying loads far beyond the maximum limits fixed by law and regardless of the condition of the pavement due to wet or freezing inclement weather.

Much of the high maintenance points directly to those sections of the state highways over which log hauling is most prevalent. The records of the Commission bristle with continual efforts to control this traffic within the scope of the statutes fixing maximum weights and legal equipment together with long lists of violators whose punishment, if any, has been nominal if not inconsequential.

Annual maintenance increased approximately \$7-3/4 million from 1938 to 1949 inclusive, during which period the road mileage increased by 444 miles. The increase on primary highways during the same period was approximately \$5 1/2 million and on the secondary highways was approximately \$2 1/4 million.

Reflecting the steadily mounting annual maintenance cost, the Commission record shows an increase of \$730,802 in 1947 over that of 1946. In 1948 the increase jumped to \$2,043,138 more than that of 1947.

In 1949 the increase over 1948 amounted to \$2,275,827. Following is a statement showing in tabular form the maintenance costs for both the primary and secondary highways of the state system, together with the totals for both:

OREGON STATE HIGHWAY COMMISSION
ANNUAL EXPENDITURES FOR MAINTENANCE
AND MILES OF HIGHWAYS MAINTAINED
YEARS 1938 TO 1949, INCLUSIVE

Year	Primary Highways		Secondary Highways		Totals	
	Amount	Miles	Amount	Miles	Amount	Miles
1938	\$2,711,841.56	4,620	\$ 671,354.56	2,208	\$3,383,196.12	6,828
1939	2,647,270.82	4,680	660,484.22	2,226	3,307,755.04	6,906
1940	2,831,596.58	4,717	751,870.79	2,308	3,583,467.37	7,025
1941	3,195,690.91	4,759	841,418.57	2,349	4,037,109.48	7,108
1942	3,257,396.45	4,781	1,007,673.51	2,361	4,265,069.96	7,142
1943	3,723,831.30	4,790	989,156.13	2,350	4,712,987.43	7,140
1944	4,048,839.87	4,800	1,092,555.82	2,350	5,141,395.69	7,150
1945	3,541,355.78	4,807	1,003,342.39	2,363	4,544,698.17	7,170
1946	4,667,728.38	4,795	1,390,856.86	2,374	6,058,585.24	7,169
1947	5,248,013.74	4,807	1,541,373.80	2,397	6,789,387.54	7,204
1948	6,779,634.73	4,817	2,052,890.42	2,438	8,832,525.15	7,255
1949	8,149,658.26	4,822	2,958,694.69	2,450	11,108,352.95	7,272