

Midvale Road, Passaic County, Showing the Straightening of the Old Line

120958

7534
v 14

FOURTEENTH ANNUAL REPORT

OF THE

DISCARDED BY
PROPERTY
RECEIVED
NEW HAMPSHIRE STATE LIBRARY
18 1964
Division of State Library
Archives and History
Trenton, N. J.

Commissioner of Public Roads

For the Year ending October 31

1907

974.901
R44

TRENTON, N. J.:

The John L. Murphy Publishing Company, Printers.

1908.

NEW JERSEY STATE LIBRARY

OFFICE OF COMMISSIONER OF PUBLIC ROADS,
TRENTON, NEW JERSEY, January 14th, 1908.

To His Excellency, Edward C. Stokes, Governor, and the Legislature of New Jersey:

I have the honor to submit the fourteenth annual report of the Commissioner of Public Roads, for the fiscal year ending October 31st, 1907, with such comments, quotations and suggestions as existing circumstances seem to require.

E. C. HUTCHINSON,
Commissioner of Public Roads.

Report.

ROAD IMPROVEMENT IN NEW JERSEY FOR THE YEAR 1907.

The following is a brief résumé of the work done in the several counties of the State during the year 1907, under the provisions of the "Act to provide for the permanent improvement of public roads in this State."

Atlantic county completed the Hammonton and Atsion road, 6.41 miles, and commenced grading the road from Mays Landing to Downstown, a distance of 13.94 miles. Both of these roads are of more than local importance. The first reduces the distance from northwestern sections of the State to Atlantic City by over 15 miles, while the latter road forms one of the most important links between Atlantic City and southwestern Jersey.

Bergen county still insists that its townships and minor municipalities shall improve their own roads, without any assistance from the county. Hohokus township partially completed the macadamizing of a portion of the Franklin turnpike, 1.59 miles, and surveyed the two remaining portions, a total of 2.65 miles. This improvement, when completed, will make a continuous improved highway from Jersey City to the New York State line. Etna borough finished the Kinderkamack road, 1.14 miles, and Woodcliff borough is fast pushing toward completion Summit and Woodcliff avenues, 1.85 miles. The Kinderkamack road and Summit avenue improvements complete another north and south road through Bergen county to the New York State line. The survey of the Belleville turnpike, 1 mile long, from the Hackensack meadows to the Belleville bridge over the Passaic river, has been made.

Burlington county purchased the Moorestown and Camden turnpike, 3.11 miles, is macadamizing its last section of the Westfield and Camden turnpike, 3.12 miles, and the Lumberton and Medford road, 3.90 miles, and hopes to soon finish the Red Lion and

Tabernacle gravel road, 3.65 miles. In addition to these, the survey of the Indian Mills and Atsion road, 4.28 miles, has been made.

Camden county finished three roads commenced in 1906: namely, Blackwoodtown, 2.53 miles, King's Highway, 1.55 miles, and Linden avenue, .98 mile. In addition to these, it has built the Haddonfield and Coffin's Corner road, 3.15 miles, Cove road, 1.78 miles, and the Berlin and Milford gravel road, 4.05 miles. It also purchased the Camden, Ellisburg and Marlton turnpike, 9 miles. The Blue Anchor gravel road, 2.33 miles, has been surveyed.

Cape May county completed the Goshen road, 4 miles, and did considerable work on the Tuckahoe road, 3.46 miles. The Sea Isle City turnpike, 2.605 miles, commenced in 1906, is just completed. Owing to heavy tides and storms, the work was unavoidably delayed. It also surveyed the extensions of the Goshen road, 2.62 miles, and of the Tuckahoe road, 4.27 miles.

Cumberland county surveyed and prepared plans and specifications for the improvement of the Vineland and Malaga road, 5.40 miles.

Essex county completed Bradford avenue, 1.46 miles, and Mount Pleasant avenue, 1.07 miles. These roads were commenced in 1906. During 1907 it built Horse Neck road, 2.505 miles, and nearly completed Westville road, 1.50 miles, Harrison street, 1.30 miles, High street, .99 mile, and commenced Watchung avenue, .88 mile. The county also took over the remainder of Mount Pleasant avenue, 2.08 miles, and surveyed Central avenue, 3.14 miles, Gregory avenue, 1.70 miles, and Clinton avenue, 2.23 miles.

Gloucester county surveyed the Malaga and Downtown road, 5.74 miles. This connects with the Mays Landing and Downtown road, which is being built through Atlantic county, and, when completed, will connect Gloucester county with Atlantic City.

Hudson county, in connection with Bergen, surveyed the Belleville turnpike, 1 mile long.

Hunterdon county completed the Old York road, 5.37 miles, thus connecting its two largest towns, Flemington and Lambertville. This county also surveyed and prepared plans and specifications for the first section of the White House and Flemington road, 6.48 miles.

COMMISSIONER OF PUBLIC ROADS.

7

Mercer county built the Upper River road, .79 mile, East State street, .49 mile, Quaker Bridge road, 1.50 miles, Princeton avenue, Spruce street and Brunswick avenue, .75 mile, Hamilton avenue, 1.39 miles, Lalor street, .93 mile, and surveyed Elm street, Rosedale and Pennington road, 2.96 miles, Hightstown and Perrineville road, 1.19 miles, Brunswick pike, 3.70 miles, and Hopewell road, 2.03 miles.

Middlesex county completed the Cranbury Neck road, 2.27 miles, and the Port Reading road, .96 mile, both commenced in 1906, and nearly completed the Jamesburg and Dayton road, 2.86 miles, commenced the same year. It also nearly completed a section of the River road, 2.97 miles, and the Cheesequakes Creek road, 1.97 miles. In addition to these, it has taken the remainder of the River road, 1.90 miles, from the township. The county surveyed and prepared plans and specifications for the following roads: Plainsboro and Cranbury, 1 mile, the south end of the River road, 1.68 miles, Avenel and Colonia, 1.60 miles, Woodbridge and Bloomfield's Corner, 1.74 miles, Livingston avenue, 1.10 miles, Perth Amboy and Carteret, 1.32 miles, and the Half Acre gravel road, 3.34 miles.

Monmouth county finished the second section of the Freehold and Colt's Neck road, 2.18 miles, commenced in 1906, and nearly completed the Allentown road, .95 mile. It also completed the greater portion of the work on the Eatontown and Colt's Neck road, 3.25 miles.

Morris county built Sussex turnpike, .69 mile, and surveyed the Denville and Boonton road, 4 miles, and the extension of the Morris Plains and Parsippany road, 2 miles.

Ocean county completed the Berkeley Township Main Shore road, 6.91 miles, commenced in 1906, and is working on the Lakehurst and Lakewood road, 6.36 miles. It has surveyed the Plumstead township section of the Lakewood and New Egypt road, 5.27 miles, and the northern end of the Bayhead, Seaside Park road, 6 miles.

Passaic county built a new piece of road, .858 mile long, connecting and completing the macadamizing of the Paterson and Hamburg turnpike from one end of the county to the other. The construction of this piece of road is of more importance than its length would indicate, as it removes two dangerous grade crossings and avoids two steep hills. This county also built East Twenty-

second street, .264 mile; and the Midvale road, 3.01 miles. This latter is a portion of the main road to Greenwood Lake. The county also nearly completed the Macopin road, 1.86 miles, and surveyed and prepared plans and profiles for the extension of the Midvale road, 3.12 miles.

Salem county is graveling the Aldine road, 1.326 miles. It surveyed and prepared plans and specifications for the Mannington shell road, 1.58 miles, and surveyed the Quinton road, 2.65 miles. Bids on the latter road were advertised for, but were rejected because they were too high. This county also surveyed the Upper Pittsgrove road, 4 miles, and the Borough of Pennsgrove and Upper Penn's Neck road, 4.75 miles.

Somerset county finished the Bridgewater township section of the North Branch road, 3.12 miles, commenced in 1906, and built the Branchburg township section of the same road, with a spur extending from North Branch village to the North Branch station, 3.134 miles. Bernardsville township built the Bernardsville and Oak Stump road, 1.03 miles. The county also surveyed and prepared plans and specifications for Liberty Corner road, 2 miles, South Bound Brook road, 2 miles, and Warrentown road, 2 miles.

Union county macadamized St. George and Leesville avenues, 1.95 miles, and the town of Westfield completed Euclid avenue, .386 mile. The county also surveyed North Broad street, Lyons Farms, .85 mile.

Warren county is macadamizing the Harmony road, 5.36 miles, and has surveyed the extension of the same to the Phillipsburg city line, 2.50 miles.

The year's work, in brief, is as follows:

Roads completed and purchased, 83.322 miles, approaching completion, 63.086 miles, improved roads taken over, 3.98 miles, surveyed, 106.22 miles, a total of 256.608 miles.

All but the last are properly classed as this year's work, while the last is preparatory for next year's work.

COMMISSIONER OF PUBLIC ROADS.

In compliance with the act of March 27th, 1905, we make a statement of cost of roads, as follows:

COST OF ROADS.

Atlantic County.

	Miles.		
Hammonton and Atsion road	6.41		
Cost		\$30,867 85	
State's share		10,289 28	
<hr/>			
Total number of miles	6.41		
Total paid the county			\$10,289 28

Bergen County.

	Miles.		
Kinderkamack road	1.14		
Cost		\$7,424 91	
State's share		2,474 97	
<hr/>			
Total number of miles	1.14		
Total paid the county			\$2,474 97

Burlington County.

	Miles.		
Moorestown and Camden turnpike	3.11		
Cost		\$22,304 41	
State's share		7,434 80	
<hr/>			
Total number of miles	3.11		
Total paid the county			\$7,434 80

Camden County.

	Miles.		
Haddonfield and Coffin's Corner road	3.15		
Cost		\$33,794 69	
State's share		11,264 89	
Berlin and Milford road	4.05		
Cost		10,389 61	
State's share		3,463 20	
Cove road	1.78		
Cost		14,379 91	
State's share		4,793 30	
Camden, Ellisburg and Marlton turnpike ..	9.00		
Cost		45,000 00	
State's share		15,000 00	
<hr/>			
Total number of miles	17.98		
Total paid the county			\$34,521 39

FOURTEENTH ANNUAL REPORT.

Cape May County.

	Miles.		
Goshen road	4.00		
Cost		\$18,720 60	
State's share		6,240 20	
Total number of miles	4.00		
Total paid the county			\$6,240 20

Essex County.

	Miles.		
Horseneck road	2.505		
Cost		\$24,509 55	
State's share		8,169 85	
Total number of miles	2.505		
Total paid the county			\$8,169 85

Mercer County.

	Miles.		
Upper River road .....	.79		
Cost		\$5,487 68	
State's share		1,829 23	
East State street .....	.49		
Cost		7,417 92	
State's share		2,472 64	
Quaker Bridge road	1.50		
Cost		11,733 80	
State's share		3,911 27	
Princeton avenue, Spruce street and Brunswick avenue .....	.75		
Cost		6,280 52	
State's share		2,093 51	
Hamilton avenue	1.39		
Cost		9,994 73	
State's share		3,331 58	
Lalor street .....	.93		
Cost		6,236 00	
State's share		2,078 67	
Total number of miles	5.85		
Total paid the county			\$15,716 90

COMMISSIONER OF PUBLIC ROADS.

11

Morris County.

	Miles.		
Sussex turnpike .....	.69		
Cost		\$7,802	82
State's share		2,600	94
<hr/>			
Total number of miles .....	.69		
Total paid the county			\$2,600 94

Passaic County.

	Miles.		
Paterson and Hamburg turnpike, new line, ..	.858		
Cost		\$19,325	34
State's share		6,441	78
East Twenty-second street .....	.264		
Cost		2,443	00
State's share		814	33
Midvale (Greenwood Lake) road	3.01		
Cost		25,560	61
State's share		8,520	20
<hr/>			
Total number of miles	4.132		
Total paid the county			\$15,776 31

Somerset County.

	Miles.		
North Branch road, Branchburg section ..	3.134		
Cost		\$28,064	86
State's share		9,354	95
Bernardsville and Oak Stump road	1.03		
Cost		8,579	42
State's share		2,859	81
<hr/>			
Total number of miles	4.164		
Total paid the county			\$12,214 76

FOURTEENTH ANNUAL REPORT.

Union County.

	Miles.	
St. George and Leesville avenues	1.95	
Cost		\$13,708 81
State's share		4,569 60
Euclid avenue .....	.386	
Cost		2,738 60
State's share		912 87
<hr/>		
Total number of miles	2.336	
Total paid the county		\$5,482 47
Total number of miles	52.317	
Total paid on contracts November 1, 1906, to January, 1908		\$120,921 87
Total paid supervisors		14,274 75
<hr/>		
Total paid out		\$135,196 62
Appropriation		\$250,000 00
Balance, against which contracts have been filed		\$114,803 38

The following roads were paid for out of the appropriation for the year 1906, but were not completed in time to be listed in the 1906 report:

Camden County.

	Miles.	
Blackwoodtown turnpike	2.53	
Cost		\$28,656 63
State's share		9,552 21
King's Highway	1.55	
Cost		16,372 56
State's share		5,457 52
Linden avenue .....	.98	
Cost		7,589 13
State's share		2,529 71
<hr/>		
Total number of miles	5.06	
Total paid the county		\$17,539 44

COMMISSIONER OF PUBLIC ROADS.

Cape May County.

	Miles.		
Sea Isle City turnpike	2.605		
Cost		\$26,964 59	
State's share		8,988 20	
Total number of miles	2.605		
Total paid the county			\$8,988 20

Essex County.

	Miles.		
Bradford avenue	1.46		
Cost		\$80,018 76	
State's share		26,672 92	
Mount Pleasant avenue	1.07		
Cost		33,344 65	
State's share		11,114 88	
Total number of miles	2.53		
Total paid the county			\$37,787 80

Hunterdon County.

	Miles.		
Old York road	5.37		
Cost		\$41,005 20	
State's share		13,668 40	
Total number of miles	5.37		
Total paid the county			\$13,668 40

Middlesex County.

	Miles.		
Cranbury Neck road	2.27		
Cost		\$23,133 32	
State's share		7,711 11	
Port Reading Railroad road .....	.96		
Cost		7,893 00	
State's share		2,631 00	
Total number of miles	3.23		
Total paid the county			\$10,342 11

FOURTEENTH ANNUAL REPORT.

Monmouth County.

	Miles.		
Freehold and Colt's Neck road, second section	2.18		
Cost		\$23,617 00	
State's share		7,872 33	
Total number of miles	2.18		
Total paid the county			\$7,872 33

Ocean County.

	Miles.		
Berkeley Township Main Shore road	6.91		
Cost		\$26,998 73	
State's share		8,999 58	
Total number of miles	6.91		
Total paid the county			\$8,999 58

Somerset County.

	Miles.		
North Branch road, Bridgewater section ..	3.12		
Cost		\$30,180 70	
State's share		10,060 23	
Total number of miles	3.12		
Total paid the county			\$10,060 23

	Miles.		
Total number of miles	31.005		
Total paid by State			\$115,258 09

The following improved roads were taken over by the counties, under the provisions of the supplements to the road act:

Essex County.

	Miles.
Mount Pleasant avenue	2.08

COMMISSIONER OF PUBLIC ROADS.

Middlesex County.

	Miles.
River road	1.90
Total number of miles	3.98

The total length of improved roads added to our mileage during the year 1907 is as follows:

Paid for from 1907 appropriation	52.317	miles.
Paid for from 1906 appropriation	31.005	"
Taken over by the counties without cost	3.98	"
Total	87.302	"

The following roads are approaching completion, but were not finished in time to be reported in the preceding lists:

Atlantic County.

	Miles.	Cost.	
Mays Landing and Downtown road	13.94	\$34,874 25	\$34,874 25

Bergen County.

	Miles.	Cost.	
Franklin turnpike	1.59	\$13,689 00	
Summit and Woodcliff avenues	1.85	15,649 46	
		\$29,338 46	

Burlington County.

	Miles.	Cost.	
Red Lion and Tabernacle road	3.65	\$8,366 10	
Lumberton and Medford road	3.90	29,950 00	
Westfield and Camden turnpike	3.12	29,131 19	
		\$67,447 29	

Cape May County.

	Miles.	Cost.	
Tuckahoe road	3.46	\$22,980 00	\$22,980 00

FOURTEENTH ANNUAL REPORT.

Essex County.

	Miles.	Cost.	
Westville avenue	1.50	\$10,629 30	
Harrison street	1.30	10,441 60	
Watchung avenue .....	.88	17,022 42	
High street, Nutley .....	.99	10,580 30	
		<hr/>	\$48,673 62

Middlesex County.

	Miles.	Cost.	
Jamesburg and Dayton road	2.86	\$23,112 78	
River road	2.97	25,180 37	
Cheesequakes Creek road	1.97	26,920 34	
		<hr/>	\$75,213 49

Monmouth County.

	Miles.	Cost.	
Allentown road .....	.95	\$9,312 40	
Eatontown and Colt's Neck road, first section	3.25	34,146 46	
		<hr/>	\$43,458 86

Ocean County.

	Miles.	Cost.	
Lakehurst and Lakewood road	6.36	\$22,015 00	\$22,015 00

Passaic County.

	Miles.	Cost.	
Macopin road	1.86	\$18,706 65	\$18,706 65

Salem County.

	Miles.	Cost.	
Aldine road	1.326	\$9,920 90	\$9,920 90

Warren County.

	Miles.	Cost.	
Harmony road	5.36	\$43,509 93	\$43,509 93

	Miles.		
Total number of miles	63.086		
Total cost			\$416,188 45
State's share			\$138,712 82

COMMISSIONER OF PUBLIC ROADS. 17

Surveys for the following roads have been authorized, and plans and specifications for their improvement have been and are being prepared:

Bergen County.

	Miles.
Franklin turnpike, second section	2.65
Belleville turnpike	1.00

Burlington County.

	Miles.
Indian Mills and Atsion road	4.28

Camden County.

	Miles.
Blue Anchor road	2.33

Cape May County.

	Miles.
Tuckahoe extension	4.27
Goshen extension	2.62

Cumberland County.

	Miles.
Vineland and Malaga road	5.40

Essex County.

	Miles.
Central avenue	3.14
Gregory avenue	1.70
Clinton avenue	2.23

Gloucester County.

	Miles.
Malaga and Downtown road	5.74

Hudson County.

	Miles.
Belleville turnpike, with Bergen	

Hunterdon County.

	Miles.
White House and Flemington road	6.48

18. FOURTEENTH ANNUAL REPORT.

Mercer County.

	Miles.
Elm street, Rosedale and Pennington road	2.96
Hightstown and Perrineville road	1.19
Brunswick Pike	3.70
Hopewell road	2.03

Middlesex County.

	Miles.
Plainsboro and Cranbury road	1.00
River road, South end	1.68
Avenel and Colonia road	1.60
Woodbridge and Bloomfield's Corner road	1.74
Livingston avenue	1.10
Perth Amboy and Carteret road	1.32
Half Acre road	3.34

Morris County.

	Miles.
Denville and Boonton road	4.00
Morris Plains and Parsippany extension	2.00

Ocean County.

	Miles.
Lakewood and New Egypt road	5.27
Bayhead and Seaside Park road, North end	6.00

Passaic County.

	Miles.
Midvale road extension	3.12

Salem County.

	Miles.
Mannington road	1.58
Quinton road	2.65
Upper Pittsgrove road	4.00
Borough of Penns Grove and Upper Penns Neck	4.75

Somerset County.

	Miles.
Warrenville road	2.00
South Bound Brook road	2.00
Liberty Corner road	2.00

COMMISSIONER OF PUBLIC ROADS. 19

Union County.

	Miles.
North Broad street, Lyons Farms .....	.85

Warren County.

	Miles.
Harmony road extension	2.50
Total number of miles	106.22

The total amount expended by the State and the number of miles paid for in each county since the passage of the State Aid Law are as follows:

County.	Miles.	Amount.
Atlantic	81.92	\$86,656 63
Bergen	14.175	25,369 86
Burlington	178.341	274,784 77
Camden	95.22	185,256 29
Cape May	29.059	48,269 95
Cumberland	1.22	14,773 23
Essex	94.049	245,359 23
Gloucester	74.895	85,128 27
Hudson	4.76	40,135 27
Hunterdon	10.92	29,875 97
Mercer	122.394	311,336 66
Middlesex	124.78	226,352 04
Monmouth	89.76	159,635 18
Morris	67.825	138,675 97
Ocean	39.77	44,493 17
Passaic	57.249	103,506 63
Salem	22.227	30,980 47
Somerset	73.049	130,954 25
Sussex	7.598	15,416 58
Union	12.549	22,488 28
Warren	33.332	63,558 25
	1,235.092	\$2,283,007 00

The following table shows the number of miles of roads built in each county, in each year, since the passage of the State Aid Law. Also the number of miles built each year and the total number of miles built in each county :

COUNTY.	1892. No. Miles.	1893. No. Miles.	1894. No. Miles.	1895. No. Miles.	1896. No. Miles.	1897. No. Miles.	1898. No. Miles.	1899. No. Miles.	1900. No. Miles.	1901. No. Miles.	1902. No. Miles.	1903. No. Miles.	1904. No. Miles.	1905. No. Miles.	1906. No. Miles.	1907. No. Miles.	Total No. Miles Built.
Atlantic.....					12	10	6.84	4.08		7.08	20.10	13	1	1.51		6.41	81.92
Bergen.....										1.02			9.375	2.22		1.14	14.175
Burlington.....		10.54	20.46	9.75	11.02	10.48	15.08	18.36	8.93	17.36	19.131	27.98	2.48		3.71	3.11	178.341
Camden.....		13.62		8.25		4.125	12.79	2.23	1	4.48	8.80	9.50	5.985	1.40		23.04	95.22
Cape May.....										6	5.394	6.20	2.23	2.63		6.605	29.059
Cumberland.....												1.22					1.22
Essex.....				6.50	6	4.91	9.276	12.07	9.60	9.36	8.723	5.79	8.545	8.24		5.035	94.049
Gloucester.....				7.75	6	5.50	7.59	11.40	4.61	17.44	6.875	7.73					74.895
Hudson.....									2.44						2.32		4.76
Hunterdon.....															5.55	5.37	10.92
Mercer.....			9.46	6.40	10.95	4.75	2.704	10.83	9.16	10.37	15.89	12.30	7.55	16.18		5.85	122.394
Middlesex.....	10.55	3.18	2.36	7.68	8.43	4.75	6.164	13.10	9.01	6.12	14.95	9.52	12.42	8.335	4.981	3.23	124.78
Monmouth.....				3.75	5	5.10	14.46	5.64	6.67	13.25	17.67	5.21	7.47	3.36	2.18		89.76
Morris.....						6.13	6.30	10.46	6.53	4.306	10.079	7.13	5.98	3.59	6.63	.69	67.825
Ocean.....											3.90	9.97	11.83	7.16		6.91	39.77
Passaic.....						4.79	5.48	8.67	6.73	3.987	6.57	6.09	1.54	5.38	3.88	4.132	57.249
Salem.....					2.67			2.17	2.05		3.25	4.61	7.477				22.227
Somerset.....						6.23	7.27	6.60	6.65	7.93	5.88	6.24	10.68	2.685	5.60	7.284	73.049
Sussex.....										.893		4.03	1.695	.98			7.598
Union.....									3.432		2.141		.63		4.01	2.336	12.549
Warren.....								.08		7.43	8.792	3.94	13.09				33.332
Total built each year.....	10.55	27.34	32.28	46.33	60.82	66.665	84.544	114.46	75.782	109.376	154.745	152.92	107.717	67.780	40.461	83.322	1,235.092

Description of Roads Improved in 1907.

ATLANTIC COUNTY.

Hammonton and Atsion Road, 6.41 Miles Long.

This road begins at the northern boundary of Hammonton and extends northwardly to the Burlington county line, near Atsion. It is built of gravel, sixteen feet wide, eight inches thick in the centre, and slopes gradually to a thickness of four inches at the sides. This may be properly termed a state rather than a local road, because when the remaining link of four and one-quarter miles in Burlington county is built, the distance over improved highways from northwestern Jersey to Atlantic City will be reduced over fifteen miles. The country through which this road passes is wild and barren. After leaving the suburbs of Hammonton there are few signs of cultivation, with the exception of cranberry bogs, until one approaches the northern end of the road. The local importance has developed more rapidly than was anticipated, as load after load of hay passes over the road daily from Burlington county to Hammonton. The number and size of these loads causes constant remark in Hammonton. This road, in fact, has made Hammonton one of the best hay markets in Atlantic county.

C. W. Mathis & Company, Tuckerton, New Jersey, were the contractors.

The maximum grade was reduced from 4.50 per cent. to .50 per cent.

The price per contract, lump sum, was \$30,867.85.

The total cost was \$36,507.60. This includes bridges and pipes paid for by the county.

BERGEN COUNTY.

Kinderkamack Road, 1.14 Miles Long.

This road extends north and south, through the borough of Etna, from Oradell to Westwood. The completion of this road leaves only one gap in the macadamized highway along the Hackensack river from Hoboken to the New York State line. It is built of macadam, fourteen feet wide, eight inches thick.

George Graham, Riverside, New Jersey, was the contractor.

The maximum grade was reduced from 8 per cent to 5 per cent.

The price per contract, lump sum, was \$7,424.91.

The total cost was \$8,286.26.

BURLINGTON COUNTY.

Moorestown and Camden Turnpike, 3.11 Miles Long.

This turnpike begins at the westerly end of the village of Moorestown, near the Haddonfield road, and extends to the bridge over the west branch of the Pensauken creek, the Camden county line.

The purchase price was \$22,304.41.

CAMDEN COUNTY.

Haddonfield and Coffin's Corner Road, 3.15 Miles Long.

This road is really an extension of the Camden and Haddonfield turnpike. It extends in the same direction as the White Horse pike, and is about one and one-half miles from it. It is built through a fine farming country, and furnishes a long-needed outlet for the farmers to the Camden and Philadelphia markets. It also serves another purpose; that is, to relieve the White Horse pike of a portion of its travel, which is becoming so excessive that it is difficult to maintain the latter road in good order. It is constructed



Haddonfield and Coffin's Corner, Camden County, Kay's Hill Before Improvement



Haddonfield and Coffin's Corner, Camden County, Kay's Hill After Improvement
Showing Concrete Bridge



Berlin and Milford Road, Camden County, Before Improvement



Berlin and Milford Road, Camden County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

23

The maximum grade was reduced from 6.60 per cent. to 4 per cent.

E. C. Humphrey, Hackensack, New Jersey, was the contractor.

The price per contract, lump sum, was \$32,610.80.

The total cost was \$36,652.42.

Berlin and Milford Road, 4.05 Miles Long.

This gravel road begins at the White Horse pike, in Berlin, and extends north to the Burlington county line, at Milford. It is built through a comparatively barren country; in fact, the land along the road would hardly warrant the expenditure of the money necessary to make the improvement were it not part of a very important through line from western Burlington county to Atlantic City. It is built of gravel, fourteen feet wide and six inches thick.

The maximum grade was reduced from 5.30 per cent. to 3.10 per cent.

B. F. Sweeten & Son, Camden, New Jersey, were the contractors.

The price per contract, lump sum, was \$10,389.61.

The total cost was \$11,004.57.

Cove Road, 1.78 Miles Long.

This road, which begins at the Moorestown pike, in Merchantville, extends northwesterly to the River road, crossing the Westfield and Camden turnpike. The improvement of this road gives the inhabitants of Merchantville a good, smooth highway to all of the river towns lying north of it, something they have long wished. It also furnishes an excellent means of avoiding the block pavement in the suburbs of Camden to those traveling from the northern to the southern part of the county. It is built of macadam, fourteen feet wide and six inches thick.

The maximum grade was reduced from 4.15 per cent. to 2.80 per cent.

E. C. Humphrey, Hackensack, New Jersey, was the contractor.

The price per contract, lump sum, was \$13,977.64.

The total cost was \$15,130.81.

Camden, Ellisburg and Marlton Turnpike, 9 Miles Long.

This turnpike begins at the southerly side of the Burlington pike, in the city of Camden, and extends through the city of Camden and the townships of Pensauken and Delaware, to the Burlington county line.

This turnpike was purchased this year by the county and State, and a contract has been made for its resurfacing.

The purchase price was \$45,000.

Blackwoodtown Turnpike, 2.53 Miles Long.

Beginning at the old macadam in Belmawr, the improvement of this old turnpike has been carried still further south to Chew's Landing. Some roads are improved to develop new country; others, like this, are improved to save the cultivated land from neglect. It was really necessary to improve this road, as the farms bordering upon it were suffering for lack of a good road over which to carry their produce to market. It is built of telford, fourteen feet wide and eight inches thick.

The maximum grade was reduced from 6.35 per cent. to 4 per cent.

The B. M. & J. F. Shanley Company was the contractor.

The price per contract, lump sum, was \$28,390.

The total cost was \$30,095.32.

King's Highway, 1.55 Miles Long.

This is a short section of the famous old road that leads through Haddonfield to Moorestown. The portion improved this year begins at Market street, Mount Ephraim, and ends at the Gloucester and Woodbury turnpike. It is built of macadam, fourteen feet wide and eight inches thick.

The maximum grade was reduced from 5.80 per cent. to 4 per cent.

The B. M. & J. F. Shanley Company was the contractor.

The price per contract, lump sum, was \$16,400.

The total cost was \$17,389.56.



Goshen Road, Cape May County, Before Improvement



Goshen Road, Cape May County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

25

Linden Avenue, .98 Mile Long.

This may be properly termed a purely local road. It extends from the White Horse pike, through the town of Laurel Springs, to the Kirkwood and Laurel Springs road. It is built of macadam, fourteen feet wide and six inches thick.

The maximum grade was reduced from 4.60 per cent. to 3.45 per cent.

John R. Bates, Jr., and Willard T. Gibbs, Clementon, New Jersey, were the contractors.

The price per contract, lump sum, was \$7,589.13.

The total cost was \$8,080.80.

CAPE MAY COUNTY.

Goshen Road, 4 Miles Long.

This road begins at the Main Shore road, in the village of Cape May Court House, and follows the main business street, passing both railway stations, and then extends out into the farming country until it reaches Goshen. This improvement furnishes the farmers and truck-raisers a fine outlet for their produce to the summer resorts along the shore. It also will, in time, be a portion of the through line to Cumberland county and thence to Philadelphia. It is built of gravel, fourteen feet wide, except through the village, where the width is twenty-eight feet. The depth of the gravel varies from twelve inches in the centre to eight inches on the sides.

The maximum grade was reduced from 2.50 per cent. to .90 per cent.

Sutton & Corson, Ocean City, New Jersey, were the contractors.

The price per contract, lump sum, was \$18,720.60.

The total cost was \$21,375.16.

Sea Isle City Turnpike, 2.605 Miles Long.

This is the result of a series of experiments in building roadways across the tide meadows, and, as such, has thus far proven much more satisfactory than any of the low roads built between the main shore and the beach. The value of the twelve-inch curb plank, placed on each side of the road, was conclusively proven during the heavy flood tide that swept the coast this fall. The road was completely covered with water, but was not damaged except in a few places where the curb had been removed to permit the teams working on the road to turn.

As the beach is growing in wealth and population much more rapidly than the interior, it is becoming almost an absolute necessity that the shore front should be connected with the farms and truck fields of the mainland, because the inhabitants of the beach must depend upon the farming region for their food-supply; therefore, a highway that can be used at all times is not merely a benefit, but an absolute necessity.

The width of the gravel bed is fourteen feet. Its depth on the upland is eight inches in the centre, sloping to six inches at the shoulders. On the meadow section the depth of the gravel is reduced to four inches, spread upon a foundation of oyster shells.

The maximum grade on the upland is reduced from 3.80 per cent. to 2.55 per cent. On the meadow it was and is practically level.

Robert E. Hand, Erma, New Jersey, was the contractor.

The price per contract, lump sum, was \$26,964.59.

The total cost was \$30,762.94.

ESSEX COUNTY.

Horseneck Road, 2.505 Miles Long.

This road begins at the Fairfield stone road and passes over a long stretch of the Great Piece meadow to the Horseneck bridge over the Passaic river. The building of this road insures the traveling public a good, dry highway at all seasons of the year, something they never enjoyed before. The value and benefit of

COMMISSIONER OF PUBLIC ROADS. 27

this improvement is not confined to Essex county, but is of equal if not greater use to the people of Morris county. It is built of telford, sixteen feet wide, eight inches deep.

The maximum grade was reduced from 2.78 per cent. to .68 per cent.

James H. & Sherman G. Francisco, Little Falls, New Jersey, were the contractors.

The price per contract was \$24,509.55.

The total cost was \$24,898.05.

Bradford Avenue, 1.46 Miles Long.

This engineering work commences at Mountain avenue, Upper Montclair, and cuts through the First Watchung mountain. It passes through the borders of Cedar Grove and crosses three improved highways, Ridge road, Pompton turnpike and Grove avenue, and ends at the entrance to the grounds of the Essex County Hospital for the Insane, at Overbrook. The graded width of the roadway is forty feet, through the centre of which is constructed a telford pavement sixteen feet wide and eight inches thick.

This improvement might properly be termed the building of a new road across the First mountain, the object of which is to avoid a detour of two miles in either direction between Upper Montclair and the northwestern section of Essex county. As this region is developing rapidly, the demand for an outlet became so insistent that it could no longer be denied. The mountain presented a very formidable obstacle, and, to obtain a suitable grade, it was necessary to make a very heavy cut through it, the maximum depth of which is thirty-two feet. The materials encountered during the excavation varied from loam, through gravel and brown sandstone, to trap rock. Owing to the nature and quantity of the materials moved, this road was, in proportion to its length, the most expensive built this year.

The Osborne & Marcellis Company, Montclair, New Jersey, was the contractor.

The maximum grade was reduced from 17.04 per cent. to 9.45 per cent.

The total cost was \$80,018.76.

FOURTEENTH ANNUAL REPORT.

Mount Pleasant Avenue, 1.07 Miles Long.

This road begins at Pleasant Valley way and extends through the Second mountain to the Livingston township line. In order to obtain a reasonable grade, it was necessary to make a rock cut twenty-seven feet in depth. This road is of great value to the inhabitants of the Oranges and to the dairymen of Livingston township, as it enables the latter to deliver the supply of milk and produce to the residents of the Oranges. It is also one of the east and west roads across the mountain, the steep grades of which have been a serious menace to the growth of the western part of Essex county. It is built of telford, sixteen feet wide, eight inches deep.

The maximum grade was reduced from 11.61 per cent. to 7.48 per cent.

Donato Fusco, Montclair, New Jersey, was the contractor.

The contract price was \$33,344.65.

The total cost was \$33,344.65.

HUNTERDON COUNTY.

Old York Road, 5.37 Miles Long.

Beginning where the macadam ended at Ringoes, the improvement of this road was pushed on to Flemington, thus connecting the largest town in Hunterdon with the county seat.

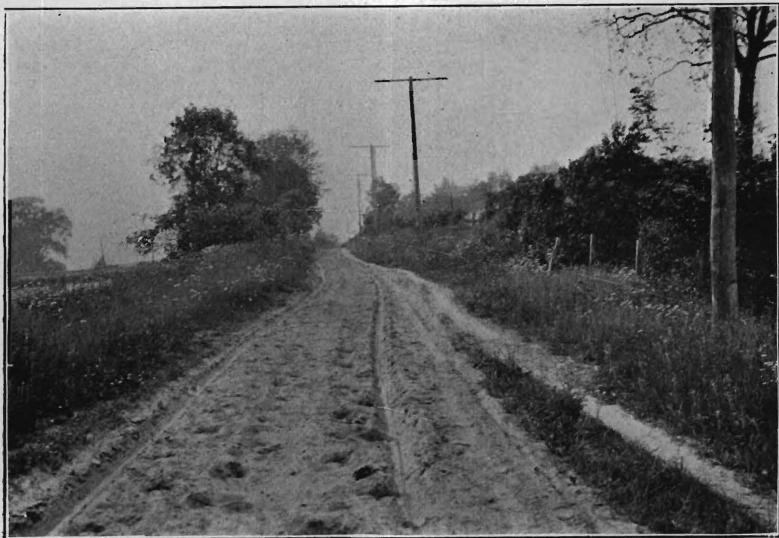
This county has been long in starting the work of road improvement, but is now fully awake to the advantages of improved highways, and, like Oliver Twist, is constantly calling for more. The width of the macadam is fourteen feet and its depth six inches.

The maximum grade was reduced from 8.60 per cent. to 4.40 per cent.

The Delaware River Quarry and Construction Company, Lambertville, New Jersey, was the contractor.

The price per contract, lump sum, was \$39,826.62.

The total cost was \$45,105.29.



Upper River Road, Mercer County, Before Improvement



Upper River Road, Mercer County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

29

MERCER COUNTY.

Upper River Road, .79 Mile Long.

This road leaves the improved River road at the point where the latter turns to cross the canal, and extends south along the easterly side of the canal feeder to the Upper Ferry road. It forms a very desirable cut-off for the people living along the upper portion of the improved River road, saving them quite a detour in traveling to Trenton Junction and Pennington. It is built of macadam, fourteen feet wide and six inches thick.

The maximum grade was reduced from 3.40 per cent. to .60 per cent.

The C. B. Walton Company, Trenton, New Jersey, was the contractor.

The price per contract, lump sum, was \$5,724.68.

The total cost was \$5,997.68.

East State Street, .49 Mile Long.

This street may be truly called a connecting link between the city pavements of Trenton and the macadam roads of Mercer county lying east of the city. This stretch of macadam is of great value to the large manufacturing plants located along it, giving them, as it does, a good, hard road at all seasons, something they have long needed, and have suffered both loss and delay because they did not have it. The macadam is twenty-four feet in width, outside of the trolley tracks, for nineteen feet, at which point the width is increased to thirty feet, where the trolley line changes from a double to a single track. The depth of the pavement was ten inches.

The maximum grade was reduced from 1.30 per cent to 1 per cent.

Richard Newton, Trenton, New Jersey, was the contractor.

The price per contract, lump sum, was \$7,524.09.

The total cost was \$7,770.09.

Quaker Bridge Road, 1.50 Miles Long.

This road leaves the Trenton and Allentown turnpike at Hamilton Square and runs first northeast and then northwest to the Edinburg stone road. It is built through a good farming country, and furnishes an outlet for the heavily-loaded wagons of the farmers that they never had before. It is built of macadam, six inches deep, and of a width of twenty feet for the first twelve hundred feet, and of fourteen feet for the remainder.

The maximum grade was reduced from 4.13 per cent. to 2.20 per cent.

Harry N. Scott, Plainsboro, New Jersey, was the contractor.

The price per contract, lump sum, was \$12,990.

The total cost was \$13,269.

Princeton Avenue, Spruce Street and Brunswick Avenue, .75 Mile Long.

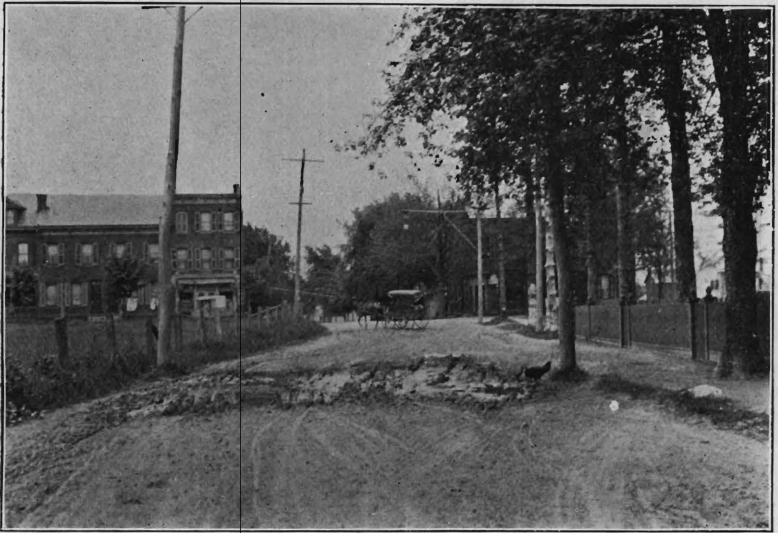
These three short pieces of road form a portion of the northwesterly boundary of the city of Trenton, and, as such, their improvement is the first step toward connecting the city and country highway improvements. The portion of Brunswick avenue, in particular, was so bad that its condition was really retarding the growth of Trenton in that direction. Since the completion of the macadamizing, many new houses have been commenced, streets laid out and graded, and the entire neighborhood shows signs of awakening. As the soil is very heavy, the depth of the macadam laid was eight inches, while the width varies according to the local conditions, being sixteen feet on Princeton avenue, fourteen feet on Spruce street, and from sixteen to nineteen feet on Brunswick avenue.

The maximum grade was reduced from 2.20 per cent. to .73 per cent.

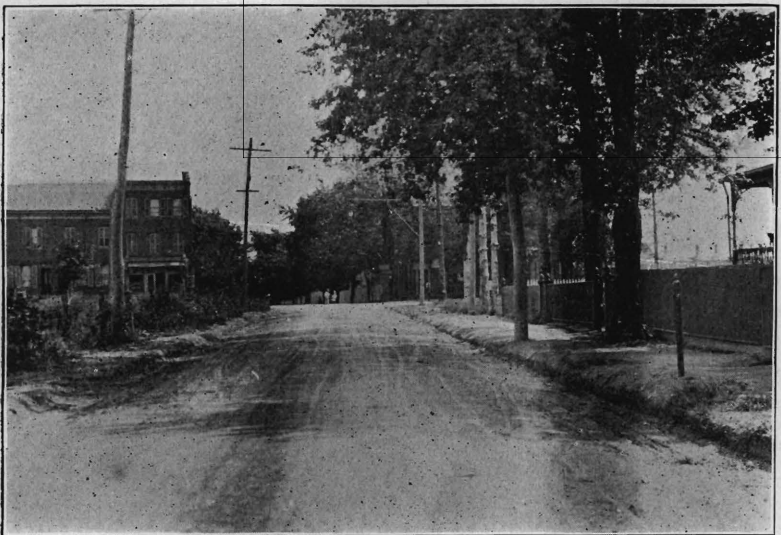
Richard Newton, Trenton, New Jersey, was the contractor.

The price per contract, lump sum, was \$6,766.52.

The total cost was \$6,892.52.



Spruce Street, Mercer County, Before Improvement



Spruce Street, Mercer County, After Improvement



Princeton Avenue, Mercer County, Before Improvement



Hamilton Avenue, 1.39 Miles Long.

Branching off from the Trenton and Allentown turnpike near the Fair grounds, this stone road extends southwesterly to the old improvement of Hamilton avenue, of which it is really an extension. This road serves a double purpose; first, in giving a good road into Trenton to the people living along and near it, and second, in making a cut-off for persons touring across the State, as it enables the latter to avoid the heavily traveled city streets of Trenton, much to the satisfaction of all parties concerned.

The maximum grade was reduced from 1.75 per cent. to 1.56 per cent.

Harry N. Scott, Plainsboro, New Jersey, was the contractor.

The price per contract, lump sum, was \$11,000.

The total cost was \$11,240.

Lalor Street, .93 Mile Long.

This macadam road starts from Broad street, the old White Horse road, and runs along the southern boundary of the city of Trenton to the Delaware and Raritan canal. This road passes St. John's and ends at Riverview cemetery; consequently, it is of great benefit to the lot owners of both cemeteries, because, before the construction of this road, they were often unable to bury their dead without being subject to great discomfort and delay. The road also furnishes a much-needed highway for the farmers of the southern end of the county to the factories of Trenton. The construction is of macadam, sixteen feet wide and six inches thick.

The maximum grade was reduced from 3.30 per cent. to 1.08 per cent.

John Ginder & Son, Trenton, New Jersey, were the contractors.

The price per contract, lump sum, was \$6,236.

The total cost was \$6,548.

MIDDLESEX COUNTY.

Cranbury Neck Road, 2.27 Miles Long.

This macadam completes the stone road from Cranbury to Princeton Junction. It was commenced in 1906, at the end of the macadam already laid, and was extended during that year and 1907 to the Mercer county line at the Millstone river. The improvement of this road gives the farmers and truck raisers an outlet for their produce to the main line of the Pennsylvania railroad at Princeton Junction, where the train service is of the best, and also to Princeton, one of the finest markets for produce. The width of this macadam was fourteen feet and its depth eight inches.

The maximum grade was reduced from 4.50 per cent. to 1.33 per cent.

John H. Hurley, Trenton, New Jersey, was the contractor.

The price per contract, lump sum, was \$22,517.12.

The total cost was \$23,715.32.

Port Reading Railroad Road, .96 Mile Long.

Another of the short links needed to connect our improved roads has been supplied by the macadamizing of this highway. It completes a short line between Plainfield and New Brunswick, and is of great advantage to the farmers living along it, as it gives them a good road in the winter and spring, when they need it the most. It will also relieve, when it becomes better known, the present macadamized road between Plainfield and New Brunswick, by the way of Metuchen, of the heavy travel which it now has to carry. The macadam is fourteen feet wide and eight inches thick.

The maximum grade was reduced from 2.50 per cent. to .814 per cent.

John H. Hurley, Trenton, New Jersey, was the contractor.

The price per contract, lump sum, was \$7,893.

The total cost was \$10,138.46.



Port Reading Railroad Road, Middlesex County, Before Improvement



Port Reading Railroad Road, Middlesex County, After Improvement

COMMISSIONER OF PUBLIC ROADS. 33

MONMOUTH COUNTY.

Freehold and Colt's Neck Road, Second Section, 2.18 Miles Long.

In 1906 the work on the second section of this road was started at the end of the macadam then laid. The work was continued until stopped by freezing weather. Operations were resumed in the spring of 1907 and the work completed, before the close of the summer, to the bridge over Yellow brook at Colt's Neck.

This work is in line with our State policy of improving portions of our through lines from year to year until they reach the State boundaries. The road is built of macadam, fourteen feet wide and eight inches thick.

The maximum grade was reduced from 3.95 per cent. to 1.80 per cent.

Charles R. Le Compte, Lakewood, New Jersey, and James H. Butcher, Ardena, New Jersey, were the contractors.

The price per contract, lump sum, was \$23,617.

The total cost was \$24,635.92.

MORRIS COUNTY.

Sussex Turnpike, .69 Mile Long.

This turnpike begins at the end of the old macadam and extends to the borough line of Netcong. It is constructed of telford, fourteen feet wide and eight inches thick. This road was reported in 1906, but, owing to lack of funds, had to be paid for out of the 1907 appropriation.

The maximum grade was reduced from 10.40 per cent. to 6.28 per cent.

Jeremiah B. Salmon, Hackettstown, New Jersey, was the contractor.

The price per contract was \$8,621.87.

The total cost was \$9,187.10.

FOURTEENTH ANNUAL REPORT.

OCEAN COUNTY.

Berkeley Township Main Shore Road, 6.91 Miles Long.

This elegant gravel road extends from north to south across Berkeley township, completing the Main Shore road from the Burlington county line, beyond Tuckerton, to the county seat at Toms River. This road has spread the fame of New Jersey's fine highways both far and wide, and forms one of the most important parts of the much-talked-of ocean boulevard from the highlands of Navesink to Cape May. It is built of gravel, twenty-four feet wide, nine inches thick in the centre, tapering to three inches at the sides.

The maximum grade was reduced from 4.94 per cent. to 1.80 per cent.

Sutton & Corson, Ocean City, New Jersey, were the contractors.

The price per contract, lump sum, was \$26,263.68.

The total cost was \$29,032.81.

PASSAIC COUNTY.

Paterson and Hamburg Turnpike, New Line, .858 Mile Long.

This is an entirely new link, which straightens two bad crooks in the old road and removes two dangerous railroad grade crossings, and, by keeping the road on high ground, avoids two very steep grades. It is, in fact, for its length, one of the greatest improvements made in Passaic county. The road is constructed of macadam, fourteen feet wide and four inches thick.

The maximum grade was reduced from 10.20 per cent. to 6.60 per cent.

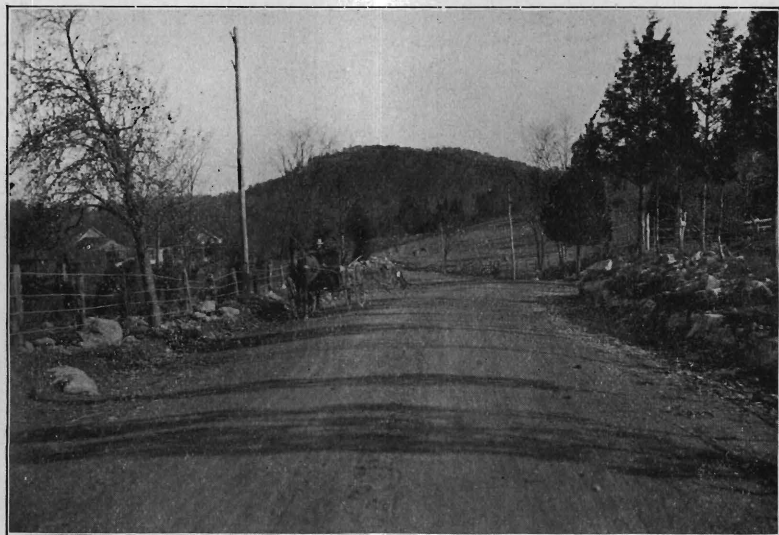
Samuel E. Cotter was the contractor.

The price per contract was \$19,325.34.

The total cost was \$20,668.69.



Midvale Road, Passaic County, Before Improvement



Midvale Road, Passaic County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

35

East Twenty-second Street, Paterson, .264 Mile Long.

Extending from Park avenue to Market street, this improvement on the new or east side of Paterson connects two of the main streets which branch out from the business centre of the city. The street is fast being lined with residence properties, the fronts of which have all been curbed, flagged and guttered, thus making a finished street. It is built of macadam, twenty-eight feet wide and four inches thick.

The maximum grade was reduced from 1 per cent. to .75 per cent.

McKiernan & Bergin, Paterson, New Jersey, were the contractors.

The price per contract, lump sum, was \$2,388.

The total cost was \$2,536.

Midvale (Greenwood Lake) Road, 3.01 Miles Long.

The improvement of this road, from the Paterson and Hamburg turnpike at Pompton, was commenced in 1899 and pushed north four miles to Midvale. Here the work stopped and was not taken up again until this year, when it was carried three miles further toward Greenwood lake, that beautiful sheet of water lying partly in New York and partly in our own State. The plans for an extension of over three miles have been approved, and it is hoped that in the near future we will have a good, hard highway, with easy grades, to the shores of Greenwood lake.

The maximum grade was reduced from 22.50 per cent. to 6.10 per cent.

John C. Tierney, Hoboken, New Jersey, was the contractor.

The price per contract, lump sum, was \$27,543.07.

The total cost was \$25,899.61. Owing to a portion left out for railroad crossing, the entire amount of work contracted for was not done.

SOMERSET COUNTY.

North Branch Road, Branchburg Section, 3.134 Miles Long.

This road begins at the west end of the river bridge in the village of North Branch and extends to the Hunterdon county line. The macadamizing of the last portion of the old Brunswick turnpike carries our improved stone roads westerly across the State of New Jersey to the county line of Hunterdon, thus improving a road the importance of which was recognized a century ago. The practical reopening of this thoroughfare has brought and will bring new life and enterprise into this portion of New Jersey. The road is constructed of macadam, fourteen feet wide and eight inches thick.

The maximum grade was reduced from 5.50 per cent. to 3.50 per cent.

William Hardgrove, Somerville, New Jersey, was the contractor.

The price per contract, lump sum, was \$27,362.15.

The total cost was \$29,818.25.

Bernardsville and Oak Stump Road, 1.03 Miles Long.

This road was built by the township of Bernards, and extends from Claremount road and Mill street, in Bernardsville, along Mill street and New street to Oak Stump. It furnishes the people of Bernardsville an inlet and an outlet that they have long needed. The demand, in fact, became so pressing that they did not feel that they could wait for the assistance of the county, and therefore undertook the improvement themselves. It is built of macadam, fourteen feet wide and six inches deep.

The maximum grade was reduced from 17.50 per cent. to 7 per cent.

George M. Frech, Somerville, New Jersey, was the contractor.

The price per contract, lump sum, was \$9,029.42.

The total cost was \$9,404.42.



Bernardsville and Oak Stump Road, Somerset County, Before Improvement



Bernardsville and Oak Stump Road, Somerset County, After Improvement

North Branch Road, Bridgewater Section, 3.12 Miles Long.

The work of improving this old turnpike to Easton was commenced at the westerly town line of Somerville and carried to the bridge over the north branch of the Raritan river to the village of North Branch. The improvement was commenced in July, 1906, but was not finished until the last of April, 1907. The reduction in grade, the width of the graded roadway and the method of construction make this one of the finest road improvements in Somerset county. The road is graded forty feet wide and macadamized fourteen feet wide and eight inches thick.

The maximum grade was reduced from 12 per cent. to 5 per cent.

William Hardgrove, Somerville, New Jersey, was the contractor.

The price per contract, lump sum, was \$29,979.30.

The total cost was \$32,223.56.

UNION COUNTY.

St. George and Leesville Avenues, 1.95 Miles Long.

This reconstruction begins at Grand street, in the city of Rahway, and follows St. George avenue to the Middlesex county line, with a branch, known as Leesville avenue, leaving the main line just before the latter crosses the Pennsylvania railroad. This branch also extends to the Middlesex county line. The completion of this improvement converts what was the worst piece of road between Newark and Trenton into one of the very best. The rapidity with which the work was pushed forward is also worthy of note, as operations were not commenced until the middle of August and the road was completed before the end of October. It is built partly of macadam and partly of telford, the telford being twelve feet wide and twelve inches thick, and the macadam sixteen feet wide, two, six and twelve inches thick. The telford was further extended with macadam wings two feet wide on each side, making the width of the finished road sixteen feet throughout its entire length.

FOURTEENTH ANNUAL REPORT.

The grade was not changed.

William H. Weldon, Rahway, New Jersey, was the contractor.

The price per contract, lump sum, was \$13,000.45.

The total cost was \$15,123.81.

Euclid Avenue, Westfield, .386 Mile Long.

This macadam work begins at Broad street, in the town of Westfield, and extends to Mountain avenue. It completes the work already done by the town, and makes a very important cut-off for the people of Garwood and Cranford to the country north of Westfield, thereby diverting a good deal of through travel from the other improved streets of the town. It is built of macadam, sixteen feet wide and six inches thick.

The maximum grade was reduced from 6.80 per cent. to 5 per cent.

William H. Weldon, Rahway, New Jersey, was the contractor.

The price per contract, lump sum, was \$2,738.60.

The total cost was \$2,801.60.



Midvale Road, Passaic County, Before Improvement



Midvale Road, Passaic County, After Improvement

Road Repairs.

Since writing my last report I have been watching the repair work done by the different county road supervisors on our improved roads, and I have made some suggestions regarding the manner in which the work should be done, which suggestions, I am glad to say, have been carried out in most of the counties, and the roads are greatly improved. Still, there are some counties that seem to have the impression that their roads need no repairing, and that they will last forever. I should like to see a system established in all our counties similar to the one used in France; that is, apportion the roads in such a manner that a man with a team can take care of his section properly by spending his entire time on the road for at least nine months of the year. In road repairs a stitch in time saves nine, and wherever there is a depression on the road, caused by a rut or otherwise, it should be remedied at once. When the counties of the State adopt this system their road repair account will be considerably less than it is at present. Of one thing I am thoroughly convinced; that is, when a road is neglected until it becomes absolutely necessary to resurface it, the cost of repairs is much greater than it would have been had the road received constant attention, and the results are not nearly as satisfactory.

We have 1,235 miles of roads, built under the State Aid Law toward the construction of which the State has contributed \$2,283,007, an investment of which we are proud, and which is certainly well worth taking care of. In addition to this, the counties have built 800 miles without state aid, which they must also keep in repair.

Under the Automobile law, passed two years ago, we will have about \$82,000 to distribute in 1908 among the different counties, as the State's contribution toward repairs. While this seems like

a large sum, I feel that the license fee should be increased, because we will need for our more than 2,000 miles over \$600,000 to keep them in repair, allowing an average expenditure of \$300 for each mile of road. This is a low estimate of our repair account. My opinion is that the automobilist will have no objection to paying a larger part of the cost of repairs, provided the money is spent judiciously and the roads are kept in good order. My experience as an automobilist is that automobiles are of little practical use if we do not have good roads, and I am personally proud, taking them as a whole, of New Jersey's improved roads, and it is my one desire that we shall keep those we already have in good repair.

I am certainly very much pleased with the work done by the counties, as shown by the reports received from them, and I shall take each county by itself and give the entire cost of repairs in the State during the past year, at the same time noting the new work in progress.

Atlantic county completed the road from Hammonton to Atsion, 6.41 miles, and is at work on the road from Mays Landing to the Gloucester county line, 13.94 miles. The county's share of the automobile money, \$3,896.43, and \$15,270.67 of their own funds have been spent for the care and maintenance of their improved roads, and, as a result, the county's highways are in fine condition. One of the best roads, in my judgment, is that leading from Mays Landing to Atlantic City.

A detailed statement of the county's disbursements for road repairs is as follows:

Hammonton and Absecon road.....	\$4,807 61
Mays Landing and Pleasantville road.....	1,106 00
Pleasantville and Atlantic City road.....	1,920 00
Hammonton and Pleasant Mills road.....	3,458 59
Egg Harbor City, Mays Landing and Green Bank road.....	1,335 75
Chestnut Neck and Absecon road.....	252 00
Longport drive	560 87
Machines, salary of supervisor and tools.....	1,829 85

Bergen, as a county, has built no roads. We have helped Hohokus township to improve 1.59 miles of the Franklin turnpike, and will pay our portion of the cost of Summit and Woodcliff avenues, 1.85 miles. The latter, in connection with the Kinderkamack road, 1.14 miles, which we have aided Etna borough in

COMMISSIONER OF PUBLIC ROADS.

41

improving, will give us an improved stone road to the New York State line. I am also in hopes that the county of Bergen will join with Hudson county in improving the Belleville turnpike from the Hackensack meadows to the Passaic river, thus giving us a direct road from Jersey City to the upper portion of the State lying west of the Passaic river. No money was spent by the county for road repairs.

Burlington county has purchased one more turnpike, the Moorestown and Camden, 3.11 miles, and is working on the Westfield and Camden turnpike, 3.12 miles, and the Lumberton and Medford road, 3.90 miles. The amount spent for repairs of roads is as follows: The automobile fund, \$8,850.75, has been spent in repairing the Mullica River road, with the exception of a small balance, which has been set aside for use after the spring tides. In addition to this sum, they have expended \$26,628.52, distributed throughout the townships as follows:

Bass River township	\$42 75
Beverly city	303 99
Beverly township	578 84
Bordentown city	272 40
Bordentown township	716 69
Burlington city	341 88
Burlington township	980 51
Chester township	3,978 83
Chesterfield township	718 21
Cinnaminson township	2,721 32
Delran township	2,095 85
Easthampton township	271 03
Evesham township	260 63
Florence township	1,827 86
Mansfield township	775 95
Lumberton township	405 87
Medford township	548 45
Mount Laurel township	2,501 02
Northampton township	763 73
Palmyra township	502 42
Pemberton township	317 12
Riverside township	3,643 96
Southampton township	472 91
Springfield township	482 13
Washington township	902 17

I am glad to say that the roads of this county are getting in much better shape than they were.

FOURTEENTH ANNUAL REPORT.

Camden county finished three roads commenced in 1906—Blackwoodtown turnpike, 2.53 miles, King's Highway, 1.55 miles, and Linden avenue, .98 mile—and has commenced and finished three other roads—the Haddonfield and Coffin's Corner, 3.15 miles, Cove, 1.78 miles, and the Berlin and Milford gravel road, 4.05 miles. It also purchased the Camden, Ellisburg and Marlton turnpike, 9 miles, making the total 95.22 miles. The county spent this year its share of the automobile money, \$3,724.60, and, in addition, \$19,806.11. The roads are in very fine condition, and the county is to be congratulated.

A detailed statement of the county's disbursements for road repairs is as follows:

White Horse pike, Haddon Heights to Camden, and Collings road,	\$2,083 51
White Horse pike, Haddon Heights to Magnolia, Warwick avenue, Haddonfield to Gloucester, and Stoy Landing road	3,972 36
White Horse pike, Magnolia to Watsonstown, and Ashland road..	4,246 81
White Horse pike, Watsonstown to Berlin.....	738 03
Berlin to Atlantic county line road, gravel	833 50
Clementon and Gibbsboro road, gravel	425 77
Blackwood Pike, Mt. Ephraim to Camden	335 80
Blackwood pike, Chew's Landing to Gloucester county line	381 05
Church road	933 07
Sandy lane, from White Horse pike to Westville pike	781 59
Burlington pike	3,104 09
Clementon road	617 75
River road	474 75
Park avenue	171 05
Browning's road and Kaighn's avenue	677 00
Marlton pike	29 98

Cape May county finished the Goshen road, 4 miles, and, after two years of hard work, completed the Sea Isle City turnpike, 2.605 miles. It spent, as its share of the automobile money, \$1,158.66, and, in addition, raised \$2,508.26 for repairs. While this county is endeavoring to repair its roads, it now has about thirty miles of improved roads, and the travel is increasing; therefore its repair account should be increased correspondingly.

Below is a detailed statement of the expenditures for repairs:

Seaside and Holly Beach road	\$1,180 97
County road at Dennisville	6 50
Ocean City turnpike	427 84
Holly Beach road	892 95

COMMISSIONER OF PUBLIC ROADS.

43

Cumberland county is waking up to the advantage that is to be derived from good roads, and, as a result, some of the progressive citizens of Vineland agitated the question of road improvement so persistently that the Board of Freeholders surveyed, prepared plans and specifications, and advertised and received bids for a gravel road from the Gloucester county line at Malaga to Vineland, a distance of 5.40 miles. The bid, though a very low one, was rejected by the board. I am sorry that the first road selected for improvement by this county under the State Aid act was one of the most difficult and expensive to build that could have been chosen in the whole county, extending, as it did, across the tide meadow from Mauricetown to the railroad station. It is in the same class with the Atlantic City boulevard, which is the most expensive road we have built in South Jersey. There are many other roads in Cumberland county which can be improved for a fraction of the cost of this first road, and I sincerely hope that the county will avail itself of a portion of the money set aside by the State for road improvement, as good roads would greatly enhance the property values of the county.

Last year this county's share of the automobile money was \$62.96, and they spent for repairs \$52.85, thus the county has raised no money for the repair of roads.

Essex county has paved the gutters on Bradford avenue, 1.46 miles, and Mount Pleasant avenue, 1.07 miles, thus completing these two roads commenced in 1906. This year the county commenced and finished the Horseneck road, 2.505 miles, and has four other roads in process of construction. The county spent last year for road repairs, first, their proportion of the automobile money, \$4,593.27, and second, from their county tax budget a further sum of \$61,529.01. The total mileage of county roads is over 129, of which 94.49 was built under the State Road act and 35 under the County Bonding act. From the foregoing it is seen that the county has spent an average of \$436 per mile for repairs upon its roads, and the people of the county must judge how wisely this has been expended.

FOURTEENTH ANNUAL REPORT.

Below is a detailed statement of the expenditures for repairs:

Bay avenue	\$272 62
Bloomfield avenue	15,506 12
Broad street	964 71
Central avenue	2,093 06
Dutch lane	788 72
Eagle Rock avenue	366 31
East Passaic avenue	561 41
West Passaic avenue	93 88
Fairfield road	3,140 15
Erelinghuysen avenue	5,370 89
Franklin avenue, Bloomfield	72 57
Franklin avenue, Belleville	295 80
Grove street, Montclair	564 88
Grove avenue, Verona	183 34
Grove street, East Orange	357 01
Hobart Gap road	1,300 83
Mount Pleasant avenue	3,050 62
Mountain avenue	721 87
Mount Hebron road	93 25
Northfield road	2,007 08
Parsonage road	704 60
Pompton turnpike	811 73
Ridge road	196 37
Pier lane	219 52
Roseland avenue	1,040 62
Roseville avenue	558 00
Ridgewood avenue	1,235 97
Sandford street	2,075 16
Swamp road	820 79
South Orange avenue	3,953 04
Springfield avenue	4,214 71
Washington avenue	2,039 19
Watchung avenue	2,729 62
Wall street and Stuyvesant avenue	71 75
Walnut street, Livingston	250 32
Miscellaneous repair account	2,802 50

Gloucester county has built no roads during the past year. It has, however, two or three under consideration for improvement. One of these, the Malaga and Downtown, is quite important, as it would connect the improved roads of Gloucester with those of Atlantic. This county received \$3,864.70 from the automobile fund, and spent only \$2,000 for repairs. The county itself raised nothing for the repair of its 75 miles of improved roads. As this is one of the most traveled sections in South Jersey, the county authorities must not expect to maintain their roads in good condition on an expenditure of less than \$27 per mile.

COMMISSIONER OF PUBLIC ROADS.

45

Below is a detailed statement of the expenditures for repairs :

Knight's run gravel road	\$300 00
Hurffville and Cross Keys road	200 00
Clayton and Glassboro road	450 00
Franklinville and Malaga road	200 00
Glassboro and Aura road	300 00
Williamstown and Clayton road	300 00
Mullica Hill and Harrisonville road	250 00

Hudson county has built no state roads the past year, but we hope that they will unite with Bergen county in improving the Belleville turnpike, thus connecting Jersey City, and at the same time New York, with that portion of our State lying west and north of the Passaic river. The county has spent its share of the automobile money, \$125.91, and, in addition, has expended \$199,741.50 upon its county roads.

Hunterdon county has completed the Old York road, 5.37 miles, has surveyed the road from the Somerset county line through White House to Flemington, and has prepared plans and specifications for the White House section of the road, 6.48 miles. This county has spent nothing for repairs.

Mercer county has built six connecting links during the past year, and has surveyed the Elm street road at Princeton, the Hightstown and Perrineville road, Brunswick pike, and the Hope-well road. It resurfaced the Princeton and Lawrenceville road, using their entire allotment of the automobile money, \$5,987.02, and, in addition, spent the following amounts for the repair of its other improved roads :

MERCER COUNTY BOARD OF CHOSEN FREEHOLDERS.

Maintenance Account for the Year Beginning January 1st, 1907, and Ending December 31st, 1907, on all County Roads in Mercer County, State of New Jersey.

	NAME OF ROAD.	Length of Macadam, Miles.	Width of Macadam, Feet.	Depth of Macadam or Telford, Inches.	Year Constructed.	Equivalent Length of Road 14 Feet Wide.	MACADAM REPAIRS.					Total of all Other Costs.	Total Cost of Maintenance.	
							Tons of Stone.	Cost of Stone Including Freight.	Tons of Gravel.	Cost of Gravel.	Cost of all Labor.			Total Cost of Macadam Repairs.
1	Scotch Road and Branches.....	4.43	14	12	1894	4.43	1,710	\$2,215 52	58	\$11 25	\$1,467 80	\$3,694 57	\$484 05	\$4,178 62
	Woodruff's Lane.....													
2	Ingham Street and Parkway Avenue.....	1.21	14	12	1894	1.21								
	Also Prospect Street, Trenton.....													
3	Lawrenceville Road.....	3.84	14	10	1894	3.84	732	951 60			556 75	1,508 35	294 40	1,802 75
4	Ewingville Road.....	3.33	14	10	1894	3.33							233 35	233 35
5	Etra Road.....	1.57	14	12	1895	1.57			49	2 05	71 00	73 05	25 25	98 30
6	Greenwood Avenue, Trenton.....	1.50	16	12	1895	1.71	1,034	1,344 20			716 50	2,060 70	22 00	2,082 70
7	Mercerville and Edinburg Road.....	4.20	14	14	1896	4.20	316	347 80			254 00	601 80	73 00	674 80
8	Pennington and Hopewell Road.....	4.50	14	14	1896	4.50	219½	338 91			498 20	837 11	441 80	1,278 91
9	Greenwood Avenue, Trenton.....	2.25	14	14	1896	3.16	214	278 20			148 00	426 20	17 00	443 20
	Chambers Street, Trenton.....													
10	Lawrenceville and Princeton Road.....	4.75	14	12	1897	4.75	1,160	1,634 67			924 55	2,559 22	175 65	2,734 87
11	White Horse Road.....	2.26	16	8	1898	4.94	330	429 00			249 00	678 00	40 00	718 00
12	White Horse Extension Road.....	0.44	12	6	1898	0.88	22½	31 67			21 40	53 07	80 00	133 07
13	Pennington Road.....	6.74	14	6	1899	6.74	248	223 05	56		558 90	781 95	676 92	1,458 87
14	Asylum road.....	2.92	14	6	1899	2.92	504	645 12			452 25	1,097 37	185 00	1,282 37
15	Upper Ferry Road.....	1.16	12	6	1899	0.99							332 35	332 35
16	Manalapan Road.....	2.09	14	6	1900	2.09	60½	90 28	78		168 50	258 78	55 45	314 23
17	Trenton and Crosswicks Road.....	3.83	14	6	1900	3.83	253	356 70			297 10	653 80	59 10	712 90
18	Old York Road.....	3.24	14	6	1900	3.08			37		31 00	31 00	59 45	90 45
19	Edinburg, Windsor and Hightstown Road.....	7.01	14	6	1900	7.01	86 ½	129 80	182	75	427 75	558 38	119 50	677 88
20	Hutchinson's Mill Road.....	1.18	12	6	1900	1.01	433	533 79			348 00	881 79	67 00	948 79
21	Old York Extension Road.....	0.36	14	6	1900	0.36	329½	474 60	23	1 15	201 10	676 85	85 50	762 35
22	Trenton and Allentown Turnpike Road.....	6.17	14	6	{1901 1902}	6.17	1,553	1,907 80	81	4 05	1,728 10	3,639 95	677 70	4,317 65
23	Hamilton Avenue and Dogtown Road.....	3.08	14	6	1902	3.02	1,418	2,737 80			1,629 80	4,367 60	41 10	4,408 70

MERCER COUNTY BOARD OF CHOSEN FREEHOLDERS.

Maintenance Account for the Year Beginning January 1st, 1907, and Ending December 31st, 1907, on all County Roads in Mercer County, State of New Jersey—(Continued).

	NAME OF ROAD.	Length of Macadam, Miles.	Width of Macadam, Feet.	Depth of Macadam or Telford, Inches.	Year Constructed.	Equivalent Length of Road 14 Feet Wide.	MACADAM REPAIRS.						Total of all Other Costs.	Total Cost of Maintenance.		
							Tons of Stone.	Cost of Stone Including Freight.	Tons of Gravel.	Cost of Gravel.	Cost of all Labor.	Total Cost of Macadam Repairs.				
24	Edinburg, Dutch Neck and Princeton Road.....	6.59	14	6	1902	6.59										
25	Marshall's Corner and Woodsville Road.....	2.43	12	6	1903	2.08	260	\$233 23		\$389 25	\$622 48	\$1,747 20	\$1,747 20			
26	Centerville School House Road.....	1.97	12	6	1903	1.69				7 00	7 00	178 90	801 38			
27	Shabakunk Road and Cross Road.....	1.95	12	6	1903	1.67				4 00	4 00	5 50	12 50			
28	River Road.....	5.95	14	6	1903	5.95	1,939 1/2	2,482 56		1,418 86	3,901 42	130 10	134 10			
29	Harbourton Road.....	1.70	14	6	1904	1.70						1,078 40	4,979 82			
30	Extension of Scotch Road.....	1.95	14	6	1904	1.95	12	15 60	12	20 00	35 60	132 00	132 00			
31	Princeton Hill Road.....	0.70	14	6	1904	0.70	86	111 80	38	\$4 75	88 75	23 00	58 60			
32	Mercerville and Lawrence Station Road.....	3.20	14	6	1904	3.20	250	325 00		165 60	490 60	7 00	212 30			
33	Grover's Mill Road.....	1.88	14	8	1905	1.88	48	67 20		79 50	146 70	67 50	558 10			
34	Brunswick Pike Road.....	4.00	16	8	1905	4.57	1,107	1,439 10	150	7 50	783 00	58 50	205 20			
35	Olden Avenue Road.....	2.31	14	6	1905	2.31	80	104 00	52		130 00	44 00	2,273 60			
36	Groveville Road.....	1.03	14	6	1905	1.03			24	1 20	34 50	234 00	234 00			
37	{ Pennington and Washington's Crossing Road } { Central Avenue..... }	2.79	14	8	1905	2.79	157	135 97		274 00	409 97	31 00	66 70			
38	Newtown and Allentown Road.....	3.15	14	8	1905	3.15	320	447 23	678	33 90	441 60	262 40	672 37			
39	Whitehead's Mill Road.....	1.02	14	8	1905	1.02	234	304 20		252 00	556 20	179 95	1,102 68			
	Totals.....										\$35,240 84	8 00	564 20			

Tools and Machinery Account for the Year, \$1,162 03

Total of All Costs, 44,601 89

Average Cost per Mile (Actual Length) of Macadam Repairs for the Year, for the Entire System.....	\$307 42
Average Cost per Mile (Equivalent Length) of Macadam Repairs for the Year, for the Entire System.....	299 87
Average Cost per Mile (Actual Length) of all Other Repairs for the Year, for the Entire System.....	71 53
Average Cost per Mile (Actual Length) of Maintenance, Including Tools and Machinery, for the Year, for the Entire System.....	402 18
Average Cost per Mile (Equivalent Length) of Maintenance, Including Tools and Machinery, for the Year, for the Entire System, 392 29	

COMMISSIONER OF PUBLIC ROADS.

I want to congratulate the supervisor of Mercer county upon his system of keeping his repair accounts, as well as upon the condition of his roads, as they are all, with the possible exception of one, in very fine condition, and that one, I understand, will soon be placed in as good shape as the others.

Middlesex county completed the Cranbury Neck road, thus giving us a direct route from Princeton to Cranbury, at which point it connects with the stone road to New Brunswick, also the Port Reading Railroad road, which completes the line from New Brunswick to Plainfield. Both of these roads were commenced in 1906. Work is also being pushed forward on the Jamesburg and Dayton road, the River road and the Cheesequakes Creek road, all of them very important links in our state road system. In preparation for next year's work the county has surveyed and made plans and specifications for seven small roads, all of which will make our road system more valuable. It has spent the \$6,015.14 of the automobile apportionment for the purchase of stone, and, in addition, has paid out \$34,857.25 for repairs, a detailed statement of which, by townships, follows:

Woodbridge township	\$6,634 74
South Brunswick township	3,012 44
North Brunswick township	3,638 81
Metuchen	304 60
Piscataway township	819 63
South Amboy	202 38
Cranbury township	1,916 14
Raritan township	4,003 58
Madison township	2,433 64
Monroe township	1,090 31
Perth Amboy	1,276 58
Highland Park	17 75
Roosevelt	322 40
Dunellen	38 44
Spa Spring	206 24
Dayton	154 13
Iselin	253 52
Old Bridge	241 28
New Brunswick	2,607 30
East Brunswick township	1,457 72
Sayreville township	1,939 09
Jamesburg	323 07
Salaries	960 00
Supplies	158 99
Steam roller	592 28
Repairs	275 17
Freight	41 52
Advertising	16 50

COMMISSIONER OF PUBLIC ROADS.

49

The roads in Middlesex county are in elegant shape, and I wish to congratulate the people upon having the services of so capable a man as their county supervisor. He is very careful and conscientious, and the results show that he knows how to keep a road in good shape under varying conditions. He has had to contend with different kinds of soil and varying grades, and for the amount of money expended, I consider the roads of Middlesex county to be in splendid condition.

Monmouth county completed the extension of the Freehold and Colt's Neck road, commenced in 1906, has all but finished the Allentown road, and is now working on the third section of the Freehold and Colt's Neck road, known as the Eatontown and Colt's Neck, also surveying the remainder of the Eatontown and Colt's Neck road, which it hopes to complete before the close of the coming year. When this is done we will have a fine, smooth road from Philadelphia and Trenton, by the way of Freehold, to Long Branch. This county has expended during the past year the sum of \$4,345.89, received from the automobile fund, on Norwood avenue, Long Branch. In repairing its other roads it has expended \$59,138.77. As this county has a large seashore frontage and a road mileage in proportion, it has been compelled to spend considerable money to keep its roads in repair. Below we give a detailed report of the cost of repairs on each road, also the amount paid for tools and supplies used in repair work:

Freehold and Matawan road	\$1,298 70
Long Branch and Asbury Park road	6,827 93
Eatontown and Red Bank road	1,075 42
Eatontown and Long Branch road	2,127 35
Valley Drive and Middletown road	2,612 69
Adelphia and Lakewood road	1,892 96
Westwood and Brighton avenues	3,270 49
Keyport and Keansburg road	1,829 44
Englishtown and Manalapan road	364 00
Baird and Bergen Mills road	209 65
Perrineville road	638 94
Atkins avenue	544 29
Blue Ball road	644 19
Holmdel and Keyport road	1,096 69
Freehold and Colt's Neck road	1,297 28
Freehold and Englishtown road	824 60
Patten's Corner road	78 10
Middletown and Red Bank road	8,067 90
Holmdel and Matawan road	507 32
Millhurst and Tennent road	540 29

Freehold and Smithburg road	\$1,537 74
Red Bank and Oceanic road	3,293 00
Monmouth Beach road	1,531 45
Matawan road	1,502 66
Bradevelt road	745 25
Corliss avenue	3,897 67
Highlands and Seabright road, stone.....	1,552 50
Highlands and Seabright road, gravel	414 41
Freehold and Manalapan road	755 39
Belmar road	2,092 70
Steam roller and incidentals	6,067 77

The people of Monmouth county realize that the large amount of money they are spending for the care of their roads is well invested, as it is one of the best advertisements that any county can have, particularly those situated along our ocean front. Wherever one goes one hears words of praise for the good roads of Monmouth county, and so fully are the people impressed with the advantages of an ocean boulevard that they will never be satisfied until they have a good, hard road from the highlands of Navesink to Cape May.

Morris county finished the Sussex turnpike at the beginning of the year, and has spent the remainder of its money in repairing and putting in shape the roads already improved. In this work the county spent its portion of the automobile money, \$3,122.15, and from the county funds \$33,870.50 more. This county has been doing a great work in straightening and removing dangerous places, and resurfacing and widening their improved roads. Their plan impresses me as a wise one, that of taking care of and putting in first-class order what they already have before they commence any new work. While we fully appreciate the desire of our people for more new roads, it is well to bear in mind that it is very essential to keep those we already have from going to destruction. Below we give the amount spent in each township and other municipality by the Board of Chosen Freeholders for road repairs:

Rockaway township	\$3,071 32
Morris township	7,393 45
Mendham township	3,753 08
Washington township	402 54
Chester township	300 21
Chatham township	2,335 56
Madison borough	2,837 18
Dover borough	225 38
Hanover township	3,751 18

COMMISSIONER OF PUBLIC ROADS.

51

Jefferson township	\$407 67
Mount Olive township	1,607 58
Montville township	1,266 46
Passaic township	2,117 49
Pequannock township	200 65
Randolph township	1,156 98
Roxbury township	3,143 13

Ocean county finished the Berkeley township Main Shore road, thus completing one of the finest gravel roads in the State, which extends from Tuckerton to Toms River. They are at present working on the Lakehurst and Lakewood road, which, it is hoped, will be continued towards Brown's Mills as far as the Burlington county line. The New Egypt end of the Lakewood and New Egypt road, 5.27 miles, and the northern end of the Bayhead, Seaside Park road, 6 miles, have been surveyed, and it is my intention to approve the specifications and plans as soon as they are prepared and the freight rates are adjusted. This county expended its share of the automobile money, \$1,695.63, and \$3,599.72 of the county money in maintaining their roads in fine shape. Our opinion is that where gravel can be procured at a reasonable cost, it is more economical to maintain our gravel roads in first-class condition than it is to keep up our stone roads. The wear seems to be less, and, as far as pleasure and comfort are concerned, a gravel road is superior to a stone road, either for horses or automobiles, provided that it is built at least twenty-four feet wide, with not over three-quarters of an inch crown to the foot. This, in my judgment, makes a model road. The amount expended by the townships in repairing their roads is divided as follows:

Egg Harbor	\$458 35
Eagleswood	317 72
Stafford	740 71
Union	291 39
Ocean	498 23
Lacy	67 50
Lakewood	611 10
Brick	614 72

Passaic county has finished the connecting link on the Paterson and Hamburg turnpike, thus completing its improved road to the Sussex county line. The construction of this road displays a progressive spirit, both upon the part of the railroad and county officials, as it removes two dangerous railroad crossings and greatly

FOURTEENTH ANNUAL REPORT.

reduces the grade of the road. In addition, it built East Twenty-second street and the Midvale road. The latter is the lower section of the main highway to Greenwood Lake, which we hope to see completed at an early day. The county is now preparing plans and specifications to extend the Midvale road 3.12 miles further. That the county believes it is good business to take care of its highways, upon which so much money has been spent, is proven by the amount which it has paid out for road repairs during the year, which is \$47,479.96, being made up of the automobile money, \$2,540.71, and the county levy, \$44,939.25. The county's money was distributed as follows:

Newark and Pompton turnpike	\$3,584 56
Squaw Brook road	4,121 67
Bloomfield road	2,865 02
Oak Ridge road	2,215 92
Singac road	4,825 80
Little Falls turnpike	2,153 20
Lafayette street	497 47
Inspection on above	438 00
	\$20,701 64
Main avenue	542 50
Cedar Lawn	2,400 00
Van Houten avenue	725 00
Market street	911 00
Hamburg avenue	359 10
Cedar Cliff avenue	2,240 00
Fourteenth avenue	1,200 00
Madison avenue	200 00
Little Falls turnpike	6,197 00
East Thirty-first street	292 00
Water street	888 80
Spring street	1,250 00
Haledon avenue	4,800 00
Preakness avenue	120 00
Godwinville road	300 00
Belmont avenue	100 00
Bloomfield road	310 00
Fenner avenue	213 21
Wagaraw road	355 00
Clinton street	100 00
Moffit Bridge approach	101 00
Totowa avenue	187 00
East Twenty-seventh street	271 00
North Eighth street	90 00
Paterson and Hamburg turnpike	85 00

COMMISSIONER OF PUBLIC ROADS.

53

As a result of the above expenditure, the roads of Passaic county, taken as a whole, are in fine condition.

Salem county will soon have completed the Aldine road, and is ready to commence the Mannington road. This county has 22 miles of road improved under the State Aid law, 10 of stone and gravel and 12 of oyster shells. It spent in repairing them its share of the automobile money, \$1,146.95, and \$1,361.43 of the county funds, distributed as follows:

Lower Penn's Neck road, shells	\$617 39
Hancock's Bridge road, shells	677 82
Mannington road, shells	603 60
Oldman's road, gravel	120 60
Woodstown and Eldridge Hill road	208 20
Elmer and Alloway road, gravel	280 77

The cost of repairs on the 10 miles of stone and gravel roads was \$609.57, an average of \$60.95 per mile. The 12 miles of shell road cost \$1,898.81, an average of \$158.23 per mile, or over two and one-half times as much per mile as the other improved roads, and still Salem county asks for shell roads. If the people of the county would note the cost of repairs as given in the figures of the county collector's report they would soon see that shell roads are the most expensive that can be built.

Somerset county finished the Bridgewater township section of the North Branch road, 3.12 miles, commenced in 1906, and, during the year, extended the improvement through Branchburg township to the Hunterdon county line, thus completing one of the finest sections of improved road in the county, from Somerville to the Hunterdon county line. In connection with the latter work it also constructed a branch from North Branch village to North Branch station, the combined length of the main line and spur being 3.134 miles, and, as Hunterdon county has just awarded a contract from the end of this macadam through White House, toward Flemington, a distance of 6.48 miles, or half way to Flemington, we hope in the near future to see a drive completed through this most beautiful part of our State from Somerville to Flemington. Bernardsville township finished the road from Bernardsville to Oak Stump, 1.03 miles. This county is preparing plans for six miles more of road to be constructed next year, and, in further proof of its progressive spirit, spent for the repair of roads its portion of the automobile money, \$3,104.61, and \$17,086.74 of the county funds, and

I will say that, after considerable urging upon my part, the roads of the county are in fair condition.

The county repair fund was expended as follows:

Bernardsville road	\$39 50
Union avenue	1,342 02
Millstone and New Brunswick road	924 62
Franklin Park road	969 82
Skillman road	18 36
Rocky Hill road	1,735 16
Mountain avenue, North Plainfield	1,452 46
Neshanic road	301 10
Belle Meade road	1,060 20
Mine Brook and Basking Ridge road	3,182 07
Pluckamin road	3,320 46
Wagner's Corner road	16 28
Kingston road	378 50
South Somerville road	2,112 89
Far Hills and Peapack road	233 30

Sussex county did not build any new roads last year. The board, however, spent its share of the automobile money, \$341.50, and \$2,046.33 of the county funds, distributed as follows:

Wantage township	\$1,519 64
Sparta township	22 00
Stanhope borough	62 25
Sandyston township	442 44

Union county rebuilt St. George and Leesville avenues, 1.95 miles, and the town of Westfield finished the improvement of Euclid avenue, .386 mile. The county also surveyed North Broad street, .85 mile. The expenditure for repairs was as follows: Automobile money, \$176.99; county funds, \$18,033.65, the latter distributed as follows:

North avenue	\$171 01
South avenue	3,716 31
Morris avenue	1,523 60
Berkeley Heights road	131 53
Chatham road	58 95
New Providence road	312 74
St. George avenue	2,096 22
Central avenue	1,446 54
Mountain avenue	5,427 13
Sprinkling with oil	2,947 17
Machine repairs and supplies	202 45

COMMISSIONER OF PUBLIC ROADS.

55

Twenty-four miles of road were sprayed with oil, and eight miles received a second application. Union county has forty miles of road constructed under the County Bonding act, and, considering the wear to which they are subjected, the roads are generally in fair condition.

Warren county is continuing the work of improving the Harmony road, the section under contract being 5.36 miles long, and has surveyed the remainder to the Phillipsburg city line, a distance of 2.50 miles. When completed, we will have a continuous improved road from Phillipsburg to the county seat at Belvidere. The county paid for repair work its share of the automobile money, \$1,719.98, and from its own funds, \$6,157.18, apportioned as follows:

Morris turnpike	\$4,371 56
Allamuchy township road	292 00
Pohatcong township road	642 40
Independence township road	768 25
Oxford township road	841 55
Blairstown township road	241 42

The roads of Warren county bear testimony to the care which has been exercised over them, as they are in very fine order, and are a credit to the county.

Our department has not only been constantly at work inspecting new construction, of which we have accepted 83.322 miles, but we have under contract 63.086 miles, and have examined and approved the surveys for the improvement of 99.33 additional miles, making a total of 245.738 miles of roads, lying in all portions of the State, that have been under our supervision the past year.

On the total mileage of state improved roads there has been expended for repairs the following amounts. First, from the automobile fund, as follows:

FOURTEENTH ANNUAL REPORT.

County.	Amount.
Atlantic	\$3,896 43
Burlington	8,850 75
Camden	3,724 60
Cape May	1,158 66
Cumberland	62 96
Essex	4,593 27
Gloucester	3,864 70
Hudson	125 91
Mercer	5,987 02
Middlesex	6,015 14
Monmouth	4,345 89
Morris	3,122 15
Ocean	1,695 63
Passaic	2,540 71
Salem	1,146 95
Somerset	3,104 61
Sussex	341 50
Union	176 99
Warren	1,719 98
Total	\$56,473 85

Second, from the county funds, as follows:

County.	Amount.
Atlantic	\$15,270 67
Burlington	26,628 52
Camden	19,806 11
Cape May	2,508 26
Essex	61,529 01
Gloucester	2,000 00
Hudson	199,741 50
Mercer	43,439 86
Middlesex	34,857 25
Monmouth	59,138 77
Morris	33,870 50
Ocean	3,599 72
Passaic	44,939 25
Salem	1,361 43
Somerset	17,086 74
Sussex	2,046 33
Union	18,033 65
Warren	6,157 18
Total	\$592,014 75

COMMISSIONER OF PUBLIC ROADS.

57

Since our last report we have been trying some experiments with oil and tarvia, both as road preservers and dust-layers. As a result of these experiments we find that wherever the road was resurfaced and in perfect order before applying the tarvia or oil, the experiment was a success, while on those sections that were not resurfaced the results were far from satisfactory, the covering cutting up and going to pieces.

We are not yet willing to give any of these preparations our endorsement, but shall continue our observations of them during the winter and spring, while the frost is in and coming out of the ground.

Tarvia, while it seems to be a great protection to the road surface, and also a good dust preventive, is quite expensive, and we are in hopes that something will be discovered that is not so costly and that will be just as effective in keeping down the dust, in order that we may be able to live along good roads and enjoy them without being covered with dirt.



Upper River Road, Mercer County, Before Improvement



A Plan for the Preservation of Our Improved Roads.

BY ROBERT A. MEEKER, STATE SUPERVISOR OF ROADS.

Our good roads are becoming so worn by the continually increasing automobile traffic that the problem of maintaining them in their fine condition is one that confronts us constantly. What shall we do? How shall we do it? Is there any known substance that will withstand the constant attrition of rapidly revolving auto tires? If not, is there any remedy that will reduce the cost of maintenance and prolong the life of our hard roads? Many answers have been made to these questions, many methods have been suggested and tried, many materials have been tested, and still the problem is not solved. Extremists on both sides have come forward and argued loud and long. The aggrieved property owners propose that the roads be allowed to wear down to the large stone, when they will be so rough that the autoist will avoid them. Then, say they, the dust nuisance will be abated, and the highways will be safe and convenient for pedestrian and horseman.

The enthusiastic automobilist says the roads should be kept in constant and perfect repair; that no ruts should be allowed to form, and that no holes large enough to hold a pail of water should ever be permitted on the surface. "True," replies the resident taxpayer, "but who is going to pay the bills in order that he may enjoy the pleasure of having his lungs, lawn and house filled with stone dust?" The autoist replies, "We pay a license fee and an occasional fine, which help to maintain the roads." Mr. Taxpayer scornfully answers, "Yes, about one-eighth of the cost." Thus the merry war goes on, and we are no nearer the solution of this vexed problem than when it first presented itself.

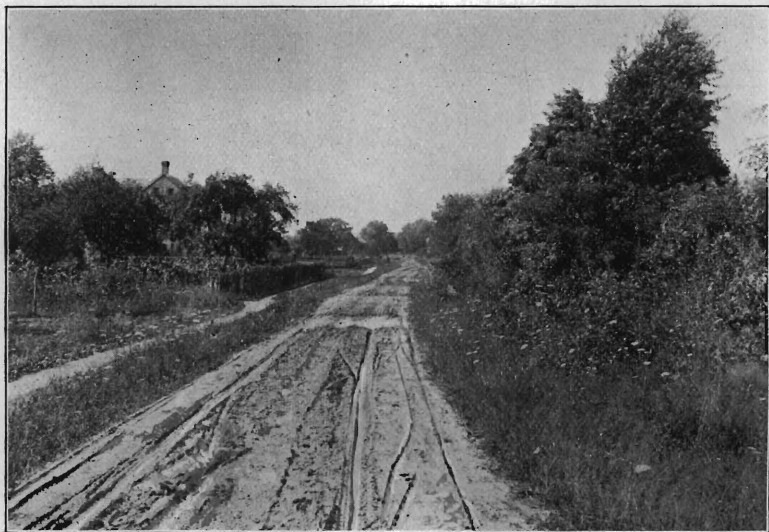
The conservatives of both sides feel that something should be done, and that there is something of truth in the contentions of

each side, hence have proposed many methods of relief. The first and most natural is that of sprinkling with water. This lays the dust and cements the surface, but must be repeated so often that it is too expensive, hence many other substances have been tried, with varying degrees of success. Among these may be mentioned crude oil, coal tar, asphaltum oil, applied hot or in solution with ammonia, and compounds having the power of absorbing the suspended moisture of the atmosphere, the most common of which last is salt, but none have thus far proven entirely satisfactory. Either they are too costly or the results, if good, are only transient.

A careful study of the problem on the New Jersey roads leads us to the conclusion that there is only one remedy; that is, to distribute the traffic. To this end it will be necessary to build practically parallel roads between our principal cities and resorts, at the same time widening our old roads, thus dividing and distributing the travel, and likewise the wear.

We have some such routes now. By building a few short links here and there we can increase their number, and if at the same time the old roads are widened, the travel will be divided and distributed to such an extent that the wear will be materially diminished. This proposition is entirely feasible, as a glance at our road map will quickly show.

The construction of these short stretches will not only distribute and consequently reduce the wear, but will also open up new territory to development, and thus enhance property values, as well as promote the comfort of all of the people, whether they live beside or travel over our improved roads.



Goshen Road, Cape May County, Before Improvement



Goshen Road, Cape May County, After Improvement

Meadow Road Repairs.

BY R. FENDALL SMITH, COUNTY ENGINEER OF CAPE MAY.

A glance at the topographical map of Cape May county will quickly reveal the fact, that a very large proportion of the area of the county consists of marsh and swamp lands. The general contour of the mainland being also quite flat, the engineering difficulties to be surmounted in the construction of improved highways are vastly different from those encountered in many of our sister counties.

With the rapid development of different sections comes the demand for a new avenue of access or the improvement of those already existing, and in many cases the only possible route available will lie directly across some of these swamp or marsh lands.

The three roads constructed by this county under State aid across these marsh lands, and previously described in detail, have proven very satisfactory, and surpassed our expectation in many particulars.

The dust problem, a matter of considerable importance on some roads, is a matter of minor importance on these roads, for, owing to their low elevation and the proximity of moisture, the dust problem is reduced to a minimum. But while we may cast aside the dust problem as a matter of slight importance in our case, we have ever with and before us the great problem of maintenance or repairs.

In the maintenance of these important highways we are again confronted with difficulties differing greatly from those encountered on other roads, for, in addition to the wear caused by travel, we have the wash of severe storm tides and the settlement of road-bed.

As the pavement on these roads consists of shells, covered with four inches of compacted gravel, the repairs made necessary by the wear from travel are very easily made by the application of a thin

coat of gravel, and by the frequent use of the road scraper, any ruts caused by heavy cartage are easily filled and the roadway made to present a smooth and uniform surface.

Owing to the infrequency of the severe storm tides, and to the enormous expense it would involve, these roads are not elevated to a height above the rise of storm tides, but are constructed to withstand being submerged and the severe washing caused thereby. Although railroad embankments have been washed away by these storm tides, and railroad travel delayed for days, these roads have withstood the storms without a single washout, the only damage sustained being a slight flattening of the crown of the roadway.

One of the most important features in the construction of these roads to protect against the washings is the use of a curb or guard-plank placed horizontally along on each side of the roadway and securely fastened to the piling forming a part of the road construction. These planks are placed one inch above the gutter line to allow free drainage from rainfall. The top of the planks are level with the crown of the road, thus protecting the road from the wash, and at the same time, if the crown is flattened or moved either side by the action of the water, the guard planks hold the gravel moved and prevent it being washed entirely away. Then after the tide has fallen the gravel may be replaced by the use of the scraper.

The efficacy of these guard planks was clearly demonstrated in a severe storm during the construction of the Sea Isle turnpike, for on such portions as the planks were not in place the crown was entirely washed away, while on portions where the guard planks were in place the roadway was intact. So by improvements from time to time in the methods of construction, and by the use of these guard planks, we consider we have reduced the cost of repairs from the wash of storm tides to a minimum.

The most serious cause for repairs, and the one involving the most expense on these roads, is from the settlement of the roadbed. This is caused by a weakening or overloading of the meadow crust, which causes the roadbed in the vicinity of these weak places to settle or become very much depressed below the grade line. We have endeavored, by improvements in methods of construction, to overcome this difficulty, but even then it is almost impossible to adopt any one form of construction that would apply to all conditions alike, as the supporting capacity of these marsh lands varies greatly.

COMMISSIONER OF PUBLIC ROADS.

63

These weak portions, although usually of limited extent, frequently call for quite an outlay of money in again raising the road to the standard grade, for, in order to properly repair the same, it is necessary to raise the foundation construction and relay the pavement.

While in this case we have not been able to reduce the expense of repairs to a minimum, as in the preceding case, experience has proven to us that we are making decided improvements along this line, and we are also confident that we are obtaining the very best results possible from a reasonable expenditure of money.

Road Coatings and Dust Preventatives.

BY JOHN J. ALBERTSON, COUNTY ENGINEER OF CAMDEN.

With the advent of the bicycle came the demand for better roads. First, from the voters, who formed themselves into clubs, and by united action were in position to enforce promises from their representatives in the Legislature. The demand for good roads soon outran the possibilities to build on a cash basis, consequently short-term road bonds were in some cases issued. The interest on these bonds, together with the sinking fund, did not seem formidable. The various communities thought they were getting a lasting improvement. In this one particular they were mistaken. With the good roads came a desire for heavier loads, thereby greatly increasing the abrasion on the stone surface and gradually grinding the toughest trap rock into fine dust. The action is slow, but continuous. The stone road surface has but little elasticity, hence the grinding is more rapid. Various ideas have been advanced to provide a wearing surface so that the heavy freight wagon with narrow steel tires would not come in direct contact with the exposed trap rock. Sand cushion, gravel surfacing, modified forms of salt, oil, and tar, have been tried, with varying degrees of success. With the coming of the high-speed automobile the dust nuisance becomes almost unbearable, to say nothing of the extravagance of having the pulverized particles of exposed stone removed from your road faster than the bonded debt was reduced, hence the urgent need for a new surfacing.

The county of Camden, with the help of your road department, has made some extensive and expensive experiments with oil and tarvia. Our road committee, together with its engineer, visited some tarvia-coated roads in Pennsylvania, and were led to believe the experiment would be worth a trial, particularly along the White Horse turnpike road, the famous automobile route between

Philadelphia and Atlantic City. This seemed to be the appropriate place to expend the funds derived from the automobile license fund, therefore our experiments were confined almost entirely to this one road. As is well known, the funds collected from automobile licenses are distributed by you for the purpose of repairing roads already built. Camden county took a large share of its allotment in tarvia. We might have bought the crude coal tar and treated it ourselves by driving off the water and ammonia with heat. The cost of tarvia was but little more, so we took the product claimed to be especially prepared for the purpose. We applied it in various places under different conditions and with varying degrees of success. On a stone bed, fourteen feet wide, we used sixty barrels per mile.

The tarvia cost six and one-fourth cents per gallon and two-fifths of a cent per gallon for freight. We used one hundred tons of trap rock screenings per mile as an absorbent for the tarvia, which cost about \$175, and \$80 for labor, or a total cost of about \$450 per mile. This seems like a heavy outlay, but where conditions were favorable, and road in good order, resurfaced and well crowned, the results so far have been very satisfactory. There has been no wear of the stone. Wagons and carriages move noiselessly as over a first-class asphalt pavement, and with about the same amount of damage to the road surface. There is no abrasion, and but little dust.

We applied the tarvia hot, using a furnace or kettle built for the purpose on wheels. We first sent a gang of men ahead with stable brooms and swept the stones as clean as possible, then dragged the kettle behind a wagon. The kettle was provided with a gate valve and a short piece of hose, through which the hot tarvia was distributed over the cleaned stone surface, then brushed out evenly with stable brooms. We then applied the screenings, to make an absorbent. In a few hours the road was ready for use. We made our first experiments in last May and continued them during the summer, using several carloads of tarvia. For those wishing to use tarvia, we would recommend, first, to have the road in good order, free from dust, and well crowned. Under all other conditions our experiments were unsatisfactory. I would apply tarvia on a hot, dry day. Use plenty of good trap rock screenings, and results promise to be most gratifying. Rain and windstorms have no effect on roads so treated.

COMMISSIONER OF PUBLIC ROADS.

67

We had previously made some experiments in 1905 with crude petroleum, and the objections about balanced the good results. In August, 1906, we applied one carload of heavy oil from Texas, at twelve cents per gallon. Counting the labor of applying the oil, it cost us about \$1.25 per mile, on a fourteen-foot-wide stone bed. As a dust absorber it acted like magic, but its results were not lasting. It is a question in the minds of some whether we cannot make more frequent applications of oil and attain almost as good results, and with a more moderate expenditure than is required with tarvia.

By another year we hope to be able to speak more positively as to the values of road coatings and dust preventatives.

Quarries in New Jersey Producing Road Metal.

BERGEN COUNTY.

Location of Quarry.	Owners.	P. O. Address.
Edgewater	Cody Bros.	Edgewater, N. J.
Linwood	Carpenter Bros.	Linwood, N. J.
Shady Side	Brown & Fleming	Englewood, N. J.
Fairview	Fairview Stone Crushing Co.,	1996 Chambers St., N. Y.

ESSEX COUNTY.

Montclair	Osborne & Marcellis	Upper Montclair, N. J.
Montclair	F. J. Marley	Little Falls, N. J.
Orange	Geo. Spottiswoode & Co.	Orange, N. J.
Millburn	G. A. Lightpipe & Son	Millburn, N. J.
Cedar Grove	F. J. Marley	Little Falls, N. J.
Montclair	Francisco Bros.	Orange, N. J.
Short Hills	Stewart Hartshorn	Orange, N. J.
Caldwell	P. A. Matthews	Caldwell, N. J.

HUDSON COUNTY.

Bergen Hill	B. M. & J. F. Shanley	Newark, N. J.
Palisades	Palisade Construction Co., No. 1 Montgomery St., Jersey City,	N. J.
Palisades	Hudson County Contracting Co., No. 367 Communipaw Ave., Jersey City,	N. J.
Guttenberg	Clinton Point Stone Co	Guttenberg, N. J.
Granton	Wagner & Duff	Granton, N. J.
Granton	F. J. Marley	Little Falls, N. J.
Woodcliff	John S. Lane & Sons	Guttenberg, N. J.
Shady Side	Bull's Ferry Land Co.	Guttenberg, N. J.

HUNTERDON COUNTY.

Byram Station	B. M. & J. F. Shanley	Newark, N. J.
Byram Station	Trenton Stone and Construction Co.	Trenton, N. J.
Lambertville	W. N. Ireland, Agent	1241 Filbert St., Phila, Pa.
Middle Valley	Middle Valley Trap Rock Co.	Middle Valley, N. J.

FOURTEENTH ANNUAL REPORT.

MERCER COUNTY.

Location of Quarry.	Owners.	P. O. Address.
Moores	Delaware River Quarry and Construction Co.,	Lambertville, N. J.
Goat Hill	B. M. & J. F. Shanley	Jersey City, N. J.
Hopewell	J. S. Cope	Hopewell, N. J.
Titusville	Trenton Stone and Construction Co.	Trenton, N. J.
Belmont	Mercer County Workhouse	Trenton, N. J.

MIDDLESEX COUNTY.

Deans	James & George Law	Monmouth Junction, N. J.
-------------	--------------------------	--------------------------

MORRIS COUNTY.

Nearly all road-building material in this county is of native rock, gneiss, granite and shale. The traps are mostly imported from other counties.

Millington	Morris County Crushed Stone Co....	Morristown, N. J.
Mountain View	Standard Paving Co.	Mountain View, N. J.

PASSAIC COUNTY.

Garret Mountain	Francisco Bros.	Little Falls, N. J.
Paterson	F. J. Marley	Little Falls, N. J.
Paterson	Paterson Crushed Stone Co.	Paterson, N. J.
Paterson	New Jersey Stone Co.	Rutherford, N. J.
Paterson	McKiernan & Bergen	Paterson, N. J.
Notch Road	F. J. Marley	Little Falls, N. J.
Notch Road	Dowling Construction Co.	Paterson, N. J.
Haledon	R. M. Torbet	Haledon, N. J.
Hawthorne	Daniel & D. Stanley	Hawthorne, N. J.
Preakness	Colfax & Steele	Pompton, N. J.
Great Notch	Wright & Lindsley	Orange, N. J.
Paterson	Preakness Stone Crushing Co.	Paterson, N. J.

SOMERSET COUNTY.

Dunellen	Garrison & Gray	Dunellen, N. J.
North Plainfield	N. B. Smalley	Plainfield, N. J.
Bernardsville	Somerset Stone Crushing Co.	Bernardsville, N. J.
Mine Brook	James Freeman	Mine Brook, N. J.
Plainfield	J. H. Wilson & Co.	Plainfield, N. J.
Millington	Millington Stone Co.	Millington, N. J.
Chimney Rock	Bound Brook Crushed Stone Co. ...	Bound Brook, N. J.
Somerville	William Hardgrove	Somerville, N. J.
Rocky Hill	Delaware River Quarry and Construction Co.,	Rocky Hill, N. J.
Bernardsville	Frank S. Tainter	Morristown, N. J.
Far Hills	Grant Schley	Far Hills, N. J.
Bernardsville	Mine Brook Stone Co.	Bernardsville, N. J.

COMMISSIONER OF PUBLIC ROADS.

71

SUSSEX COUNTY.

Location of Quarry.	Owners.	P. O. Address.
Newton	Newton State Quarry	Newton, N. J.

UNION COUNTY.

Scotch Plains	Hatfield & Weldon	Scotch Plains, N. J.
Murray Hill	Commonwealth Company	Murray Hill, N. J.
Summit	A. A. Potter	Summit, N. J.
West Summit	Victor G. Smythe	West Summit, N. J.
Springfield	Stewart Hartshorn	Springfield, N. J.

Gravel Pits in New Jersey Used for Road Building.

ATLANTIC COUNTY.

Location of Pits.	Owners.	P. O. Address.
Mays Landing	Estate of Wm. Post	Mays Landing, N. J.
Mays Landing	D. E. Izard	Mays Landing, N. J.
Estelville	A. E. Bourgeois	Estelville, N. J.
Tuckahoe	Henry D. & Wm. G. Moore, Haddonfield, and 931 Chestnut St., Phila., Pa.	
Mays Landing	J. E. P. Abbott	Mays Landing, N. J.
Mays Landing	Samuel Champion	Mays Landing, N. J.
Pleasantville	West Jersey and Seashore Railroad	Camden, N. J.
Pleasantville	P. & A. C. Railroad	Pleasantville, N. J.

BURLINGTON COUNTY.

Riverton	Lewis Connor	Riverton, N. J.
Westfield	Enoch Evans	Westfield, N. J.
Westfield	Estate of Wm. R. Lippincott	Westfield, N. J.
Palmyra	Isaac Evalul	Palmyra, N. J.
Palmyra	Wm. F. Morgan	Palmyra, N. J.
Burlington	Frank Warren	Burlington, N. J.
Riverton	Franklin T. Hunter	Riverton, N. J.
Bridgeboro	Edwin M. Brock	Bridgeboro, N. J.
Moorestown	Michael Flynn	Moorestown, N. J.
Hartford	John Warrick	Hartford, N. J.
Rancocas	James W. Stokes	Rancocas, N. J.
Columbus	Thomas A. Bunting	Columbus, N. J.
Columbus	Thomas H. Rogers	Columbus, N. J.
Kinkora	C. G. Kinsley	Kinkora, N. J.
Columbus	Edward Wilson	Columbus, N. J.
Columbus	Charles Sharp	Columbus, N. J.
Florence	George Bowne	Florence, N. J.
Georgetown	John P. Hutchinson	Georgetown, N. J.
Jobstown	Charles Black	Jobstown, N. J.
Centerton	Allen Austin	Centerton, N. J.
Willingboro	Mrs. John Buzby	Willingboro, N. J.
Beverly	J. H. Comb	Beverly, N. J.
Burlington	Samuel Johnson	Burlington, N. J.
Beverly	William Baggs	Beverly, N. J.
Beverly	Joshua Fenimore	Beverly, N. J.
Moorestown	Samuel C. Decou	Moorestown, N. J.

FOURTEENTH ANNUAL REPORT.

CAPE MAY COUNTY.

Location of Pits.	Owners.	P. O. Address.
Belle Plain	West Jersey and Seashore Railroad	Camden, N. J.

CUMBERLAND COUNTY.

Millville	John Golder	Millville, N. J.
-----------------	-------------------	------------------

MIDDLESEX COUNTY.

Old Bridge	I. Biddle Herbert	Old Bridge, N. J.
Helmetta	Geo. W. Helme	Helmetta, N. J.
Jamesburg	James Buckelew's Sons	Jamesburg, N. J.
Englishtown	Charles Hoffman	Englishtown, N. J.

MONMOUTH COUNTY.

Hopping	D. G. Campbell	Middletown, N. J.
Navesink	D. R. G. Andrews	Navesink, N. J.
Hopping	Peter L. Conover	Atlantic Highlands, N. J.
Leonardville	John T. Hopping	Leonardville, N. J.
Red Bank	Mrs. Henry Field	Red Bank, N. J.
Red Bank	James Hubbard	Red Bank, N. J.
Red Bank	John L. Applegate	Red Bank, N. J.
Chapel Hill	Geo. T. Hopping	Chapel Hill, N. J.
Middletown	J. D. Conover	Middletown, N. J.
Farmingdale	Manasquan Gravel Co.	Asbury Park, N. J.
Allenwood	Manasquan Gravel Co.	Asbury Park, N. J.
Shark River	Manasquan Gravel Co.	Asbury Park, N. J.
Navesink	Webster Swan	Navesink, N. J.
Holmdel	William Crawford	Holmdel, N. J.
Red Bank	Red Bank Gravel Co.	Red Bank, N. J.

OCEAN COUNTY.

Stafford	Staffordville Gravel Co.	Staffordville, N. J.
----------------	-------------------------------	----------------------

Statements by Engineers and Supervisors.

October 10th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Ham-
 monton and Atsion road, town of Hammonton, county of Atlantic, State of
 New Jersey. Total length, 33,835 feet, or 6.408 miles.

Width of gravel-bed, 16 feet.

Length of gravel-bed, 33,835 feet.

Depth of gravel-bed, 3,000 feet of 4 inches, 30,835 feet of 8 inches.

Gravel, 12,774.32 cubic yards, at \$1.95; total	\$24,909 92
Earth excavation, 22,426 cubic yards, at 23 cents; total.....	5,157 98
Extra excavation, 1,000 cubic yards, at 36 cents; total	360 00
Grubbing, 12 acres, at \$35; total	420 00
	<hr/>
Total	\$30,847 90
Supervisor's salary	627 00
Engineering expenses	1,573 39
Extras, paid by county	3,459 31
	<hr/>
Total cost of road	\$36,507 60
	<hr/>
Lump sum, contract price	\$30,507 85
Supplemental contract	360 00
Total allowed by the State	30,867 85
One-third of above amount paid by the State	10,289 28
	<hr/>
Maximum grade before	4.5 per cent.
Maximum grade after .....	.5 per cent.

We hereby certify the above statement to be correct, and that the pavement
 was constructed strictly according to the specifications, and that the depth of
 finished pavement was eight inches.

Respectfully yours,

E. D. RIGHTMIRE,
Engineer.

WM. A. ELVINS,
Supervisor.

(75)

FOURTEENTH ANNUAL REPORT.

December 11th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Kinderkamack road, borough of Etna, county of Bergen, State of New Jersey. Total length, 6,055.8 feet, or 1.14 miles.

Width of stone-bed, 14 feet.
 Length of stone-bed, 6,055.8 feet.
 Depth of stone-bed, 8 inches.

Macadam, 9,526.5 square yards....	} total.....	\$7,424 91
Earth excavation, 3,787 cubic yards		
Total		\$7,424 91
Supervisor's salary		214 50
Engineering expenses		300 00
Extras, paid by county		346 85
Total cost of road		\$8,286 26
Lump sum, contract price		\$7,424 91
Total allowed by the State		7,424 91
One-third of above amount paid by the State		2,474 97
Maximum grade before		8 per cent.
Maximum grade after		5 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,

H. G. HERING, JR.,
Engineer.

JOHN HECK,
Supervisor.

MAGNOLLA, N. J., October 7th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Haddonfield and Coffin's Corner road, townships of Haddon and Delaware, county of Camden, State of New Jersey. Total length, 17,649.5 feet, or 3.15 miles.

Width of stone-bed, 14 feet.
 Length of stone-bed, 17,563 feet.
 Depth of stone-bed, 8 inches.



Haddonfield Hill, Camden County, Before Improvement, Showing Intersection of Ellis and Potter Streets



Haddonfield Hill, Camden County, After Improvement, Showing Concrete Retaining Wall on Ellis Street with Stone Gutters to the bottom of the hill

COMMISSIONER OF PUBLIC ROADS.

77

Macadam, 26,977.98 square yards, at 94 cents; total	\$25,359 30
Telford, 342.22 square yards, at \$1; total	342 22
Driveways, 219 square yards, at 50 cents; total	109 50
Earth excavation, 15,806.66 ² / ₃ cubic yards, at 30 cents; total	4,742 00
Drain, 1,429 lineal feet, at 20 cents; total	285 80
Belgian block gutter	} total.... 2,955 87
Cobble stone gutter, 3,284.3 square yards, at 90 cents	
Rubble stone gutter	
<hr/>	
Total	\$33,794 69
Supervisor's salary	660 00
Engineering expenses	1,013 84
Extras	1,183 89
<hr/>	
Total cost of road	\$36,652 42
<hr/>	
Lump sum, contract price	\$32,610 80
Total allowed by the State	33,794 69
One-third of above amount paid by the State	11,264 89
<hr/>	
Maximum grade before	6.60 per cent.
Maximum grade after	4 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,

J. J. ALBERTSON,

Engineer.

CHARLES C. STAFFORD,

Supervisor.

MAGNOLIA, N. J., January 14th, 1908.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Berlin and Milford road, townships of Waterford and Voorhees, county of Camden, State of New Jersey. Total length, 21,392 feet, or 4.05 miles.

Width of gravel-bed, 14 feet.
 Length of gravel-bed, 21,392 feet.
 Depth of gravel-bed, 6 inches.

Gravel, 5,533.4 cubic yards, at 85 ¹ / ₃ cents.....	} total....	\$10,389 61
Earth excavation, 16,836.3 cubic yards, at 33 ² / ₃ cents		
Extra drain, 682 lineal feet, at 20 cents; total		136 40
Extra excavation, 151 cubic yards, at 33 ² / ₃ cents; total		50 84
Extra gravel, 20.2 cubic yards, at 85 ¹ / ₃ cents; total		17 23
<hr/>		
Total		\$10,594 08
Supervisor's salary		414 00
Engineering expenses, yearly salary		
<hr/>		
Total cost of road		\$11,008 08

FOURTEENTH ANNUAL REPORT.

Lump sum, contract price	\$10,389 61
Total allowed by the State	10,389 61
One-third of above amount paid by the State	3,463 20
Maximum grade before	5.3 per cent.
Maximum grade after	3.1 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was six inches.

Respectfully yours,

J. J. ALBERTSON,
Engineer.
CHARLES SNYDER,
Supervisor.

MAGNOLIA, N. J., November 25th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Cove road, township of Pensauken, borough of Merchantville, county of Camden, State of New Jersey. Total length, 9,407 feet, or 1.78 miles.

Width of stone-bed, 14 feet.
Length of stone-bed, 9,373 feet.
Depth of stone-bed, 6 inches.

Macadam, 14,580.2 square yards, at 79 cents; total	\$11,518 36
Macadam driveways, 80 square yards, at 70 cents; total	56 00
Earth excavation, 6,677.6 cubic yards, at 30 cents; total	2,003 28
Cobble stone gutter, 444 ¹ / ₆ square yards, at 90 cents; total	400 00
Extra excavation, 924.24 cubic yards, at 30 cents; total	277 27
Tile drain, 500 feet, at 25 cents; total	125 00
Total	\$14,379 91
Supervisor's salary	319 50
Engineering expenses	431 40
Total cost of road	\$15,130 81
Lump sum, contract price	\$13,977 64
Total extras allowed by the State	402 27
One-third of above amount paid by the State	\$14,379 91
Maximum grade before	4.15 per cent.
Maximum grade after	2.80 per cent.

COMMISSIONER OF PUBLIC ROADS.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was six inches.

Respectfully yours,

J. J. ALBERTSON,
Engineer.

JOHN W. COX,
Supervisor.

MAGNOLIA, N. J., October 28th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Blackwoodtown turnpike road, townships of Centre and Gloucester, county of Camden, State of New Jersey. Total length, 13,360 feet, or 2.53 miles.

Width of stone-bed, 14 feet.
Length of stone-bed, 13,291.8 feet.
Depth of stone-bed, 8 inches.

Macadam, 20,676.13 square yards, at \$1.12.....	}	total....	\$28,390 00
Macadam driveways, 20 square yards, at \$1.....			
Earth excavation, 15,339.2 cubic yards, at 20 cents..	}		
Drain, 1,070 lineal feet, at 15 cents.....			
Rubble block gutter, 1,991.1 square yards, at 65 cents }			
Extra macadam driveways, 18.3 square yards, at \$1; total			18 30
Extra excavation at driveways, 576 square yards, at 30 cents;			
total			172 80
Extra concrete and rubble stone gutter 116.2 square yards, at			
65 cents; total			75 53
Total			\$28,656 63
Supervisor's salary			579 00
Engineering expenses			859 69
Total cost of road			\$30,095 32
Lump sum, contract price			\$28,390 00
Total allowed by the State			28,656 63
One-third of above amount paid by the State			9,552 21
Maximum grade before			6.35 per cent.
Maximum grade after			4.00 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,

J. J. ALBERTSON,
Engineer.

CHARLES C. STEVENSON,
Supervisor.

FOURTEENTH ANNUAL REPORT.

MAGNOLIA, N. J., August 9th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the King's Highway road, township of Centre, county of Camden, State of New Jersey. Total length, 8,210 feet, or 1.55 miles.

Width of stone-bed, 14 feet.
 Length of stone-bed, 8,173 feet.
 Depth of stone-bed, 8 inches.

Macadam, 12,713.5 square yards, at \$1.04; total.....	\$13,222 04
Cobble gutters, 888.8 square yards, at 70 cents; total	622 16
Macadam intersections, 60 square yards, at 95 cents; total	57 00
Earth excavation, 10,181.8 cubic yards, at 20 cents; total	2,036 36
Drain, 2,900 lineal feet, at 15 cents; total	435 00
Supervisor's salary	525 00
Engineering expenses	492 00
Total	\$17,389 56

Lump sum, contract price	\$16,400 00
Total allowed by the State	16,372 56
One-third of above amount paid by the State	5,457 52

Maximum grade before	5.40 per cent.
Maximum grade after	4.00 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,

J. J. ALBERTSON,
Engineer.
 WILLIAM C. WOOD,
Supervisor.

MAGNOLIA, N. J., March 8th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Linden avenue (Laurel Springs) road, township of Clementon, county of Camden, State of New Jersey. Total length, 5,174.5 feet, or .98 mile.

Width of stone-bed, 14 feet.
 Length of stone-bed, 5,135.5 feet.
 Depth of stone-bed, 6 inches.

Macadam, 7,988.55 square yards.....	} total.....	\$7,589 13
Earth excavation, 2,568.5 cubic yards		
Total		\$7,589 13
Supervisor's salary		264 00
Engineering expenses		227 67
Total cost of road		\$8,080 80



Linden Avenue, Laurel Springs, Camden County, Before Improvement



Linden Avenue, Laurel Springs, Camden County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

81

Lump sum, contract price	\$7,589 13
Total allowed by the State	7,589 13
One-third of above amount paid by the State	2,529 71

Maximum grade before	4.60 per cent.
Maximum grade after	3.45 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was six inches.

Respectfully yours,

J. J. ALBERTSON,

Engineer.

FREDERICK H. TOMLINSON,

Supervisor.

CAPE MAY COURT HOUSE, N. J., November 6th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Goshen road, township of Middle, county of Cape May, State of New Jersey. Total length, 21,120 feet, or 4 miles.

Width of gravel-bed, 14 feet (except Mechanic street).

Width of gravel-bed on Mechanic street, 28 feet.

Length of gravel-bed on Mechanic street, 1,737 feet.

Total length of gravel-bed, 21,120 feet.

Depth of gravel-bed, 8 inches, at shoulder line, 12 inches in center.

Compacted gravel, Class A, 4,991 cubic yards, at \$1.55; total	\$7,736 05
Compacted gravel, Class B, 4,942 cubic yards, at 92 cents; total..	4,546 64
Earth excavation and embankment, 14,100 cubic yards, at 28 cents; total	3,948 00
Grubbing, 3 acres, at \$125; total	375 00

Total	\$16,605 69
-------------	-------------

Excess of lump sum bid over calculation by quantities	2,114 91
---	----------

Supervisor's salary	342 00
---------------------------	--------

Engineering expenses	711 26
----------------------------	--------

Extras paid by county for culverts, iron pipe, &c.	1,601 30
---	----------

Total cost of road	\$21,375 16
--------------------------	-------------

Lump sum, contract price	\$18,720 60
--------------------------------	-------------

Total allowed by the State	18,720 60
----------------------------------	-----------

One-third of above amount paid by the State	6,240 20
---	----------

Maximum grade before	2.5 per cent.
----------------------------	---------------

Maximum grade after	0.9 per cent.
---------------------------	---------------

FOURTEENTH ANNUAL REPORT.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches at the shoulder line and twelve inches at the center.

Respectfully yours,
R. FENDALL SMITH,
Engineer.
THOMAS H. DOUGLASS,
Supervisor.

December 24th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Sea Isle City turnpike road, township of Dennis, county of Cape May, State of New Jersey. Total length of road, 13,752 feet, or 2.605 miles.

Width of gravel-bed, 14 feet.
 Length of gravel-bed, 13,615 feet.
 Depth of gravel-bed on upland, 6 inches at the shoulder line, 8 inches in center.
 Depth of gravel-bed on meadow section, 4 inches on shells.

Bulkheads, 1,528 lineal feet, at \$1.25	\$1,910 00
Retaining wall, 175 lineal feet, at \$2.70	472 50
Excavation, 3,196 cubic yards	} total..... 24,582 09
Meadow filling, 6,300 cubic yards	
Compacted gravel, 3,540 cubic yards	
Shells, 43,660 bushels	
Cedar plank, 21,830 feet B. M.	
Pine plank, 40,604 feet B. M.	
Cedar piles, 3,165.	
Pine and cedar ties, 1,695.	
Pine, cedar and oak poles, 72,272	
Pine stringers, 53,734 lineal feet.	
Galvanized iron nails, bolts, &c., 4,800 pounds)	

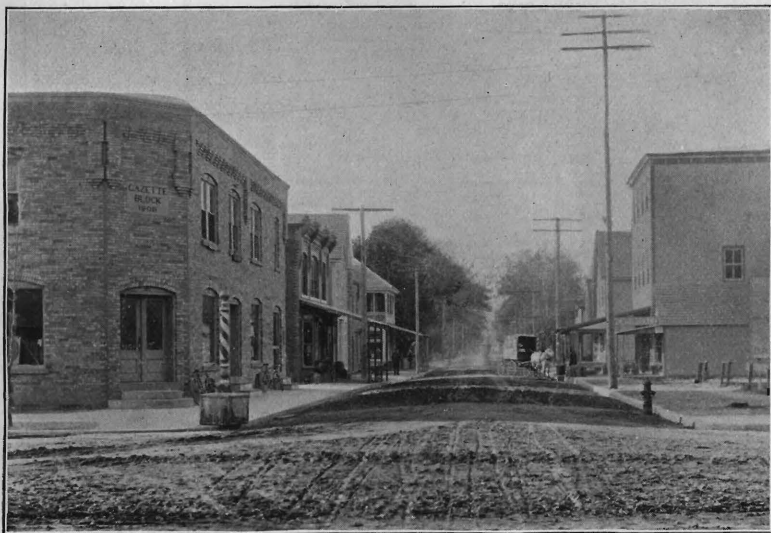
Total	\$26,964 59
Supervisor's salary	1,002 00
Engineering expenses	943 76
Extras paid by county, culverts, bridges, &c.	1,852 59

Total cost of road

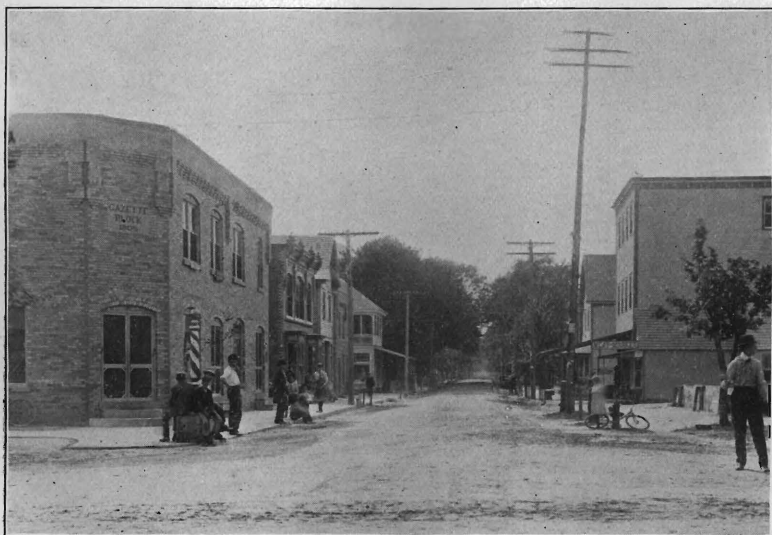
\$30,762 94

Lump sum, contract price	\$26,964 59
Total allowed by the State	26,964 59
One-third of above amount paid by the State	8,988 20

Maximum grade on upland before3.8 per cent.
 Maximum grade on meadow beforeLevel.
 Maximum grade on upland after2.55 per cent.
 Maximum grade on meadow afterpractically level.



Goshen Road, Cape May County, Before Improvement



Goshen Road, Cape May County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of the finished pavement was six inches and eight inches on the upland, and four inches on shells on the meadow section.

R. FENDALL SMITH,
Engineer.
CHARLES E. FOSTER,
Supervisor.

October 21st, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Horse-neck road, township of Caldwell, county of Essex, State of New Jersey. Total length, 13,225.2 feet, or 2.505 miles.

Width of stone-bed, 16 feet.
Length of stone-bed, 13,069.4 feet.
Depth of stone-bed, 8 inches.

Telford, 23,505 square yards, at 80 cents; total	\$18,804 00
Earth excavation, 12,679 cubic yards, at 45 cents; total	5,705 55
Total	\$24,509 55
Supervisor's salary	388 50
Total cost of road	\$24,898 05
Lump sum, contract price	\$24,509 55
Total allowed by the State	24,509 55
One-third of above amount paid by the State	8,169 85
Maximum grade before	2.78 per cent.
Maximum grade after .....	.68 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,
G. F. DRUM,
Engineer.
NICHOLAS B. WILLIAMS,
Supervisor.

October 22d, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of Bradford, avenue road, township of Verona and town of Montclair, county of Essex, State of New Jersey. Total length, 7,689 feet, or 1.46 miles.

Width of stone-bed, 16 feet.
Length of stone-bed, 7,689 feet.
Depth of stone-bed, 8 inches.

FOURTEENTH ANNUAL REPORT.

Telford, 13,929 square yards, at 55 cents; total	\$7,660 95
Earth excavation, 79,129 cubic yards, at 89 cents; total	70,424 81
Cobble stone gutter, 1,933 square yards at \$1; total	1,933 00
Total	\$80,018 76
Total cost of road	\$80,018 76
Total allowed by the State	\$80,018 76
One-third of above amount paid by the State	26,672 92
Maximum grade before	17.04 per cent.
Maximum grade after	9.45 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,
JAMES OWEN,
Engineer.
HARRY R. BALDWIN,
Supervisor.

October 22d, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Mt. Pleasant avenue road, township of West Orange, county of Essex, State of New Jersey. Total length, 5,655 feet, or 1.07 miles.

Width of stone-bed, 16 feet.
 Length of stone-bed, 5,655 feet.
 Depth of stone-bed, 8 inches.

Telford, 10,053 square yards, at 57 cents; total.....	\$5,730 21
Earth excavation, 34,727 cubic yards, at 72 cents; total.....	25,003 44
Cobble stone gutter, 2,611 square yards, at \$1; total.....	2,611 00
Total	\$33,344 65
Total allowed by the State	\$33,344 65
One-third of above amount paid by State	11,114 88
Maximum grade before	11.61 per cent.
Maximum grade after	7.48 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,
JAS. OWEN,
Engineer.
GEORGE LEAVORGUTH,
Supervisor.



Upper River Road, Mercer County, Before Improvement



Upper River Road, Mercer County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

December 19th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Old York road, townships of East Amwell and Raritan, county of Hunterdon, State of New Jersey. Total length, 28,225 feet, or 5.37 miles.

Width of stone-bed, 14 feet.
 Length of stone-bed, 28,225 feet.
 Depth of stone-bed, 6 inches.

Macadam, 42,692 square yards, at 60 cents.....	} total....	\$39,826 62
Telford, 1,244 square yards, at \$1.88.....		
Earth excavation, 18,419 cubic yards, at 50 cents...		
Borrowed excavation, 6,662 cubic yards, at 40 cents		
Drain, 325 lineal feet, at 25 cents.....		
Extra excavation		1,178 58
Total		\$41,005 20
Supervisor's salary		531 00
Extras, paid by county		4,070 09
Total cost of road		\$45,606 29
Lump sum, contract price		\$39,826 62
Total allowed by the State		41,005 20
One-third of above amount paid by the State		13,668 40
Maximum grade before		8.60 per cent.
Maximum grade after		4.40 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was six inches.

Respectfully yours,
 A. J. COOPER,
Engineer.
 R. H. RUNKLE,
Supervisor.

October 8th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

SIR—Below find an exact detailed statement of the cost of the improvements to the public highway in Mercer county, New Jersey, known as the Upper River road, beginning at River road and extending to Upper Ferry road, in the township of Ewing. Total length of road, 4,162 feet, or 0.79 mile.

Length of stone-bed, 4,153 feet.
 Width of stone-bed, 14 feet.
 Depth of stone-bed, Class B, or not less than six (6) inches.
 Average width of shoulders, six (6) feet.
 Average total width of improved roadway, twenty-six (26) feet.

FOURTEENTH ANNUAL REPORT.

Excavations, 3,100 cubic yards, at 40 cents	\$1,240 00
Macadam, 6,517 square yards, at 64 cents	4,170 88
Macadam driveways, 120 square yards, at 64 cents	76 80
Rubble masonry retaining walls, 24 cubic yards, at \$8	192 00
Four-inch by 20-inch coping, 20 lineal feet, at \$2	40 00
Anchor bolts, 6.	5 00
<hr/>	
Total cost	\$5,724 68
<hr/>	
Lump sum, contract price	\$5,724 68
Supervisor's salary	273 00
<hr/>	
Total of all costs	\$5,997 68
<hr/>	
Portion approved by the State	\$5,487 68
Total allowed by the State	5,487 68
One-third of above paid by the State	1,829 23
<hr/>	
Maximum grade before	3.40 per cent.
Maximum grade after	0.60 per cent.

We hereby certify the above statement to be correct, and that the work was constructed in all respects in strict conformity to the plans and specifications, and that the finished pavement was Class B, or not less than six (6) inches deep.

Respectfully yours,

FRANK J. EPPELE,
Engineer.
J. LINCOLN KNIGHT,
Supervisor.

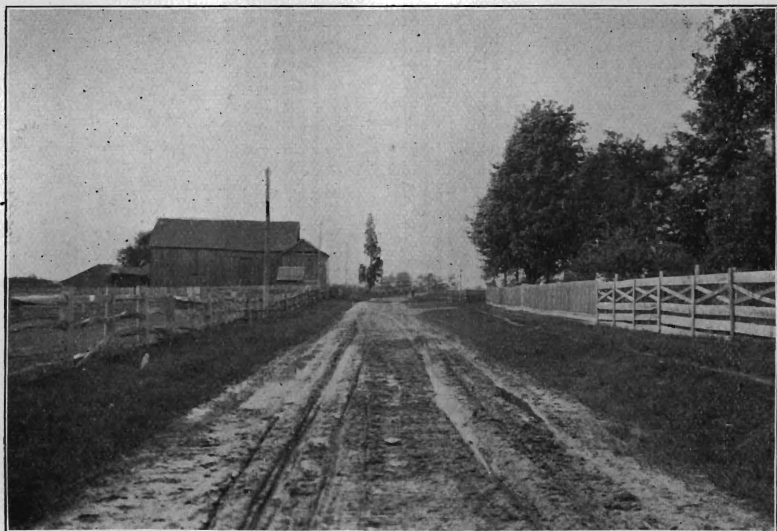
September 10th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

SIR—Below find an exact detailed statement of the cost of the improvements to the public highway in Mercer county, New Jersey, known as the East State street road, beginning at the city line of Trenton and extending to Trenton and Allentown road, in the township of Hamilton. Total length of road, 2,442 feet, or 0.49+ mile.

- Length of stone-bed, 2,442 feet.
- Width of stone-bed, 39.6 feet less space occupied by street car tracks.
- Depth of stone-bed, Class D, or not less than ten (10) inches deep.
- Average total width of improved roadway, 39.6 feet.

Excavations, 2,400 cubic yards, at 30 cents	\$720 00
Macadam, 6,977 square yards, at 96 cents	6,697 92
Fifteen-inch terra-cotta pipe, 40.6 lineal feet, at 75 cents	30 37
Concrete retaining walls and inlets $4\frac{2}{3}$ cubic yards, at \$12	56 00
Inlet covers—two "City Inlets No. 2," at \$9	18 00
Two blue stone slabs for inlets, 5 feet 2 inches by 16 inches by 3 inches thick, at 90 cents	1 80
<hr/>	
Total cost	\$7,524 09



Quaker Bridge Road, Mercer County, Before Improvement



Quaker Bridge Road, Mercer County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

87

Lump sum, contract price	\$7,524 09
Supervisor's salary	246 00
<hr/>	
Total of all costs	\$7,770 09
<hr/>	
Portion approved by the State	\$7,417 92
Total allowed by the State	7,417 92
One-third of above paid by the State	2,472 64
Maximum grade before	1.3 per cent.
Maximum grade after	1.0 per cent.

We hereby certify the above statement to be correct, and that the work was constructed in all respects in strict conformity to the plans and specifications, and that the finished pavement was Class D, or not less than ten (10) inches deep.

Respectfully yours,

FRANK J. EPPELE,
Engineer.
R. B. KONOVER,
Supervisor.

September 24th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

SIR—Below find an exact detailed statement of the cost of the improvements to the public highway in Mercer county, New Jersey, known as the Quaker Bridge road, beginning at Hamilton Square and extending to Mercerville and Edinburg road, in the township of Hamilton. Total length of road, 7,892 feet, or 1.50 miles.

- Length of stone-bed, 7,849 feet.
- Width of stone-bed, 20 feet for 1,200 feet, balance 14 feet.
- Depth of stone-bed, Class B, or not less than six (6) inches.
- Average width of shoulders, six (6) feet.
- Average total width of improved roadway, twenty-six (26) feet.

Excavations, 4,880 cubic yards, at 32 cents	\$1,561 60
Macadam, 13,325 square yards, at 72 ¹⁰⁷⁴ / ₂₀₆₅ cents	9,672 70
Macadam driveways, 56 square yards, at 40 cents	22 40
Belgian block gutters, 133 square yards, at 90 cents	119 70
Underdrains, 3,574 lineal feet, at 10 cents	357 40
Sixteen-inch C. I. pipe, to be laid only, 24 lineal feet, at \$2.50....	60 00
Thirty-six-inch C. I. pipe, 30 lineal feet, at \$6	180 00
Twenty-four-inch terra-cotta pipe, 400 lineal feet, at \$2	800 00
Concrete retaining walls and inlets, 26 cubic yards, at \$6	156 00
Four-inch by 20-inch coping, 42 lineal feet, at 60 cents	25 20
Anchor bolts, 18, at 50 cents	9 00
Two iron grates for inlets, at \$5	10 00
Two covers for inlets, at \$8	16 00
<hr/>	
Total cost	\$12,990 00

FOURTEENTH ANNUAL REPORT.

Lump sum, contract price	\$12,990 00
Supervisor's salary	279 00
	<hr/>
Total of all costs	\$13,269 00
	<hr/>
Portion approved by the State	\$11,733 80
Total allowed by the State	11,733 80
One-third of above paid by the State	3,911 27
Maximum grade before	4.13 per cent.
Maximum grade after	2.20 per cent.

We hereby certify the above statement to be correct, and that the work was constructed in all respects in strict conformity to the plans and specifications, and that the finished pavement was Class B, or not less than six (6) inches deep.

Respectfully yours,

FRANK J. EPPELE,
Engineer.
DAVID G. FLOCK,
Supervisor.

July 23d, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

SIR—Below find an exact detailed statement of the cost of the improvements to the public highway in Mercer county, New Jersey, known as the Princeton avenue, Spruce street and Brunswick avenue road, beginning at the intersection of Princeton avenue and the city line of Trenton and extending to Spruce street, thence to Brunswick avenue, and thence to Mulberry street, in the townships of Ewing and Lawrence, and the city of Trenton. Total length of road, 3,933.8 feet, or .75 mile.

Length of stone-bed, 3,933.8 feet.

Width of stone-bed, Princeton avenue, 16 feet; Spruce street, 14 feet; Brunswick avenue, 16 feet to 19 feet.

Depth of stone-bed, Class C, or not less than eight (8) inches.

Average width of shoulders, Princeton avenue, 11.8 feet; Spruce street, 3 feet, and Brunswick avenue, 3.8 feet.

Average total width of improved roadway, Princeton avenue, 39.6 feet; Spruce street, 20 feet, and Brunswick avenue, 39.6 feet.

Excavations, 2,645 cubic yards, at 30 cents	\$793 50
Macadam, 7,126 square yards, at 77 cents	5,487 02
Ten-inch C. I. pipe, 120 lineal feet, at \$1.50	180 00
Sixteen-inch C. I. pipe, 41 lineal feet, at \$3	123 00
Sixteen-inch terra-cotta pipe, 23 $\frac{1}{2}$ lineal feet, at 69+ cents	16 00
Concrete retaining walls and inlets, 8 $\frac{1}{2}$ cubic yards, at \$12	102 00
Four-inch by 20-inch coping, 20 $\frac{1}{3}$ lineal feet, at \$1	20 30
Anchor bolts, 8, at 50 cents	4 00
Inlet covers, two, city inlet No. 2, at \$9	18 00
Four-inch by 16-inch blue stone curb, 9 lineal feet	} 22 70
Two blue stone slabs, 4 feet by 12 inches by 3 inches thick	
	<hr/>
Total cost	\$6,766 52

COMMISSIONER OF PUBLIC ROADS. 89

Lump sum, contract price	\$6,766 52
Supervisor's salary	126 00

Total of all costs	\$6,892 52

Portion approved by the State	\$6,280 52
Total allowed by the State	6,280 52
One-third of above paid by the State	2,093 51
Maximum grade before	2.20 per cent.
Maximum grade after .....	.73 per cent.

We hereby certify the above statement to be correct, and that the work was constructed in all respects in strict conformity to the plans and specifications, and that the finished pavement was Class C, or not less than eight (8) inches deep.

Respectfully yours,

FRANK J. EPPELE,
Engineer.
W. E. H. ROUSE,
Supervisor.

November 29th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

SIR—Below find an exact detailed statement of the cost of the improvements to the public highway in Mercer county, New Jersey, known as the Hamilton avenue road, beginning at Dogtown road and extending to Trenton and Allentown turnpike, in the township of Hamilton. Total length of road, 7,360 feet, or 1.39+ miles.

- Length of stone-bed, 7,360 feet.
- Width of stone-bed, 14 feet.
- Depth of stone-bed, Class B, or not less than six (6) inches.
- Average width of shoulders, eight (8) feet.
- Average total width of improved roadway, thirty (30) feet.

Excavations, 2,525 cubic yards, at 30 cents	\$757 50
Macadam, 12,028 square yards, at 74 ¹⁰⁰¹ / ₁₂₀₂₈ cents	9,011 23
Macadam driveways, 565 square yards, at 40 cents	226 00
Sixteen-inch C. I. pipe, 84 lineal feet, at \$2.50	210 00
Eighteen-inch C. I. pipe, 156 lineal feet, at \$3	468 00
Twelve-inch terra-cotta pipe, 22 lineal feet, at \$1	22 00
Concrete retaining walls and inlets, 26½ cubic yards, at \$6	159 00
Four-inch by 20-inch coping, 86 ² / ₃ lineal feet, at 55 cents	47 67
Anchor bolts, 32, at 50 cents	16 00
Open ditch, 253 lineal feet, at 20 cents	50 60
Inlet cover, 1, "City Inlet No. 2," for corner, at \$10	10 00
One blue stone well cover, 5 feet by 5 feet by 4 inches thick, at \$12	12 00
One blue stone slab for inlet, 5 feet 2 inches by 16 inches by 3 inches thick, at \$10	10 00

Total cost	\$11,000 00

FOURTEENTH ANNUAL REPORT.

Lump sum, contract price	\$11,000 00
Supervisor's salary	240 00
<hr/>	
Total of all costs	\$11,240 00
<hr/>	
Portion approved by the State	\$9,994 73
Total allowed by the State	9,994 73
One-third of above paid by the State	3,331 58
<hr/>	
Maximum grade before	1.75 per cent.
Maximum grade after	1.56 per cent.

We hereby certify the above statement to be correct, and that the work was constructed in all respects in strict conformity to the plans and specifications, and that the finished pavement was Class B, or not less than six (6) inches deep.

Respectfully yours,

FRANK J. EPPELE,
Engineer.
WALTER ELDRIDGE,
Supervisor.

December 13th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

SIR—Below find an exact detailed statement of the cost of the improvement to the public highway in Mercer county, New Jersey, known as the Lalor street road, beginning at the Delaware and Raritan Canal and extending to Broad street, in the township of Hamilton and city of Trenton. Total length of road, 4,905 feet, or 0.93 mile.

- Length of stone-bed, 4,905 feet.
- Width of stone-bed, 16 feet.
- Depth of stone-bed, Class B, or not less than six (6) inches.
- Average width of shoulders, seven (7) feet.
- Average total width of improved roadway, thirty (30) feet.

Excavations, 3,020 cubic yards, at 15 cents	\$453 00
Maçadam, 8,650 square yards, at 65 cents	5,622 50
Excavations, shortage called for, 1,070 cubic yards, at 15 cents, ..	160 50
<hr/>	
Total cost	\$6,236 00
<hr/>	
Lump sum, contract price	\$6,236 00
Supervisor's salary	312 00
<hr/>	
Total of all costs	\$6,548 00
<hr/>	
Portion approved by the State	\$6,236 00
Total allowed by the State	6,236 00
One-third of above paid by the State	2,078 67
<hr/>	
Maximum grade before	3.30 per cent.
Maximum grade after	1.08 per cent.

COMMISSIONER OF PUBLIC ROADS. 91

We hereby certify the above statement to be correct, and that the work was constructed in all respects in strict conformity to the plans and specifications, and that the finished pavement was Class B, or not less than six (6) inches deep.

Respectfully yours,

FRANK J. EPPELE,
Engineer.
JOEL H. SPRAGUE,
DAVID G. FLOCK,
Supervisors.

September 16th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Cranbury Neck road, township of Cranbury, county of Middlesex, State of New Jersey. Total length, 11,988 feet, or 2.27 miles.

Width of stone-bed, 14 feet.
Length of stone-bed, 11,988 feet.
Depth of stone-bed, 8 inches.

Macadam, 18,626 square yards, at 90 cents; total	\$16,763 40
Earth excavation, 20,549 cubic yards, at 28 cents; total	5,753 72
	<hr/>
Total	\$22,517 12
Supervisor's salary	582 00

SUPPLEMENTARY CONTRACT.

Extras paid by county—

Six hundred and ninety-two cubic yards, extra excavation, at 50 cents	\$346 00
Three hundred and eighty-six square yards, extra driveways, at 70 cents	270 20
	<hr/>
	616 20

Total cost of road

\$23,715 32

Lump sum, contract price	\$22,517 12
Total allowed by the State	23,133 32
One-third of above amount paid by the State	7,711 11

Maximum grade before 4.5 per cent.
Maximum grade after 1.33 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,

MORGAN F. LARSON,
Engineer.
JAMES E. BENNETT,
Supervisor.

October, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Port Reading Railroad road, township of Piscataway, county of Middlesex, State of New Jersey. Total length, 5,050 feet, or 0.96 mile.

Width of stone-bed, 14 feet.
 Length of stone-bed, 5,050 feet.
 Depth of stone-bed, 8 inches.

Macadam, 7,855.5 square yards, at .8686 cents; total	\$6,824 00
Earth excavation, 4,276 cubic yards, at 25 cents; total	1,069 00
<hr/>	
Total	\$7,893 00
Supervisor's salary	381 00
Extras paid by the county	1,864 46
<hr/>	
Total cost of road	\$10,138 46
<hr/>	
Lump sum, contract price	\$7,893 00
Total allowed by the State	2,631 00

Maximum grade before 2.5 per cent.
 Maximum grade after 0.814 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,

MORGAN F. LARSON,
Engineer.
 S. R. MANNING,
Supervisor.

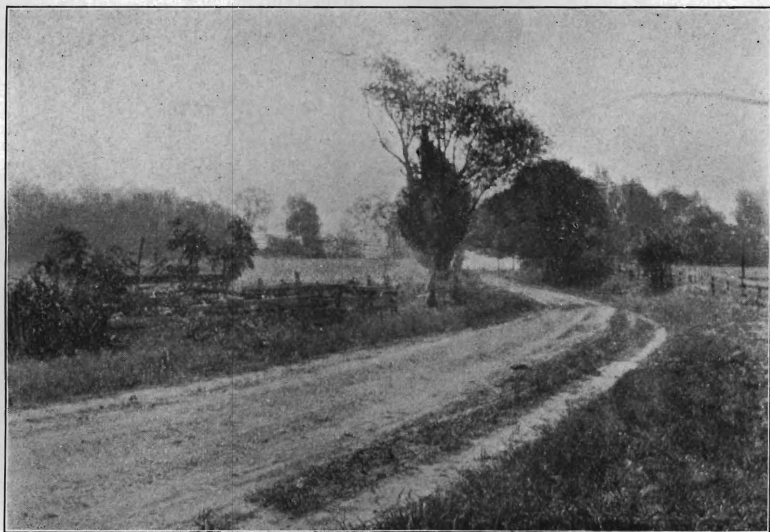
August 8th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Freehold and Colt's Neck road, second section, township of Atlantic, county of Monmouth, State of New Jersey. Total length, 11,500 feet, or 2.18 miles.

Width of stone-bed, 14 feet.
 Length of stone-bed, 11,500 feet.
 Depth of stone-bed, 8 inches.

Macadam, 17,905 square yards, at \$1; total	\$17,905 00
Earth excavation, 20,466 $\frac{2}{3}$ cubic yards, at 24 cents; total.....	4,912 00
Cobble stone gutter, 500 square yards, at 40 cents; total.....	200 00
Stone approaches, 1,200 square yards, at 50 cents; total.....	600 00
<hr/>	
Total	\$23,617 00
Supervisor's salary	428 50
Engineering expenses	590 42
<hr/>	
Total cost of road	\$24,635 92



Allentown and Davis Station Road, Monmouth County, Before Improvement



Allentown and Davis Station Road, Monmouth County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

Lump sum, contract price	\$23,617 00
Total allowed by the State	23,617 00
One-third of above amount paid by the State	7,872 33

Maximum grade before	3.95 per cent.
Maximum grade after	1.80 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,
 PETER FORMAN,
Engineer.
 ISAAC B. DAVISON,
Supervisor.

MORRISTOWN, N. J., December 27th, 1906.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Sussex turnpike road, township of Roxbury, county of Morris, State of New Jersey. Total length, 3,625 feet, or .69 mile.

Width of stone-bed, 14 feet.
 Length of stone-bed, 3,625 feet.
 Depth of stone-bed, 8 inches.

Macadam driveways, 14½ square yards, at 40 cents; total	\$5 80
Telford—macadam, 5,639 square yards, at 55 cents; total	3,101 45
Earth excavation, 13,530 cubic yards, at 33 cents; total	4,464 90
Rock excavation, 135 cubic yards, at \$1.50; total	202 50
Cobble stone gutter, 80½ square yards, at 35 cents; total	28 17
<hr/>	
Total	\$7,802 82
Supervisor's salary	324 00
Engineering expenses	241 23
Extras paid by county, iron pipe	819 05
<hr/>	
Total cost of road	\$9,187 10

Lump sum, contract price	\$8,621 87
Total allowed by the State	7,802 82
One-third of above amount paid by the State	2,600 94
Maximum grade before	10.4 per cent.
Maximum grade after	6.28 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight (8) inches.

Respectfully yours,
 WM. E. KING,
County Engineer.
 GEO. W. KING,
Supervisor.

FOURTEENTH ANNUAL REPORT.

June 19th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Berkeley Township Main Shore road, township of Berkeley, county of Ocean, State of New Jersey. Total length, 36,603.5 feet, or 6.91 miles.

Width of gravel-bed, 24 feet.
 Length of gravel-bed, 36,603.5 feet.
 Depth of gravel-bed, 9 and 3 inches.

Gravel, 17,569 cubic yards, at 80 cents.....	} total....	\$26,263 68
Earth excavation, 41,839 cubic yards, at 28½ cents.....		
Turf, 4,460 square yards, at 12 cents.....		
Drain, 40 lineal feet, at 35 cents; total		14 00
Grubbing, 2⅞ acres, at \$200; total		575 00
Eight-inch vitrified pipe, 142 lineal feet, at 45 cents; total		63 90
Ten-inch vitrified pipe, 42 lineal feet, at 50 cents; total		21 00
Changing bridge		146 05
<hr/>		
Total		\$27,083 63
Supervisor's salary		595 00
Engineering expenses		1,354 18
<hr/>		
Total cost of road		\$29,032 81
<hr/>		
Lump sum, contract price		\$26,263 68
Total allowed by the State		26,998 73
One-third of above amount paid by the State		8,999 58
<hr/>		
Maximum grade before		4.94 per cent.
Maximum grade after		1.80 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was nine and three inches.

Respectfully yours,

WM. SEGOINE,
Engineer.
 DEVINE BUTLER,
Supervisor.

PATERSON, N. J., October 8th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Paterson and Hamburg turnpike road (new line), township of West Milford, county of Passaic, State of New Jersey. Total length, 4,528.73 feet, or .858 mile.

Width of stone-bed, 14 feet.
 Length of stone-bed, 4,287.5 feet.
 Depth of stone-bed, 4 inches.

COMMISSIONER OF PUBLIC ROADS. 95

Macadam, 7,509 square yards, at 18 cents; total	\$1,351 62
Earth excavation, 24,352 cubic yards, at 30 cents; total	7,305 60
Earth excavation, special, 207 cubic yards, at 45 cents; total....	93 15
Rock excavation, 7,639.7 cubic yards, at \$1.25; total	9,549 62
Rock excavation, special, 196 cubic yards, at \$2; total	392 00
Trees, 125, at \$4; total	500 00
Cubic yards of overhaul, 889, at 15 cents; total	133 35
<hr/>	
Total	\$19,325 34
Supervisor's salary	1,227 00
Extras paid by county	116 35
<hr/>	
Total cost of road	\$20,668 69
<hr/>	
Total allowed by the State	\$19,325 34
One-third of above amount paid by the State	6,441 78
<hr/>	
Maximum grade before	10.2 per cent.
Maximum grade after	6.6 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was four inches.

Respectfully yours,
 COLIN R. WISE,
Engineer.
 E. G. COURSEN,
Supervisor.

PATERSON, N. J., October 8th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of East Twenty-second street, city of Paterson, county of Passaic, State of New Jersey. Total length, 1,397 feet, or .264 mile.

Width of stone-bed, 28 feet.
 Length of stone-bed, 1,397 feet.
 Depth of stone-bed, 5 inches.

Macadam, 4,344 square yards, at 50 cents; total	\$2,172 00
Macadam, extra, at corners and at crosswalks, 110 yards at 50 cents	55 00
Earth excavation, 720 cubic yards, at 30 cents; total	216 00
<hr/>	
Total	\$2,443 00
Supervisor's salary	93 00
<hr/>	
Total cost of road	\$2,536 00
<hr/>	
Lump sum, contract price	\$2,388 00
Total allowed by the State	2,443 00
One-third of above amount paid by the State	814 33

FOURTEENTH ANNUAL REPORT.

Maximum grade before 1.00 per cent.
 Maximum grade after75 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was five inches.

Respectfully yours,

COLIN R. WISE,
Engineer.
 PETER EARL,
Supervisor.

PATERSON, N. J., October 28th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Midvale (Greenwood Lake) road, township of Pompton, county of Passaic, State of New Jersey. Total length, 15,897 feet, or 3.01 miles.

Width of stone-bed, 16 feet.
 Length of stone-bed, 15,197 feet.
 Depth of stone-bed, 4 inches.

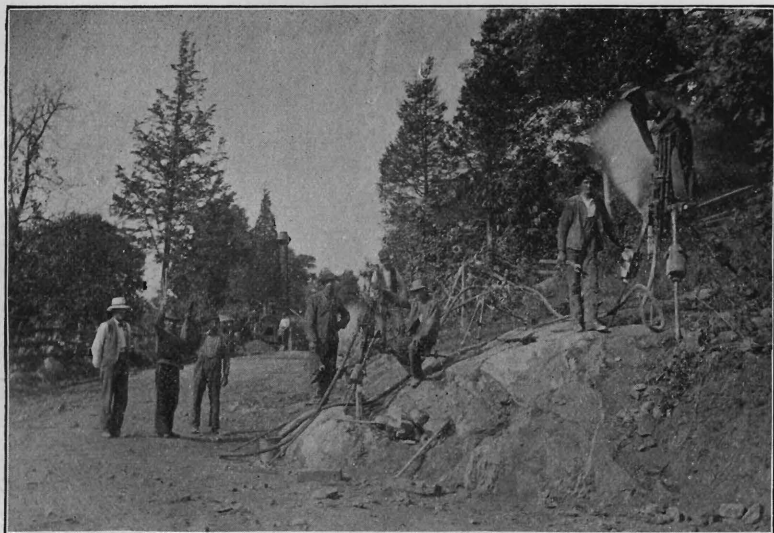
Macadam, 27,017 square yards, at 42 cents; total	\$11,347 14
Earth excavation, 9,354 cubic yards, at 38 cents; total	3,554 52
Rock excavation, 6,370 cubic yards, at \$1.60; total	10,192 00
Rock excavation, loose, 561 cubic yards, at 75 cents; total	420 75
Cobble stone gutter, 77 square yards, at 60 cents; total	46 20
<hr/>	
Total	\$25,560 61
Supervisor's salary	339 00
<hr/>	
Total cost of road	\$25,899 61
<hr/>	
Lump sum, contract price	\$27,543 07
Total allowed by the State	25,560 61
One-third of above amount paid by the State	8,520 20

Maximum grade before 22.5 per cent.
 Maximum grade after 6.1 per cent.

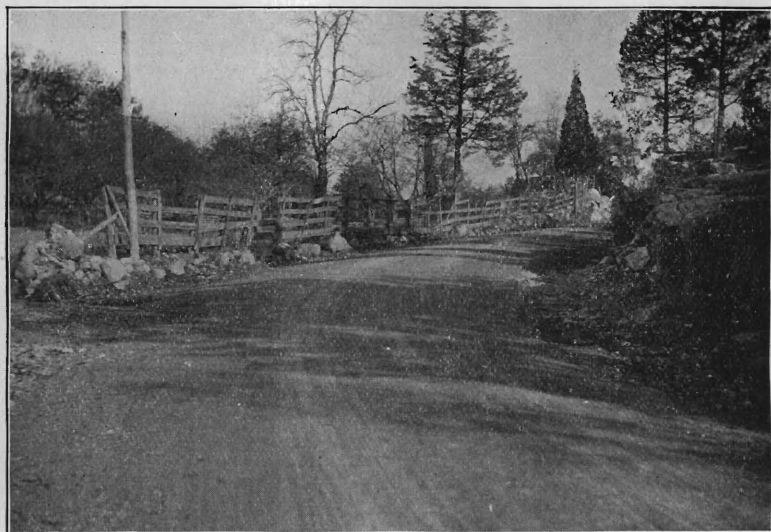
We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was four inches.

Respectfully yours,

C. R. WISE,
Engineer.
 J. E. SLOAT,
Supervisor.



Midvale Road, Passaic County, Before Improvement



Midvale Road, Passaic County, After Improvement

COMMISSIONER OF PUBLIC ROADS.

97

December 10th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the North Branch road, township of Branchburgh, county of Somerset, State of New Jersey. Total length, 16,546½ feet, or 3.134 miles.

Width of stone-bed, 14 feet.
 Length of stone-bed, 16,546½ feet.
 Depth of stone-bed, 8 inches.

Macadam, 25,517 square yards, at 75 cents; total	\$19,137 75
Telford, 222 square yards, at \$1; total	222 00
Clay binder, 2,862 square yards, at 50 cents; total	1,431 00
Earth excavation, 15,593 cubic yards, at 40 cents; total	6,237 20
Drain, 4,500 lineal feet, at 15 cents; total	675 00
Cobble stone gutter, 175 square yards, at 40 cents; total	70 00
Four-inch macadam, 729.79 square yards, at 40 cents; total	291 91
<hr/>	
Total	\$28,064 86
Supervisor's salary	621 00
Engineering expenses	969 64
Extras paid by county, 105 tons stone, at \$1.55; total	162 75
<hr/>	
Total cost of road	\$29,818 25
<hr/>	
Lump sum, contract price	\$27,362 15
Total allowed by the State	28,064 86
One-third of above amount paid by the State	9,354 95
<hr/>	
Maximum grade before	5.50 per cent.
Maximum grade after	3.50 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,

JOSHUA DOUGHTY, JR.,
Engineer.

E. C. TAGGART,
Supervisor.

BERNARDSVILLE, N. J., October 30th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the Bernardsville and Oak Stump road, township of Bernards, county of Somerset, State of New Jersey. Total length, 5,450 feet, or 1.03 miles.

Width of stone-bed, 14 feet.
 Length of stone-bed, 5,450 feet.
 Depth of stone-bed, 6 inches.

FOURTEENTH ANNUAL REPORT.

Macadam, 8,336 square yards, at 62 cents; total	\$5,168 32
Extra macadam driveways, 135 square yards, at 40 cents; total ..	54 00
Earth excavation, 7,480 cubic yards, at 40 cents; total	2,992 00
Drain, 550 lineal feet, at 15 cents; total	82 50
Cobble stone gutter, 942 square yards, at 30 cents; total	282 60
Two hundred feet 18-inch iron pipe, at \$2.25; total	450 00
<hr/>	
Total	\$9,029 42
Supervisor's salary	375 00
<hr/>	
Total cost of road	\$9,404 42
<hr/>	
Lump sum, contract price	\$9,029 42
Total allowed by the State	8,579 42
One-third of above amount paid by the State	2,859 81
<hr/>	
Maximum grade before	17.5 per cent.
Maximum grade after	7 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was six inches.

Respectfully yours,

ANTONY SCHUMACKER,
Engineer.
PATRICK McGUINNESS,
Supervisor.

SOMERVILLE, N. J., April 29th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the North Branch road, Bridgewater section, township of Bridgewater, county of Somerset, State of New Jersey. Total length, 16,465 feet, or 3½ miles.

Width of stone-bed, 14 feet.
Length of stone-bed, 16,465 feet.
Depth of stone-bed, 8 inches.

Macadam, 25,237 square yards, at 75 cents; total	\$18,927 75
Telford, 375 square yards, at \$1; total	375 00
Four-inch macadam at drives, &c., 695 square yards, at 30 cents; total	208 50
Earth excavation, 24,774½ cubic yards, at 40 cents; total	9,909 80
Ditchings, 200 feet, at 10 cents; total	20 00
Drain, 4,031 lineal feet, at 15 cents; total	604 65
Cobble stone gutter, 300 square yards, at 45 cents; total	135 00
<hr/>	
Total	\$30,180 70
Supervisor's salary	738 00
Engineering expenses	1,130 21
Extras paid by county, tile, \$154.65; ditch, \$20.....	174 65
<hr/>	
Total cost of road	\$32,223 56

DISCARDED BY
NEW HAMPSHIRE STATE LIBRARY

COMMISSIONER OF PUBLIC ROADS

Lump sum, contract price	\$29,979 30
Total allowed by the State	30,180 70
One-third of above amount paid by the State	10,060 23
Maximum grade before	12 per cent.
Maximum grade after	5 per cent.

We hereby certify the above statement to be correct, and that the pavement was constructed strictly according to the specifications, and that the depth of finished pavement was eight inches.

Respectfully yours,

JOSHUA DOUGHTY, JR.,
Engineer.
ERNEST C. TAGGART,
Supervisor.

October 24th, 1907.

Mr. E. C. Hutchinson, State Commissioner of Public Roads, Trenton, N. J.:

DEAR SIR—Below find an exact detailed statement of the cost of the St. George avenue and Leesville avenue roads, city of Rahway, county of Union, State of New Jersey. Total length, 10,196 feet, or 1.95 miles.

- Width of stone-bed, 16 feet.
- Length of stone-bed, 10,196 feet.
- Depth of stone-bed, 2 inches, 6 inches and 12 inches.

Macadam, 12 inches, 7,378 square yards, at 90 cents; total....	\$6,640 20
Telford, 12 inches, 1,432 square yards, at \$1.20; total	1,718 40
Macadam, 6 inches, 441 square yards, at 70 cents; total	308 70
Macadam, 2 inches, 9,060 square yards, at 22½ cents; total....	2,038 50
Earth excavation, 1,955 cubic yards, at 38 cents; total	742 90
Earth excavation, 255 cubic yards, at 30 cents; total	76 50
Earth excavation, 1,150 cubic yards, at 40 cents; total	460 00
Drain, 4,460 lineal feet, at 22 cents; total	981 20
Embankment, 767 cubic yards, at 30 cents; total	230 10
Crushed stone, 292¾ tons, at \$1.75; total	512 31
Dry wall, near railroad	25 00
New culvert, 4½ feet by 45 feet; total	450 00
New culvert, iron box, 24 inches by 55 feet; total	296 00
Total	\$14,479 81
Supervisor's salary	144 00
Engineering expenses	500 00
Total cost of road	\$15,123 81

Lump sum, contract price	\$13,000 45
Total allowed by the State	13,708 81
One-third of above amount paid by the State	4,569 60
Maximum grade before	3.75 per cent.
Maximum grade after	3.75 per cent.

APPENDICES.

(101)

Appendix A.

STANDARD STATE AID SPECIFICATIONS FOR STONE ROADS.

SPECIFICATIONS.

FOR A STONE ROAD IN.....COUNTY, NEW
 JERSEY, KNOWN AS.....
 BEGINNING AT.....
 EXTENDING TO.....
 A DISTANCE OF.....FEET OR.....MILES
 STONE.....FEET WIDE.....INCHES DEEP
 EARTH.....FEET WIDE. TOTAL WIDTH.....FEET

WORK TO BE PERFORMED.

1. The work to be performed will consist in furnishing all material, tools, machinery and labor necessary for the efficient and proper grading of roadway, side ditches and side banks, laying, spreading and rolling of road metal, and leaving the roadway complete in every manner ready for immediate use.

PLANS AND DRAWINGS.

2. The plan, profile and cross-sections on file in the office of the State Commissioner of Public Roads and at the office of.....
 County Engineer.....New Jersey, show general location, profile, details and dimensions. The work will be constructed in all respects according to the above-mentioned plan, profile and cross-sections, which form part of these specifications.

3. Any variation of location, profile, size and dimensions from that shown on the plan, as may be required by the exigencies of construction, will, in all cases, be determined by the engineer, but the contractor shall not, on any pretense, save that of the written order of the contracting parties and the State Commissioner of Public Roads, deviate from the intent of the plan or specifications.

4. On all drawings, figured dimensions are to govern in cases of discrepancy between scale and figures.

GRADING.

5. Under this head will be included all excavation and embankment required for the formation of the highway, cutting all ditches or drains about or contiguous to the road, removing all fences, walls, buildings, trees, poles or other encumbrances, the excavation and embankment necessary for reconstructing cross or branch roads or entrances to dwellings in cases where they are destroyed or interfered with in the formation of the roadway, and all other excavations and embankments connected with or incidental to the construction of the said road.

EXCAVATION.

6. The roadway to the widths and depths as shown on plans must be excavated or built to the same curvature as that of the surface of the road when finished. The grade, from center to sides, must be as shown on plans.

7. The earth taken from any cut or ditch shall be deposited where the engineer may direct, either within or without the line of the road, but no earth shall be removed from the line of the road without the order of the engineer.

8. The grading shall be completed for the full width of the road, from gutter to gutter, before any macadamizing is commenced.

EMBANKMENT.

9. Material taken from the excavations, except when otherwise directed by the engineer, shall be deposited in the embankments, either on the roadway or sidewalks. Rejected or excess material will be used to increase the width of the embankments or deposited in spoil banks or waste piles, as and where the engineer may direct.

10. When there is not sufficient material in the excavations of the road to form the embankments, the deficiency must be supplied by the contractor from without the road. The character of said material and place of excavation must be approved by the engineer.

11. The embankments will be formed in layers of such depth, generally one (1) foot, and the material deposited and distributed in such a manner as the engineer may direct, the required allowance for settling being added. Each layer shall be carried across the entire width of the embankment and completed before commencing another, and this method shall be followed with each succeeding layer until the established grade is reached.

SLOPES.

12. Slopes in both embankment and excavation shall be one and one-half ($1\frac{1}{2}$) horizontal to one (1) vertical, when the width of the road will permit; if the road is too narrow to allow the full slope within its side lines, the engineer shall not calculate the quantities, either in embankment or excavation, beyond said side lines, unless the required ground shall be first dedicated to the public in writing by the owner or owners thereof.

COMMISSIONER OF PUBLIC ROADS. 105

WIDTH AND DEPTH.

13. The construction to be.....inches deep and..... feet wide, as shown on plan and detail sheet.

ROADWAY.

Sub-Foundations.

14. When the excavations and embankments have been brought to a proper depth below the intended surface of the roadway, the cross-section thereof conforming in every respect to the cross-section of the road when finished, the same shall be rolled with a.....ton roller until it is..... inches below the intended surface of the road and is approved by the engineer and supervisor. If any depressions form under such rolling, owing to improper material or vegetable matter, the same shall be removed and good earth substituted, and the whole re-rolled until thoroughly solid and to above-mentioned grade. Water must be applied in advance of the roller, when, in the opinion of the engineer and supervisor, it is necessary.

STONE CONSTRUCTION.

Telford Foundations.

15. After the roadbed has been formed and rolled, as above specified, and has passed the inspection of the engineer and supervisor, a bottom course of stone, of an average depth of.....inches, is to be set by hand as a close, firm, pavement, the stones to be placed on their broadest edges lengthwise across the road in such manner as to break joints as much as possible, the breadth of the upper edge not to exceed four (4) inches. The interstices are then to be filled with stone chips, firmly wedged by hand with a hammer, and projecting points broken off. No stone of greater length than ten (10) inches, or width of four (4) inches, shall be used, except each alternate stone on outer edge, which shall be double the length of the others and well tied into the bed of the road. All stones with a flat, smooth surface must be broken. The whole surface of this pavement must be subjected to a thorough settling or ramming with heavy sledge-hammers, and thoroughly rolled with a.....ton..... roller. No stone larger than two and one-half ($2\frac{1}{2}$) inches shall be left loose on top of telford.

MACADAM.

First Course of Broken Stone.

16. After the roadbed has been formed and rolled, as above specified, and has passed the inspection of the engineer and supervisor, the first layer of broken stone, consisting of two and one-half ($2\frac{1}{2}$) inch stone, or stone that will pass through a ring three (3) inches in diameter, shall be deposited in a uniform layer, having a depth of.....inches, and rolled repeatedly with a.....ton.....roller until compacted to the satisfaction of the

engineer and supervisor. No stone in this course shall be less than two (2) inches in length.

17. The depth of loose stone in this and all other courses must be measured by blocks the required thickness of the said loose stone. These blocks must be placed at frequent intervals amid the loose stone when being spread.

BINDER BETWEEN FIRST AND SECOND COURSE FOR TELFORD OR MACADAM.

18. On the first course of stone a quantity of..... binder shall be spread in a uniform layer, and the whole rolled until the stones cease to sink or creep in front of the roller. The quantity and quality of this and all other binding shall be subject to the approval of the engineer and supervisor. Water must be applied in advance of the roller, if ordered by the engineer or supervisor.

SECOND COURSE OF BROKEN STONE FOR MACADAM OR TELFORD.

19. The second course of broken stone shall consist of one and one-half (1½) inch stone; that is, every piece of stone shall be broken so that it can be passed through a ring two (2) inches in diameter, and no stone shall be more than two (2) inches or less than one (1) inch long. This course shall be spread in a uniform layer.....inches in depth and rolled until thoroughly settled into place to the satisfaction of the engineer and supervisor. Water must be applied as ordered by the engineer or supervisor.

BINDER ON SECOND COURSE OF STONE.

20. Binder on this course of stone must be applied in the same manner as binder on first course of stone (see Art. 18), as directed by engineer and supervisor.

SURFACE.

21. When the two courses are rolled to the satisfaction of the engineer and supervisor, a coat of fifty (50) per cent. of three-quarters (¾) inch stone and fifty (50) per cent. of screenings, properly mixed, is to be spread, of sufficient thickness to make a smooth and uniform surface to the road, then again rolled until the road becomes thoroughly consolidated, hard and smooth.

22. Rolling must be done by the contractor with a.....ton..... roller, approved by the engineer.

23. Any depressions formed during the rolling, or from any other cause, are to be filled with one and one-half (1½) inch stone, or three-quarter (¾) inch stone, or both, and screenings, approved by the engineer, and the roadway brought to the proper grade and curvature as determined by him.

24. Water must be applied in such quantities and in such manner as directed by the engineer or supervisor.

COMMISSIONER OF PUBLIC ROADS. 107

MANNER OF ROLLING.

25. In the rolling the roller must start from the side lines of the stone-bed and work towards the center, unless otherwise directed. The rolling shall at all times be subject to the directions of the engineer and supervisor, who may, from time to time, direct such methods of procedure as in their opinion the necessities of the case may require.

QUALITY OF MATERIAL.

26. All stone must be as nearly cubical as possible, broken with the most approved modern stone crushing machinery, free from all screenings, earth and other objectionable substances, of uniform size, and the same kind and quality, or equally as good in every particular, as that shown in the engineer's office. The one and one-half ($1\frac{1}{2}$) inch stone, three-quarter ($\frac{3}{4}$) inch and screenings for binder and final finish must be of the best trap rock, free from loam or clay.

27. The contractor must furnish samples to the engineer of the kind of stone to be used in the work before the opening of the bids, and to the State Commissioner of Public Roads before the approval of the contract by him.

ENTRANCES TO DWELLINGS.

28. All driveways leading to dwellings along the road shall be macadamized with the second course and finished in the same manner as prescribed for the main road. The macadamizing shall be carried to a distance of not more than six feet beyond the gutter line of the road, as indicated by the engineer's stakes, but in no case shall the macadamizing be carried beyond the side line of the road as indicated by the fences.

SHOULDERING.

29. A shoulder of firm earth or gravel is to be left or made on each side, extending at the same grade and curvature of road to side ditches or gutters. This shoulder is to be rolled according to the directions of the engineer.

COBBLE GUTTERS.

30. Cobble gutters shall be laid from station number.....to station number..... The cobbles used must be good, hard, sound stone. Medium-sized stone, not over five-inch face on its longest diameter, must be used, except for centers or sides, where eight-inch cobbles may be used. The cobbles must be bedded in not less than six inches of good, sharp sand or gravel, and laid with the longest diameter of stone parallel with the road, and thoroughly rammed into shape and place. All stone broken in ramming must be removed and replaced with perfect stone.

SIDE DITCHES OR GUTTERS.

31. The side ditches or gutters are to be excavated as per stakes furnished by engineer, in order to give an easy flow of water, so that no water shall be left standing on the road or in the ditches, for which no extra payment will be made.

UNDERDRAINS.

32. Underdrains, if found necessary, shall be constructed by the contractor of good.....inch.....tile, laid upon a board of not less than one (1) inch in thickness and six (6) inches in width. The top of the tile shall be at least.....inches deep, unless otherwise directed by the engineer; the joints shall be covered with salt hay, or material equally as good, and the trench filled with pervious earth. These drains must be constructed whenever and wherever the engineer and supervisor shall decide.

33. When directed by the engineer, a stone drain may be used in place of the tile drain. A trench one foot wide and one foot six inches deep shall be excavated below the subgrade, said excavation to be filled with loose broken stone to a depth required by the engineer.

BROAD-TIRE WAGONS.

34. All wagons and carts used during the construction for hauling stone, earth or any other material must have tires not less than three and one-half (3½) inches in width.

NO EXTRA PRICE.

35. No allowance in measure of depth of pavement will be made on account of any material which may be driven into the roadbed by rolling. The pavement, when completed, must conform to the grade and the cross-sections, and be satisfactory to the engineer and State Commissioner of Public Roads, whose decisions shall be final.

36. No extra work will be paid for unless the price has been agreed upon between the contracting parties, including the State Commissioner of Public Roads, and endorsed upon the agreement, witnessed by the engineer.

37. All clay or gravel for shouldering or binder and all extra hauling is to be done at the contractor's expense.

BIDS.

38. Bids will only be received under these specifications for the road complete. The prices per yard for excavation, telford, macadam, &c., are intended for the use of the engineer in making estimate to the Board of Chosen Freeholders of work done. No bid will be received in which all of the following items are not filled out:

(1) Price per cubic yard for earth excavations, without classification, as per cross-sections throughout the length and width of the road.

(2) Price per cubic yard for any necessary earth excavations and removing material without classification and measured in excavation, not included in the length and width of the road.

COMMISSIONER OF PUBLIC ROADS.

- (3) Price per square yard for macadam driveways to dwellings.
- (4) Price per square yard for telford road complete.
- (5) Price per square yard for macadam road complete.
- (6) Price per square yard for cobble gutters complete.
- (7) Price per lineal foot for underdrains, furnishing all labor and material.
- (8) Price (lump) for the whole road complete, according to above specifications and plans.

ESTIMATE OF QUANTITIES.

- 39. (1) Excavation, earthcubic yards.
- (2) Extra excavationcubic yards.
- (3) Macadam drivewayssquare yards, as specified.
- (4) Telfordsquare yards, as specified.
- (5) Macadamsquare yards, as specified.
- (6) Cobble gutterssquare yards, as specified.
- (7) Underdrainslineal feet.
- (8)

40. These quantities are the result of calculation, but are to be considered as approximate. The county will not be responsible for any excess in above quantities, should any occur. The contractor is expected to satisfy himself as to the nature, character and quantity of the labor and material required by a personal examination of the work contemplated.

CHECK ACCOMPANYING BIDS.

41. Bids shall be accompanied with a certified check, payable to the order of the Director of the Board of Chosen Freeholders, in the sum of one thousand dollars (\$1,000), as a guarantee that if the contract shall be awarded to him he will, when required by said board, execute an agreement in writing to perform the work according to the specifications. Upon failure by the contractor to enter into said agreement with the said Board of Chosen Freeholders, said certified check shall be forfeited and considered as liquidated damages.

LIABILITIES OF CONTRACTOR.

42. He shall maintain sufficient guards by day and night to prevent accidents from travel, and will be liable for any damage which may arise from his neglect to do so, or from any omission on his part.

43. He shall keep the road sprinkled until the certificate of completion by the engineer is given.

44. He is to commence and prosecute the work upon the road at the end farthest from the source of supply of broken stone, unless otherwise ordered by the engineer, within.....days from and after the signing of the contract, and shall continue work thereon until completion, except as herein provided.

45. He further agrees to complete the same on or before the.....day of.....A. D..... Twenty dollars for each day that the work shall remain uncompleted, after the time allowed by contract, may be deducted, as liquidated damages, from any moneys due the contractor, unless otherwise

agreed upon by the Board of Chosen Freeholders, after presentation of certificate of the engineer recommending the extension of the time limit of completion.

46. The contractor shall keep the finished roadway, earthwork, side ditches and underdrains in repair for the period of one year from the date of its completion and acceptance, and, in addition thereto, for as much longer as for any period or periods during said year it shall be out of proper condition. If, during that time, the roadway or any part of the work shall, in the judgment of the engineer and the Board of Chosen Freeholders, require repairing, and they shall duly notify the contractor to make such repairs as required, and the contractor should refuse or neglect to do so to the satisfaction of the said engineer and the Board of Chosen Freeholders, within five days from the date of service of notice, then the said engineer and the Board of Chosen Freeholders shall have the right to have the work done properly by other parties and recover the cost for the same from the said contractor or his surety.

47. The contractor will be required to preserve all stakes and bench marks made and established on the line of work until duly authorized by the engineer to remove the same. All stakes or bench marks disturbed or removed by the contractor or his agents without the permission of the engineer shall be replaced at the expense of the contractor.

48. The contractor shall not disturb the position of title stones (the corners of properties adjacent to the road), but where they appear he will either lift or lower them, under the personal supervision of the engineer.

49. The contractor must also preserve the roadway on which he is working from needless obstruction, and where necessary he must construct safe and commodious crossings, to be maintained in good order. He shall afford all proper and reasonable means for the accommodation of the public, and leave the roadway complete in every manner ready for immediate use.

50. All loss or damage arising from the nature of the work to be done, or from any unforeseen or unusual obstruction or difficulty which may be encountered in the prosecution of said work, or from the action of the elements, shall be sustained by the contractor.

PROVISION FOR DRAINAGE.

51. If it is necessary in the prosecution of the work to interrupt or obstruct the natural drainage of the surface, or the flow of artificial drains, the contractor shall provide for the same, during the progress of the work, in such a way that no damage shall result to either public or private interest. He shall be held liable for all damages which may result from any neglect to provide for either natural or artificial drainage, which he may have interrupted.

RIGHT TO BUILD BRIDGES, CULVERTS, ETC., AND SUSPENSION OF WORK.

52. The right of the county to build bridges, culverts, lay pipes or other appurtenances in said road during the progress of the work is expressly reserved, as well as suspending the work, or any part thereof, during the construction of the same, for the purposes above stated, without further compensation to the contractor for such suspension than an extension of time for completing the work as much as it may have been delayed.

COMMISSIONER OF PUBLIC ROADS. 111

STOPPING WORK ON ACCOUNT OF WEATHER.

53. The State Commissioner of Public Roads, engineer or supervisor, may stop any portion of the work, if in their judgment the weather is such as to prevent the same being done properly. No allowance of any kind will be made for such stoppage, except an extension of the time for the completion of the work as herein provided.

ABANDONMENT OF CONTRACT.

54. If at any time the work under contract should be abandoned, or if at any time the engineer should judge and so certify in writing that said work, or any part thereof, is unnecessarily delayed, or that the contractor is willfully violating any of the conditions or covenants of this contract, or is executing the same in bad faith, then, in that case, the Board of Chosen Freeholders shall notify the said contractor to discontinue all work under this contract. They may employ other parties to complete the work in such manner as they may decide, and use such material as may be procured upon the line of aforesaid work, and, if necessary, procure other material for its completion, and charge the expense of the said labor and material to the contractor, which expense shall be deducted from any moneys due him under contract. In case these expenses shall exceed the sum which would have been payable under contract, if the same had been completed by said contractor, he or his bondsmen shall pay the amount of the excess to the Board of Chosen Freeholders, on notice from the engineer.

ENGINEER.

55. The engineer shall be selected or appointed by the Board of Chosen Freeholders and paid by it. He shall furnish all surveys, profiles, plans, specifications and estimates of quantities of all kinds before specifications are signed, and in such a clear manner that lump bids can be made upon the work. He shall furnish all lines and grades required for the completion of the work. He shall furnish estimates for quantities of work done before partial payments can be made, the quantity of road laid being determined by surface measurements. Should any difference arise between the contracting parties as to the meaning or intent of these specifications, his decisions on these matters are to be final and conclusive. The work is to be done according to his directions, and if any material of which he does not approve is brought upon the road, it is to be removed at the expense of the contractor. If the contractor fails or neglects to do any part of the work as specified or as directed by the engineer, then, in that case, all other work shall be discontinued, on notice from the engineer to the contractor, or to the superintendent or foreman in charge of the work for the contractor, until such time as the work complained of has been done to the satisfaction of the engineer, and the contractor will not be entitled to or allowed any compensation or extension of time for such discontinuation or suspension of the work.

SUPERVISOR.

56. Nothing in these specifications relating to the duties of the engineer shall be taken or construed in any manner to conflict with the duties of the supervisor, as specifically set forth in the act entitled "An act to provide for the permanent improvement of public roads in this State," approved March 27th, 1905, but they shall co-operate as far as practicable.

INCOMPETENT WORKMEN.

57. The contractor shall employ competent men to do the work, and whenever the engineer and supervisor shall inform him, or his representative in charge, in writing, that any man on the work is unfitted for the place, or is working contrary to the provisions of the specifications or the instructions of the engineer and supervisor, he shall thereupon be discharged.

INSPECTION.

58. All directions and determinations necessary to give due and full effect to any of the provisions of these specifications shall be given by the engineer and supervisor.

59. All material and workmanship of any kind shall be subject at all times to the inspection of the engineer and supervisor. Whenever unfaithful and imperfect work is discovered, it shall be immediately repaired or replaced by the contractor, after due notification from the engineer and supervisor.

SUB-LETTING OF CONTRACT.

60. The contractor shall not assign or sub-let any portion of this contract without the consent of the Board of Chosen Freeholders and the State Commissioner of Public Roads.

PAYMENTS.

61.monthly payments will be made by the Board of Chosen Freeholders to the contractor for work performed, upon presentation by him of the proper certificates of the engineer and supervisor, in a sum not to exceed eighty per cent. of the amount then due, together with releases from all liens, if required. Fifteen per cent. will be paid at the completion of the work and the acceptance of the same in writing by the Board of Chosen Freeholders and the State Commissioner of Public Roads. The remainder, or five per cent., will be retained by the Board of Chosen Freeholders for a period of one year as security for the faithful performance of Article 46.

BOND OF CONTRACTOR.

62. The contractor will be required to execute, within thirty days of giving of contract, a bond in such sum and with such securities as shall be approved by the Board of Chosen Freeholders, conditioned for the faithful performance

COMMISSIONER OF PUBLIC ROADS. 113

of the contract, to indemnify and save harmless the Board of Chosen Freeholders from all suits or actions of any name or description brought against them on account of any act or omission of the contractor or his agents, and for the faithful performance of the contract by the contractor. Said bond shall be in a sum of not less than the estimated cost of the road when completed. Any change made in the plans, specifications, agreements or quantities without the consent of the bondsmen shall in no way vitiate said bond. The contractor hereby further agrees that so much of the money due him, under and by virtue of this agreement, as shall be considered necessary by the Board of Chosen Freeholders, may be retained by them until all such suits or claims for damages aforesaid shall have been settled, and evidence to that effect furnished to the satisfaction of the Board of Chosen Freeholders.

CONTRACTOR TO INSURE PAYMENT FOR LABOR, MATERIAL, ETC., ON FINAL ESTIMATE.

63. The contractor must also furnish the engineer with satisfactory evidence that all persons who did work, or furnished material for this contract, or who have sustained damage or injury by reason of any act, omission or carelessness on his part or his agents in the prosecution of the work, have been duly paid or secured. He shall also give notice to the engineer within ten days after the completion of the work, and before final estimate is made, that any balance for such work or materials, or compensation for such damages due, has been fully paid or released.

64. The right is reserved to reject any or all bids, if deemed to the interest of the county or State.

.....
County Engineer.

Approved this....., A. D....., by resolution of the Board of Chosen Freeholders of the county of.....

.....
Director of Board of Chosen Freeholders.

.....
Clerk of Board of Chosen Freeholders.

OFFICE STATE COMMISSIONER OF PUBLIC ROADS, TRENTON, N. J.

I have this day carefully read and examined the foregoing specifications, and the same are hereby approved.

Any departure from these specifications must have the written consent of the State Commissioner of Public Roads.

Given under my hand, this....., A. D. 190

.....
State Commissioner of Public Roads.

PROPOSALS.

To the Board of Chosen Freeholders, County of.....and State of New Jersey:

GENTLEMEN—The undersigned hereby declare...that...he...ha...carefully examined the annexed specifications and the drawings therein referred to, and will provide all necessary machinery, tools, apparatus and other means of construction, and do all the work and furnish all the material called for by said specifications in the manner prescribed by the specifications and the requirements of the engineer and supervisor under them, for the following prices:

- (1) Price per cubic yard for earth excavations, without classification, as per cross-sections throughout the length and width of the road.
- (2) Price per cubic yard for any necessary earth excavations and removing material without classification and measured in excavation, not included in the length and width of the road.
- (3) Price per square yard for macadam driveways.
- (4) Price per square yard for telford road complete.
- (5) Price per square yard for macadam road complete.
- (6) Price per square yard for cobble gutters.
- (7) Price per lineal foot for under-drains, furnishing all labor and material.
- (8) Price (lump) for the whole road complete, according to the specifications and plans.

Accompanying this proposal is a certified check for the sum of one thousand dollars (\$1,000), payable to the order of the Director of the Board of Chosen Freeholders of.....county, which check is to be forfeited as liquidated damages if, in case this proposal is accepted, the undersigned shall fail to execute a contract with said Board of Chosen Freeholders, under the conditions of this proposal, within the time provided for by the foregoing advertisement for proposals; otherwise, said check is to be returned to the undersigned.

Signed.....

Address.....

.....N. J.,

COMMISSIONER OF PUBLIC ROADS.

CONTRACT.

This agreement, made the.....day of....., in the year of our Lord one thousand nine hundred....., between THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF....., party of the first part, and....., party of the second part,

Witnesseth, That the said party of the second part, for and in consideration of the payments hereinafter specified and agreed to be made by the party of the first part, hereby covenant and agree to furnish and deliver all the materials and to do and perform all the work and labor required to be furnished and delivered, done and performed in and about the macadamizing of..... beginning at.....and extending to.....in the township of.....a distance of.....in strict and entire conformity with the plans on file in the engineer's office and with the specifications hereto annexed and duly approved by resolution of THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF..... adopted the.....day of.....in the year of our Lord one thousand nine hundred.....and approved by the State Commissioner of Public Roads on the.....day of.....in the year of our Lord one thousand nine hundred.....which said plans and specifications are hereby made part of this agreement as fully and with the same effect as if the same had been set forth at length in the body of this agreement.

In consideration of the premises the party of the first part hereby agrees to pay to the party of the second part for said work, when completed in accordance with the said specifications, the sum of.....payments to be made as provided in said specifications upon presentation of the proper certificates of the engineer and supervisor and upon the terms set forth in the annexed specifications.

This contract to be binding upon THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF....., their successors or assigns, and upon.....the party of the second part.....

In Witness Whereof, The director of THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF....., by authority of a resolution of said board, hath hereunto set his hand and affixed the corporate seal of the said board and the said party of the second part ha.. hereunto set.....hand.. and seal.. the day and year first above written.

.....
Director of the Board of Chosen Freeholders of the County of

Signed, sealed and delivered in the presence of

.....

This contract approved this.....day of....., 190..

.....
State Commissioner of Public Roads.

FOURTEENTH ANNUAL REPORT.

KNOW ALL MEN BY THESE PRESENTS, That we,.....
.....and.....of the county of.....
and State of New Jersey, are held and firmly bound unto THE BOARD OF CHOSEN
FREEHOLDERS OF THE COUNTY OF....., in the sum of.....dollars, lawful
money of the United States, to be paid to the said THE BOARD OF CHOSEN FREE-
HOLDERS OF THE COUNTY OF....., their successors or assigns, to which pay-
ment well and truly to be made, we bind ourselves, our heirs, executors and
administrators, jointly and severally, firmly by these presents.

Sealed with our seals and dated this.....day of....., A. D. nine-
teen hundred and.....

The Condition of this Obligation is such, That if the above bounden.....
shall well and truly perform his part of the contract hereto annexed, and all
the covenants and conditions therein perform, then this obligation to be void,
otherwise to remain in full force and virtue.

SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF

.....

This Bond approved this.....day of....., A. D. 190..

.....
Director.
.....
.....
.....
.....

Be it Remembered on this.....day of.....in the year of our
Lord one thousand nine hundred and.....before me, a Master in Chancery
of the State of New Jersey, personally appeared.....and.....
who acknowledged that they signed, sealed and delivered the foregoing bond
as their voluntary act and deed for the uses and purposes therein expressed.

.....

COMMISSIONER OF PUBLIC ROADS.

JUSTIFICATION OF SURETY.

STATE OF NEW JERSEY, }
COUNTY OF..... } ss.

On this.....day of....., A. D. 190.., before me, a Notary Public in and for the county and State aforesaid, personally appeared.....who, being duly sworn, on his oath declares that he is a resident of the county of....., in the State of New Jersey; that he is a freeholder in said county, and that he owns real estate in said county, in his own right, to the amount of.....over and above all his indebtedness and after all his debts are paid, and over any contingent liability by reason of being bail, surety, endorser or guarantor.

Subscribed and sworn to before me, this.....day of....., A. D. 190.. I hereby certify that the contents of the above have been carefully made known to affiant before execution.

.....

STATE OF NEW JERSEY, }
COUNTY OF..... } ss.

On this.....day of....., A. D. 190.., before me, a Notary Public in and for the county and State aforesaid, personally appeared.....who, being duly sworn, on his oath declares that he is a resident of the county of....., in the State of New Jersey; that he is a freeholder in said county, and that he owns real estate in said county, in his own right, to the amount of.....over and above all his indebtedness and after all his debts are paid, and over any contingent liability by reason of being bail, surety, endorser or guarantor.

Subscribed and sworn to before me, this.....day of....., A. D. 190.. I hereby certify that the contents of the above have been carefully made known to affiant before execution.

.....

STANDARD STATE AID SPECIFICATIONS FOR GRAVEL ROADS.

SPECIFICATIONS.

FOR A GRAVEL ROAD IN.....COUNTY, NEW JERSEY, KNOWN AS..... BEGINNING AT.....AND EXTENDING TO..... A DISTANCE OF.....FEET, OR.....MILES. GRAVEL.....FEET WIDE.....INCHES DEEP. SHOULDERS.....FEET WIDE. TOTAL WIDTH OF ROAD.....FEET.

WORK TO BE PERFORMED.

1. The work to be performed will consist in furnishing all material, tools, machinery and labor necessary for the efficient and proper grading of roadway, side ditches and side banks, laying, spreading and rolling of road material, and leaving the roadway complete in every manner ready for immediate use.

PLANS AND DRAWINGS.

2. The plan, profile and cross-sections on file in the office of the State Commissioner of Public Roads and at the office of..... County Engineer,.....New Jersey, show general location, profile, details and dimensions. The work will be constructed in all respects according to the above-mentioned plan, profile and cross-sections, which form part of these specifications.

3. Any variation of location, profile, size and dimensions from that shown on the plan, as may be required by the exigencies of construction, will, in all cases, be determined by the engineer, but the contractor shall not, on any pretense, save that of the written order of the contracting parties and the State Commissioner of Public Roads, deviate from the intent of the plan or specifications.

4. On all drawings, figured dimensions are to govern in cases of discrepancy between scale and figures.

GRADING.

5. Under this head will be included all excavations and embankments required for the formation of the highway, cutting all ditches or drains about or contiguous to the road, removing all fences, walls, buildings, trees, poles or other encumbrances, the excavation and embankment necessary for reconstructing cross or branch roads or entrances in cases where they are de-

stroyed or interfered with in the formation of the roadway, and all other excavations and embankments connected with or incidental to the construction of the said road.

EXCAVATION.

6. The roadway to the width of.....feet as shown on plan must be excavated or built to the same curvature as that of the surface of the road when finished; the grade, from center to sides, must be as shown on plans.

7. The earth taken from any cut or ditch shall be deposited where the engineer may direct, either within or without the lines of the road, but no earth shall be removed from the line of the road without the order of the engineer.

EMBANKMENT.

8. Material taken from the excavations, except when otherwise directed by the engineer, shall be deposited in the embankments, either on the roadway or sidewalks.

9. When there is not sufficient material in the excavations of the road to form the embankments, the deficiency must be supplied by the contractor from without the road. The character of said material and place of excavation must be approved by the engineer.

10. The embankments must be formed in layers of such depth, generally twelve (12) inches, and the material deposited and distributed in such manner as the engineer may direct, the required allowance for settling being added. Each layer must be carried across the entire width of the embankment and completed before commencing another, and this method shall be followed with each succeeding layer until the established grade is reached.

SLOPES.

11. Slopes in both embankment and excavation shall be one and one-half ($1\frac{1}{2}$) horizontal to one (1) vertical, when the width of the road will permit; if the road is too narrow to allow the full slope within its side lines, the engineer shall not calculate the quantities, either in embankment or excavation, beyond said side lines, unless the required ground shall be first dedicated to the public in writing by the owner or owners thereof.

ROADWAY.

Sub-Foundations.

12. When the excavations and embankments have been brought to a proper depth below the intended surface of the roadway, the cross-section conforming in every respect to the cross-section of the road when finished, the same shall, if ordered by the engineer, be rolled until approved by him. If any depressions form under such rolling, owing to improper material or vegetable matter, the same shall be removed and good earth substituted, and the whole re-rolled until thoroughly solid and to above-mentioned grade.

SHOULDERING.

13. A shoulder of firm earth or gravel is to be left or made on each side of the gravel-bed, extending at the same grade and curvature of road to side ditches or gutters. This shoulder is to be rolled according to the directions of the engineer.

UNDERDRAINS.

14. Underdrains, if found necessary, shall be constructed by the contractor (at prices named in bids) of good.....inch.....tile, laid upon a board of not less than one (1) inch in thickness and six (6) inches in width, whenever and wherever the engineer shall decide; top of tile or pipe must be at least.....inches deep, unless otherwise directed by the engineer; the joints of the tile or pipe must be covered with salt hay, or material equally as good, and trench filled with pervious earth.

15. When directed by the engineer a stone drain may be used in place of the tile drains. A trench one foot in width and one foot six inches in depth shall be excavated below the subgrade, said excavation to be filled with loose broken stone to a depth required by the engineer.

MATERIALS.

16. The material to be used in surfacing the road is to be furnished by the contractor.

17. The road committee, in conjunction with the engineer and State Commissioner of Public Roads, will pass upon and approve all gravel to be used in surfacing the road. The contractor is to dig, cart and place upon the road, in accordance with the specifications, the gravel selected and use no other. Should any objectionable material be used, he is to remove the same at his own expense.

18. The contractor must furnish to the engineer and State Commissioner of Public Roads samples of the kind of gravel to be used in the work before the opening of the bids.

19. The gravel is to be placed upon the road in such manner as shall be approved by the engineer, and be thoroughly rolled and solidified until it is consolidated, firm and approved by the engineer. The gravel shall be of such thickness that when it is thoroughly compacted and approved, it shall be..... inches deep in the center and slope at a regular grade to.....inches in depth at a distance of.....feet on each side of the center line.

20. Should any depressions appear these are to be carefully filled with gravel, so that the finished road will conform to the approved profile.

21. The contractor is to be paid by the cubic yard, as per depths above named, for the compacted gravel that he puts on the road, at the price named in the accepted bid, which shall include finishing the road and shaping the shoulders as above specified.

22. The contractor is to place sufficient gravel on the road to allow it to shrink thirty-three per cent. in rolling and settling.

SIDEWALKS.

23. The contractor will also be required, when the engineer so directs, to grub and remove from a strip of land.....feet on outside of curb-lines all material objectionable to the engineer, such as trees, stumps, roots and brush, and refill the holes with earth, thereby completing the opening of the entire road to a width of.....feet, which shall be.....feet on each side of the center line.

24. The grubbing and removing of such objectionable material that is ordered by the engineer shall be styled as "grubbing," and paid for by the acre at price named in accepted bid.

OPEN DITCHES.

25. The contractor is to grade the shoulders and open all necessary side ditches (as per stakes furnished by the engineer) so that there will be no water allowed to stand by the side of the road or upon it, for which no extra payment will be allowed.

EXTRA DEEP.

26. Should the engineer and State Commissioner of Public Roads so order, the contractor is to build in all respects, as already specified, the gravel-bed to a greater depth or thickness than that already named. The contractor is to do the same at a price named per square yard for each extra inch in depth.

NO EXTRA PRICE.

27. No allowance in measure of depth of pavement will be made on account of any material which may be driven into the roadbed by rolling. The pavement, when completed, must conform to the grade and cross-section and be satisfactory to the engineer and State Commissioner of Public Roads, whose decision shall be final.

28. No extra work will be paid for unless the price has been agreed upon between the contracting parties, including the State Commissioner of Public Roads, and endorsed upon the agreement, witnessed by the engineer.

BROAD-TIRE WAGONS.

29. All wagons and carts used during the construction, for hauling stone, earth or any other material must have tires not less than three and one-half ($3\frac{1}{2}$) inches in width.

BIDS.

30. Bids will be received under these specifications for the road complete as follows:

(1) Price per cubic yard for earth excavation, without classification, as per plans and cross-sections throughout the length and width of the road.

(2) Price per acre for grubbing and removing objectionable material from

- (3) Price per lineal foot for completed tile drain.
- (4) Price per cubic yard for compacted gravel as specified.
- (5) Price per square yard for each ordered inch in depth in excess of thickness named.
- (6) Price (lump) for the whole road complete, according to the specifications and plans prepared by the engineer.

No bid will be received in which all the above items are not filled out.

ESTIMATE OF QUANTITIES.

- 31. (1) Earth excavationcubic yards.
- (2) Grubbingacres.
- (3) Tile drainlineal feet.
- (4) Compacted gravelcubic yards.
- Total estimated cost of the road, \$.....

32. These quantities are the result of calculation, but are to be considered as approximate. The county will not be responsible for any excess in above quantities, should any occur. The contractor is expected to satisfy himself by a personal examination of the work contemplated, about the nature, character and quantity of the labor and material required.

CHECK ACCOMPANYING BIDS.

33. Bids shall be accompanied with a certified check, payable to the Director of the Board of Chosen Freeholders, for the sum of one thousand dollars (\$1,000), as a guarantee that if the contract shall be awarded to him he will, when required by said board, execute an agreement in writing to perform the work according to the specifications, and upon failure by the contractor to enter into said agreement with the said Board of Chosen Freeholders, said certified check shall be forfeited and considered as liquidated damages.

LIABILITIES OF CONTRACTOR.

34. He shall keep up sufficient guards by day and night to prevent accidents from travel, and will be liable for any damage which may arise from his neglect to do so, or from any omission on his part.

35. He is to commence and prosecute the work upon the road at such points as may be directed by the engineer, within.....days from and after the signing of the contract, and shall continue work thereon until completion, except as herein provided.

36. He further agrees to complete the same on or before the..... day of, A. D.

37. Twenty dollars for each day that the work shall remain uncompleted, after the time allowed by contract, may be deducted, as liquidated damages, from any moneys due contractor, unless otherwise agreed upon by the Board of Chosen Freeholders, after presentation of certificate of the engineer recommending the extension of the time limit of completion.

38. The contractor shall keep the finished roadway, earthwork, side ditches and underdrains in repair for the period of one year from the date of its completion and acceptance, and, in addition thereto, for as much longer as for any

COMMISSIONER OF PUBLIC ROADS. 123

period or periods during said year it shall be out of proper condition. If, during that time, the roadway or any part of the work shall, in the judgment of the engineer and the Board of Chosen Freeholders, require repairing, and they shall duly notify the contractor to make such repairs as required, and the contractor should refuse or neglect to do so to the satisfaction of the said engineer and Board of Chosen Freeholders, within five days from the date of service of notice, then the said engineer and Board of Chosen Freeholders shall have the right to have the work done properly by other parties and recover the cost for the same from the said contractor or his surety.

39. The contractor will be required to preserve all stakes and bench-marks made and established on the line of work until duly authorized by the engineer to remove the same.

40. The contractor shall not disturb the position of title-stones (the corners of properties adjacent to the road), but where they appear he will either lift or lower them, under the personal supervision of the engineer.

41. The contractor must also preserve the roadway on which he is working from needless obstruction, and where necessary construct safe and commodious crossings, to be maintained in good order. He shall afford all proper and reasonable means for the accommodation of the public, and leave the roadway complete in every manner ready for immediate use.

42. All loss or damage arising from the nature of the work to be done, or from any unforeseen or unusual obstruction or difficulty, which may be encountered in the prosecution of said work, or from the action of the elements, shall be sustained by the contractor.

PROVISION FOR DRAINAGE.

43. If it is necessary in the prosecution of the work to interrupt or obstruct the natural drainage of the surface, or the flow of artificial drains, the contractor shall provide for the same during the progress of the work in such a way that no damage shall result to either public or private interests. He shall be held liable for all damages which may result from any neglect to provide for either natural or artificial drainage, which he may have interrupted.

RIGHT TO BUILD BRIDGES, CULVERTS, ETC., AND SUSPENSION OF WORK.

44. The right of the county to build bridges, culverts, lay pipes or other appurtenances in said road during the progress of the work, is expressly reserved, as well as suspending the work, or any part thereof, during the construction of the same, for the purposes above stated, without further compensation to the contractor for such suspension than an extension of time for completing the work as much as it may have been delayed.

STOPPING THE WORK ON ACCOUNT OF WEATHER.

45. The State Commissioner of Public Roads, engineer or supervisor may stop any portion of the work if, in their judgment, the weather is such as to prevent the same being done properly. No allowance of any kind will be made for such stoppage, except an extension of the time for the completion of the work as herein provided.

ABANDONMENT OF CONTRACT.

46. If at any time the work under contract should be abandoned, or if at any time the engineer should judge and so certify in writing that said work, or any part thereof, is unnecessarily delayed, or that the contractor is willfully violating any of the conditions or covenants of this contract, or is executing the same in bad faith, then, and in that case, the Board of Chosen Freeholders shall notify the said contractor to discontinue all work under this contract. It may employ other parties to complete the work in such manner as it may decide, and use such material as may be procured upon the line of aforesaid work, and, if necessary, to procure other material for its completion, and charge the expense of the said labor and material to the contractor, which expense shall be deducted from any moneys due him under contract. In case these expenses shall exceed the sum which would have been payable under contract, if the same had been completed by said contractor, he or his bondsmen shall pay the amount of the excess to the Board of Chosen Freeholders, on notice from the engineer.

ENGINEER.

47. The engineer shall be selected or appointed by the Board of Chosen Freeholders and paid by it. He shall furnish all surveys, profiles, plans, specifications and estimates of quantities of all kinds before specifications are signed, and in such a clear manner that lump bids can be made upon the work. He shall furnish all lines and grades required for the completion of the work. He shall furnish estimates for quantities of work done before partial payments can be made, the quantity of road laid being determined by surface measurements. Should any difference arise between the contracting parties as to the meaning or intent of these specifications, his decisions on these matters are to be final and conclusive. The work is to be done according to his directions, and if any material of which he does not approve is brought upon the road, it is to be removed at the expense of the contractor. If the contractor fails or neglects to do any part of the work as specified or as directed by the engineer, then, in that case, all other work shall be discontinued, on notice from the engineer to the contractor, or to the superintendent or foreman in charge of the work for the contractor, until such time as the work complained of has been done to the satisfaction of the engineer, and the contractor will not be entitled to or allowed any compensation or extension of time for such discontinuation or suspension of the work.

SUPERVISOR.

48. Nothing in these specifications relating to the duties of the engineer shall be taken or construed in any manner to conflict with the duties of the supervisor, as specifically set forth in the act entitled "An act to provide for the permanent improvement of public roads in this State," approved March 27th, 1905, but they shall co-operate as far as practicable.

COMMISSIONER OF PUBLIC ROADS.

125

INCOMPETENT WORKMEN.

49. The contractor shall employ competent men to do the work, and whenever the engineer and supervisor shall inform him, or his representative in charge, in writing, that any man on the work is unfitted for the place, or is working contrary to the provisions of the specifications or the instructions of the engineer and supervisor, he shall thereupon be discharged.

INSPECTION.

50. All directions and determinations necessary to give due and full effect to any of the provisions of these specifications shall be given by the engineer and supervisor.

51. All material and workmanship of any kind shall be subject at all times to the inspection of the engineer and supervisor. Whenever unfaithful and imperfect work is discovered, it shall be immediately repaired or replaced by the contractor, after due notification from the engineer and supervisor.

SUB-LETTING OF CONTRACT.

52. The contractor shall not assign or sub-let any portion of this contract without the consent of the Board of Chosen Freeholders and the State Commissioner of Public Roads.

PAYMENTS.

53.monthly payments will be made by the Board of Chosen Freeholders to the contractor for work performed, upon presentation by him of the proper certificates of the engineer and supervisor, in a sum not to exceed eighty per cent. of the amount then due, together with releases from all liens, if required. Fifteen per cent. will be paid at the completion of the work and the acceptance of the same in writing by the Board of Chosen Freeholders and the State Commissioner of Public Roads. The remainder, or five per cent., will be retained by the Board of Chosen Freeholders for a period of one year as security for the faithful performance of Article 38.

BOND OF CONTRACTOR.

54. The contractor will be required to execute, within thirty days of giving of contract, a bond in such sum and with such securities as shall be approved by the Board of Chosen Freeholders, conditioned for the faithful performance of the contract, to indemnify and save harmless the said Board of Chosen Freeholders from all suits or actions of any name or description brought against them on account of any act or omission of the contractor or his agents, and for the faithful performance of the contract by the contractor. Said bond shall be in a sum of not less than the estimated cost of the road when completed. Any change made in said plans, specifications, agreements or quantities without the consent of the bondsmen shall in no way vitiate said bond. The

FOURTEENTH ANNUAL REPORT.

said contractor hereby further agrees that so much of the money due him, under and by virtue of this agreement, as shall be considered necessary by the Board of Chosen Freeholders, may be retained by it until all such suits or claims for damages aforesaid shall have been settled, and evidence to that effect furnished to the satisfaction of the said Board of Chosen Freeholders.

CONTRACTOR TO INSURE PAYMENT FOR LABOR, MATERIAL, ETC., ON FINAL ESTIMATE.

55. The contractor must also furnish said engineer with satisfactory evidence that all persons who did work, or furnished material for this contract, or who have sustained damage or injury by reason of any act, omission or carelessness on his part or his agents in the prosecution of the work, have been duly paid or secured; he shall also give notice to said engineer within ten days after the completion of the work, and before final estimate is made, that any balance for such work or materials, or compensation for such damages due, has been fully paid or released.

56. The right is reserved to reject any or all bids, if deemed to the interest of the county or State.

.....
County Engineer.

Approved this.....day of....., A. D. 190.., by resolution of the Board of Chosen Freeholders of the county of.....

.....
Director of Board of Chosen Freeholders.

.....
Clerk of Board of Chosen Freeholders.

OFFICE STATE COMMISSIONER OF PUBLIC ROADS, TRENTON, N. J.

I have this day carefully read and examined the foregoing specifications, and the same are hereby approved.

Any departure from these specifications must have the written consent of the State Commissioner of Public Roads.

Given under my hand, this.....day of....., A. D.....

.....
State Commissioner of Public Roads.

COMMISSIONER OF PUBLIC ROADS.

PROPOSAL.

To the Board of Chosen Freeholders, County of.....and State of New Jersey:

GENTLEMEN—The undersigned hereby declare... that...he...ha... carefully examined the annexed specifications and the drawings therein referred to, and will provide all necessary machinery, tools, apparatus and other means of construction, and do all the work and furnish all the material called for by said specifications in the manner prescribed by the specifications and the requirements of the engineer and supervisor under them, for the following prices:

- (1) Price per cubic yard for earth excavation, without classification, as per plans and cross-sections throughout the length and width of the roadper cubic yard.
(2) Price per acre for grubbing and removing objectionable material from sidewalks.....per acre.
(3) Price per lineal foot for completed tile drain.....per lineal foot.
(4) Price per cubic yard for compacted gravel as specified.....per cubic yard.
(5) Price per square yard for each ordered inch in depth in excess of thickness named.....per square yard.
(6) Price (lump) for the whole road complete, according to the specifications and plans prepared by the engineer.....

Accompanying this proposal is a certified check for the sum of one thousand dollars (\$1,000), payable to the order of the Director of the Board of Chosen Freeholders of.....county, which check is to be forfeited as liquidated damages if, in case this proposal is accepted, the undersigned shall fail to execute a contract with said Board of Chosen Freeholders, under the conditions of this proposal, within the time provided for by the foregoing advertisement for proposals; otherwise, said check is to be returned to the undersigned.

Signed.....

Address.....

..... N. J.,

CONTRACT.

This agreement, made the.....day of....., in the year of our Lord one thousand nine hundred....., between THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF....., party of the first part, and....., party of the second part,

Witnesseth, That the said party of the second part, for and in consideration of the payments hereinafter specified and agreed to be made by the party of the first part, hereby covenant and agree to furnish and deliver all the materials and to do and perform all the work and labor required to be furnished and delivered, done and performed in and about the graveling of.....beginning at.....and extending to....., in the township of....., a distance of....., in strict and entire conformity with the plans on file in the engineer's office and with the specifications hereto annexed and duly approved by resolution of THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF....., adopted the.....day of....., in the year of our Lord one thousand nine hundred....., and approved by the State Commissioner of Public Roads, on the.....day of.....in the year of our Lord one thousand nine hundred.....which said plans and specifications are hereby made part of this agreement as fully and with the same effect as if the same had been set forth at length in the body of this agreement.

In consideration of the premises the party of the first part hereby agrees to pay to the party of the second part for said work, when completed in accordance with the said specifications, the sum of.....payments to be made as provided in said specifications upon presentation of the proper certificates of the engineer and supervisor and upon the terms set forth in the annexed specifications.

This contract to be binding upon THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF....., their successors and assigns, and upon.....the party of the second part.....

In Witness Whereof, The director of THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF....., by authority of a resolution of said board, hath hereunto set his hand and affixed the corporate seal of the said board and the said party of the second part ha.. hereunto set hand.. and seal.. the day and year first above written.

.....
Director of the Board of Chosen Freeholders of the County of.....
.....
.....
.....

Signed, sealed and delivered in the presence of
.....

This contract approved this.....day of....., 190..

.....
State Commissioner of Public Roads.

COMMISSIONER OF PUBLIC ROADS. 129

KNOW ALL MEN BY THESE PRESENTS, That we,.....
.....and.....of the county of.....
and State of New Jersey, are held and firmly bound unto THE BOARD OF
CHOSEN FREEHOLDERS OF THE COUNTY OF....., in the sum of.....
dollars, lawful money of the United States, to be paid to the said THE BOARD
OF CHOSEN FREEHOLDERS OF THE COUNTY OF....., their successors or
assigns, to which payment well and truly to be made, we bind ourselves, our
heirs, executors and administrators, jointly and severally, firmly by these
presents.

Sealed with our seals and dated this.....day of....., A. D. nine-
teen hundred and.....

The Condition of this Obligation is such, That if the above bounden.....
shall well and truly perform his part of the contract hereto annexed, and all
the covenants and conditions therein perform, then this obligation to be void,
otherwise to remain in full force and virtue.

.....

SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF

.....

This Bond approved this.....day of....., A. D. 190..

.....
Director.

.....
.....
.....

Be it Remembered on this.....day of....., in the year of our
Lord one thousand nine hundred and....., before me, a Master in Chan-
cery of the State of New Jersey, personally appeared.....and.....
who acknowledged that they signed, sealed and delivered the foregoing bond
as their voluntary act and deed for the uses and purposes therein expressed.

.....

JUSTIFICATION OF SURETY.

STATE OF NEW JERSEY, }
COUNTY OF..... } ss.

On this.....day of....., A. D. 190., before me, a Notary Public in and for the county and State aforesaid, personally appeared.....who, being duly sworn, on his oath declares that he is a resident of the county of....., in the State of New Jersey; that he is a freeholder in said county, and that he owns real estate in said county, in his own right, to the amount of.....over and above all his indebtedness and after all his debts are paid, and over any contingent liability by reason of being bail, surety, endorser or guarantor.

Subscribed and sworn to before me, this.....day of....., A. D. 190.. I hereby certify that the contents of the above have been carefully made known to affiant before execution.

.....

STATE OF NEW JERSEY, }
COUNTY OF..... } ss.

On this.....day of....., A. D. 190., before me, a Notary Public in and for the county and State aforesaid, personally appeared.....who, being duly sworn, on his oath declares that he is a resident of the county of....., in the State of New Jersey; that he is a freeholder in said county, and that he owns real estate in said county, in his own right, to the amount of.....over and above all his indebtedness and after all his debts are paid, and over any contingent liability by reason of being bail, surety, endorser or guarantor.

Subscribed and sworn to before me, this.....day of....., A. D. 190.. I hereby certify that the contents of the above have been carefully made known to affiant before execution.

.....

Appendix B.

CHAPTER 58.

An act to provide for the permanent improvement of public roads in this State (Revision of 1905). With amendment of 1906.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. The board of chosen freeholders of any county in this State may, at any time, by resolution, direct that any public road or section of road, located within said county, being at least thirty-three feet in width and at least one mile in length, or, being less than one mile in length, is an extension of or connection with some permanently improved or paved road or street, be improved by the construction of a macadamized road, or a telford or other stone road, or a road constructed of gravel, oyster shells or other similar materials, in such manner that the same, of whatever materials constructed, shall, with reasonable repairs thereto, at all seasons of the year, be firm, smooth and convenient for travel. When more roads are applied for than can be constructed in any one year, the board of chosen freeholders and State Commissioner of Public Roads shall have power and authority to select from the roads petitioned for the ones first to be constructed, having first regard to the most important roads and the distribution of the benefits of this act to all parts of their counties. The board of chosen freeholders may, before approval of any road, require as a condition of said approval that the township or townships or other municipality through which said road runs shall pay ten per centum of the cost of said improvement, said payment to

Improve-
ments of
roads by
freeholders.

Selection of
roads.

Township
assistance.

be applied to the improvement of roads constructed under this act.

Survey
made.

2. The said board, after the passage of the resolution, shall cause a survey of said road so to be improved to be made, and plans, cross-sections and specifications of the work to be done on the same to be prepared. The survey shall indicate the width and length of said road, and shall also show how much of said road may be improved by deviation from the then existing lines, but no survey shall be commenced until the consent of the State Commissioner of Public Roads shall have been first obtained. When the said plans, cross-sections and specifications shall have been prepared, they shall be submitted to the board of chosen freeholders for its approval or rejection.

Approval by
board and
commissioner.

If such board shall approve the same, they shall then be submitted to the State Commissioner of Public Roads for his approval or rejection, whose duty it shall be, before approving of said plans, cross-sections and specifications, to ascertain, by personal inspection or otherwise, the natural character of the soil upon which such road is proposed to be constructed, and any and all other facts that he may deem important. If, after examination of the plans, cross-sections and specifications, and an inspection of the road, as aforesaid, he shall be satisfied as to the advisability of the improvement of the road as contemplated, and that one-third of the cost of the construction of said road, together with one-third of the cost of the construction of all other roads or sections of roads in this State, under plans and specifications previously approved by him, will not in any one year exceed the sum of four hundred thousand dollars, or such sum as shall in each year be appropriated for that purpose, then he shall approve said plans, cross-sections and specifications, otherwise he shall reject the same.

Limit of
State ex-
penditure.

Proposals
invited.

3. Within thirty days after approval of the plans, cross-sections and specifications by the Commissioner of Public Roads, it shall be the duty of the board of chosen freeholders to advertise for bids for said work in two or more of the public papers printed in said county, and in at least one engineering journal published in the city of

COMMISSIONER OF PUBLIC ROADS.

133

New York, for three weeks successively, at least once in each week. This advertisement shall state the place where bidders may examine said plans, cross-sections and specifications, and the time and place where bids for said work will be received by the board of chosen freeholders, or a committee of said board. Each bidder must accompany his bid with a certified check, payable to the director of the board of chosen freeholders, for one thousand dollars, as a guarantee that if said work is awarded to him he will enter into a contract with said board for the same. This contract must be executed, together with a bond of the successful bidder, in the penal sum of at least the estimated cost of said work, with two or more sureties, freeholders of the county, or a surety or trust company created by this State, or a surety or trust company of another State, authorized to transact business within this State, to be approved by the director of the board of chosen freeholders, conditioned for the faithful performance of said work in strict conformity with the plans, cross-sections and specifications for the same, within thirty days from the awarding of the contract. The contract, before any work is done thereunder, must be exhibited to the State Commissioner of Public Roads for his approval, in writing, thereon, and said commissioner is hereby authorized, whenever, in his judgment, the best interests of the county require him so to do, to reject the same, in which case he shall write upon said contract the word "rejected," and append thereto his signature and official title of office, and said contract and the bond required to accompany the same shall, from the time of such rejection, be absolutely null and void, but such rejection shall in nowise operate to prevent said board from readvertising for bids and proceeding thenceforth under the provisions of this act; *provided*, such action is taken within four months after such rejection, otherwise said approval shall be null and void. The time and manner of payment for work done under any contract awarded under this act shall be set forth in said contract, and at least five per centum of the contract price shall not be paid to the contractor until after the expiration of one

Bidder's
guarantee.

Contract.

Approved
by com-
missioner.May reject
contract.

Proviso.

As to pay-
ment under
contract.

year from the completion of the work and acceptance thereof in writing by the Commissioner of Public Roads.

Limit to county expenditures.

4. The estimated amount of all contracts for road improvements awarded in any one year by the board of chosen freeholders, together with the estimated cost of repairs of roads already constructed, shall not exceed one-half of one per centum of the ratables of the county, as reported to the State Comptroller for the preceding year, exclusive of the State appropriation for road purposes apportioned to any county.

Copy of specifications, &c., filed with commissioner.

5. A true copy of the specifications, bid, contract, bond and justification of surety, certified to be such by the director of the board of chosen freeholders, shall, immediately after the awarding of any contract, be furnished by the board of chosen freeholders to the State Commissioner of Public Roads, to be filed and remain of record in the office of such commissioner.

Supervisor appointed by commissioner.

6. Immediately after the awarding of any contract under the provisions of this act, the State Commissioner of Public Roads shall appoint a competent supervisor to take charge of the work required to be performed under said contract, who shall receive for his services the sum of three dollars per day, to be paid to the said supervisor, out of the sum hereinafter appropriated for the one-third of the cost of all roads constructed under this act, on the approval of the State Commissioner of Public Roads.

Per diem.

Oath.

Such supervisor, before assuming the duties of his office, shall make and subscribe an oath or affirmation, before any officer authorized to administer the same, that he will faithfully, and to the best of his ability and understanding, perform all the duties of his office. The State Commissioner of Public Roads may, however, summarily discharge any supervisor and may appoint a new supervisor in the place of the one so discharged. Where any contract provides for partial payments based upon the amount of work done, it shall be the duty of the supervisor, as each payment becomes due, to present to the board of chosen freeholders a certificate, signed by such supervisor and the engineer, in which certificate shall be stated, as near as can be, the amount of work done for

May be summarily dismissed.

Certificate of partial payments.

COMMISSIONER OF PUBLIC ROADS.

135

which payment is to be made, and that the same has been done, in all respects, in strict conformity with the contract, plans and specifications. When the work done under any contract shall have been fully completed, the supervisor and engineer shall prepare a detailed and itemized statement, in quadruplicate, of the cost of the improvement, one copy whereof shall be filed with the board of chosen freeholders, one with the clerk of the county and two with the State Commissioner of Public Roads.

Final statement on completion of contract.

7. One-third of the cost of all roads constructed under this act, not exceeding in any one year the sum of four hundred thousand dollars, shall be paid out of the State treasury, out of any moneys not otherwise appropriated, if the same be first appropriated in the annual appropriation act. The Governor and State Commissioner of Public Roads shall certify from time to time to the State Comptroller the amount to be paid to any county, township, town, borough, village or other municipality for such year, and the State Comptroller shall draw his warrant on the State Treasurer in favor of the county collector or collector of the township, town, borough, village or municipality, as the case may be, for the amount so certified, and the State Treasurer shall thereupon pay the same.

State appropriation.

Payments to various municipalities.

8. On or before the day fixed by law for the meeting of the county board of assessors in any county in each year, the board of chosen freeholders of such county shall certify to the said county board of assessors, either in the annual tax budget or separately, two-thirds of the estimated cost of all work contracted for under the provisions of this act since the day fixed by law for the meeting of the board of assessors in the year next preceding. The county board of assessors shall include in their assessment of county taxes the sum so certified, and the same shall be collected and paid over to the county in the same manner and at the same time that other county taxes are collected and paid over; if a deficiency shall exist, in consequence of the cost exceeding the estimate, or in consequence of the receipt of less than one-third of the cost

Notice to county board of assessors.

Assessment and collection of road moneys.

If deficiency.

from the State, the board of chosen freeholders shall have authority to borrow, on temporary loans, such deficiency, and the said board shall certify to the county board of assessors the total amount of such deficiency, which shall be included in the next annual tax levy, and shall be assessed, collected and paid over as other taxes are assessed, collected and paid over. If there be a surplus, by reason of the estimate exceeding the cost, the same shall be retained and used in the construction of other roads under this act, or in repairs to roads constructed under this act.

If surplus.

Bonds in-
stead of tax.

Amount, rate,
time.

Amount
annually
raised.

9. The board of chosen freeholders may, instead of certifying to the county board of assessors the two-thirds cost of any work done under this act, as required by the eighth section of this act, by resolution, adopted by a vote of at least two-thirds of all its members, issue bonds of the county for two-thirds of the estimated cost of said work. These bonds shall be designated as "road improvement bonds," and shall be for such sums and in such amounts, payable in not less than six nor more than thirty years from date thereof, with interest at a rate not exceeding five per centum per annum, payable annually or semi-annually, as said board of chosen freeholders, by said resolution, may determine. The said bonds shall be signed by the director of the board of chosen freeholders and by the county collector, sealed with the seal of the board, properly numbered, and a registry thereof kept by the board, and may be either coupon or registered bonds; if coupon bonds, the coupons shall be signed by the director of the board, and shall be numbered to correspond to the several bonds to which they shall be severally attached. The board of chosen freeholders shall, when bonds are issued under the provisions of this section, certify to the county board of assessors, in each and every year, so long as any of said bonds remain outstanding, a sum sufficient to pay the interest accruing on said bonds for said year and the principal of any bond or bonds that shall mature in said year, and the said county board of assessors shall include the said sum in the annual tax levy or assessment for said year, and the same shall be col-

COMMISSIONER OF PUBLIC ROADS.

137

lected and paid over in the same manner and at the same time as other county taxes.

10. Any road constructed under the provisions of this act or of any previous act bearing the same title shall forever hereafter be a county road, and the duty of keeping the same in repair shall devolve exclusively upon the board of chosen freeholders and the county supervisor, as hereinafter mentioned, and all other powers and duties respecting such road shall be imposed upon and vested in the said board of chosen freeholders to the exclusion of all township, town, borough, village or other municipal officers. If any such road shall become out of repair, and shall not be repaired within sixty days after notice in writing so to do, given by the State Commissioner of Public Roads to the board of chosen freeholders or to its director, the said Commissioner of Public Roads shall certify such neglect or refusal to the State Comptroller, who shall withhold payment to such county of any moneys already apportioned, or that may thereafter be apportioned, to such county by the State, and no payment shall be made to said county until the State Commissioner of Public Roads shall certify to the State Comptroller that said road has been placed in a good state of repair.

Improved roads to be county roads.

Maintenance.

Payment withheld upon failure to maintain roads.

11. After the first county road shall have been constructed under this act in any county, it shall be the duty of the board of chosen freeholders to appoint some suitable person as county supervisor of roads, who, before assuming the duties of his office, shall make and subscribe an oath or affirmation that he will faithfully perform all the duties of his office to the best of his ability and understanding. Such supervisor shall hold his office for three years and until his successor is appointed and qualified. He shall give bond to the board of chosen freeholders in the penal sum of one thousand dollars, conditioned for the faithful performance of the duties of his office, with such surety or sureties as the board shall approve, and shall receive such compensation for his services as the said board shall determine. Said supervisor may be summarily dismissed at any time by the board of chosen freeholders or the State Commissioner of Roads, whenever

County supervision of roads.

Term.

Bond.

Subject to dismissal.

Moneys for
maintenance
and repairs.

Cost of
repairs paid
by county
collector.

Acquire lands
for road
purposes.

By purchase.

By con-
demnation.

in their or his judgment such supervisor is incompetent or neglectful in the performance of his duties, in which event the board of chosen freeholders shall immediately appoint a new supervisor to hold for the unexpired term of the supervisor so discharged. The said board of chosen freeholders shall appropriate all moneys necessary to keep any and all roads constructed under this act in good repair and free from obstructions, and if the board shall have no money which may be lawfully used for such purposes, it shall have the power to borrow the same, on the credit of the county, until the next annual taxes shall have been levied and collected. The cost of all repairs and removal of obstructions shall be paid by the county collector, upon the order of the board of chosen freeholders, and all bills for repairs and removal of obstructions shall be verified by affidavit, and shall be certified to be correct by the county supervisor of roads.

12. Whenever it is deemed advisable by the board of chosen freeholders of any county of this State to acquire land for the purpose of laying out, widening, changing or straightening any road to be made or improved under the provisions of this act, said board is hereby authorized to agree with the owner or owners of any land or lands required for that purpose as to the compensation to be paid by said board for a conveyance of said land or lands, and to make compensation therefor out of any moneys applicable for road improvement purposes, or, if there be no money on hand for such purpose, said board may borrow the necessary sum or sums on temporary loans, on the credit of the county, until the next annual taxes shall have been levied and collected. In case said board cannot agree with the owner or owners of any land for the acquisition of the same by the said board for road improvement purposes, said board shall have the power to acquire said land by condemnation, in the manner prescribed by law, and shall have authority and power to pay all necessary costs and expenses from any moneys applicable for road improvement purposes, or may borrow so much as may be necessary on temporary loans, on the credit of the county, until the next annual taxes shall have been levied

COMMISSIONER OF PUBLIC ROADS.

139

and collected; nothing in this act contained, however, shall be so construed as to prevent said board from acquiring any land for road improvement purposes by gift.

13. If all the owners of property abutting on any road or highway, in any county, which has not been improved, or is not undergoing improvement, desire said road, or any section thereof, to be improved, and shall certify, in writing, to the board of chosen freeholders, that they are willing to bear the entire expense of such improvement, the county engineer, or other competent engineer, shall prepare plans, cross-sections and specifications for the work to be done on such road, or any section thereof, so to be improved, and shall submit the same to the owners, and if satisfactory to such owners, they are hereby authorized to enter into contract for such work, said contract to be first submitted to the board of chosen freeholders for its approval. Upon the completion of the work to the satisfaction of the county supervisor and the board of freeholders, and upon the submission to said board of proper receipts showing full payment for all work done, the said board of chosen freeholders may, by resolution, declare that said road, or any portion thereof, be thereafter a county road. The location of any portion of said road may be changed, if deemed desirable, upon acquiring the consent, in writing, of the owner or owners of land abutting on such portion of road so to be changed, and upon acquiring, without expense to the county, the land necessary for such change. The county supervisor shall be paid the sum of twenty-five dollars for supervising said work, to be paid by said owners.

Improvement
of road by
abutting
owners.

Such road to
be a county
road.

Change of
location of
road.

14. The board of chosen freeholders shall have full power to lay out, open, construct and improve all necessary approaches to any dwelling along the line of such road which may have been destroyed or damaged by any alteration in the existing grade, whether within or without the line of such road, and all costs and expenses incurred therefor shall be paid by the said board of chosen freeholders in the same way and manner as other work done under this act is paid for.

Improve
approaches
to dwellings.

Improvement
of roads
bordering
on State
property.

15. Whenever any public road is sought to be improved under the provisions of the thirteenth section of this act, upon which road any lands or real estate owned by the State of New Jersey may front or border, the board of managers, or other body having the control and management of said lands and real estate, are hereby authorized to consent to the improvement of said road and to enter into contract for the same in the manner directed by said section, and to pay for said improvement out of any moneys appropriated to said board of managers, or other governing body.

Boundary
line roads.

16. The provisions of this act shall extend to the improvement of any road, or section of road, constituting the boundary line between two counties, whenever said improvement shall be agreed to by the board of chosen freeholders of both counties.

Act not to
apply to
cities.

17. The provisions of this act shall extend to townships, towns, boroughs, villages, or any municipality or municipalities except cities. The common council or other governing body, the assessor or assessors, the mayor or other chief executive officer, the clerk and collector, respectively, of any township, town, borough, village, or other municipality, shall have the power and shall perform all the duties as are in this act cast upon the board of chosen freeholders, the county board of assessors, the director of the board of chosen freeholders, the county clerk and county collector, respectively. Any of said municipalities may raise, by taxation, funds with which to pay for the cost of the construction of any road or roads, or may issue bonds for the payment of the same, in the same manner, as nearly as may be, as the board of chosen freeholders may do under this act, it being the expressed intention of this section to confer upon townships, towns, boroughs, villages, or other municipalities, full power to improve any road, or section of road, under the provisions of this act, all proceedings conforming, as nearly as may be practicable, to the provisions of this act. Any such road, or section of road, so constructed by any township, town, borough, village, or other municipality, other than by the county, shall be exclusively under the

Right of
municipalities
to improve
roads.

Control
thereof.

COMMISSIONER OF PUBLIC ROADS.

141

jurisdiction and control of such township, town, borough, village, or other municipality, and shall be repaired and maintained by such municipality. Nothing, however, Exception. contained in section four of this act shall be held to apply to any township, town, borough, village, or other municipality.

18. Whenever any road, or section of road, constructed As to roads in cities. by the board of chosen freeholders, shall lie within the corporate limits of any city, such city may enter into an agreement, in writing, with the board of chosen freeholders for the repair and maintenance of said road, or section of road, and from and after the making of said agreement, and the approval thereof by the State Commissioner of Public Roads, said road shall be exclusively under the jurisdiction and control of such city, and shall be repaired and maintained by the same.

19. All acts and parts of acts inconsistent with the provisions of this act be and the same are hereby repealed; Repealer. *provided*, that this repealer shall not revive any act heretofore repealed, nor shall any proceeding for the improvement of any public road entered into before the passage of this act abate, but such proceeding shall continue as Proviso. prescribed in the act under which the improvement was commenced.

20. This act shall take effect immediately.

Approved March 27th, 1906.

 CHAPTER 144.

An act to amend an act entitled "An act to provide for the permanent improvement of public roads in this State (Revision of 1905)," approved March twenty-seventh, one thousand nine hundred and five.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Section ten of the act entitled "An act to provide Section 10 amended. for the permanent improvement of public roads in this

FOURTEENTH ANNUAL REPORT.

State (Revision of 1905),” approved March twenty-seventh, one thousand nine hundred and five, be and the same is hereby amended so as to read as follows:

Improved roads to be county roads.

Maintained by freeholders.

Proviso.

Road appropriation withheld for failure to maintain.

10. Any road constructed under the provisions of this act, or of any previous act entitled “An act to provide for the permanent improvement of public roads in this State,” and any road accepted by any board of chosen freeholders under chapter one hundred and fourteen of the laws of one thousand nine hundred and four shall forever hereafter be a county road, and the duty of keeping the same in repair shall devolve exclusively upon the board of chosen freeholders and the county supervisor, as hereinafter mentioned, and all other powers and duties respecting such road shall be imposed upon and vested in the said board of chosen freeholders, to the exclusion of all township, town, borough, village, or other municipal officers; *provided, however,* that nothing in this act shall divest the municipal authorities of townships or boroughs of their power to construct, grade, curb, pave or repair the sidewalks along said county roads, nor shall this power of said governing bodies divest the board of chosen freeholders of their right to construct across or under the sidewalks the necessary culverts or other provisions for the maintenance of such county roads. If any such road shall become out of repair, and shall not be repaired within sixty days after notice in writing so to do, given by the State Commissioner of Public Roads to the board of chosen freeholders, or to its director, the said Commissioner of Public Roads shall certify such neglect or refusal to the State Comptroller, who shall withhold payment to such county of any moneys already apportioned, or that may thereafter be apportioned, to such county by the State, and no payment shall be made to said county until the State Commissioner of Public Roads shall certify to the State Comptroller that said road has been placed in a good state of repair.

2. This act shall take effect immediately.

Approved May 8th, 1907.

COMMISSIONER OF PUBLIC ROADS.

143

CHAPTER 38.

An act to enable boards of chosen freeholders of two or more counties of this State, where such counties now are or hereafter may be charged by law with the maintenance and repair, or now are or hereafter may be in the possession and control of any road or roads lying wholly in one or partly in one and partly in other such county or counties, to rebuild, reconstruct, change the grade of, widen and improve such road or roads, and to acquire lands for such widening by gift, devise, purchase or condemnation, and to agree as to the proportion of the total expense thereof to be borne by each, and to issue bonds for the payment of the same, and to agree with any street railway company using or hereafter using such road or roads as to the share of the expenses thereof to be borne by it for and towards such improvement.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Whenever two or more counties of this State now are or hereafter may be charged by law with the maintenance and repair, or now are or hereafter may be in the possession and control, of any road or roads lying wholly in one or partly in one and partly in other such county or counties, it shall be lawful for such counties to jointly rebuild, reconstruct, change the grade of, improve and widen such road or roads, and to acquire lands for such widening by gift, devise, purchase or condemnation, and agree as to the proportion of the total expense thereof to be borne by each; and it shall and may be lawful also for such boards to agree with any street railway company using or hereafter using such road or roads as to the share of the expense thereof to be borne by it for and towards such improvement.

Joint improvement and maintenance of roads by counties.

Agreement with street railway companies.

2. If such boards shall determine to make the improvements and do the work authorized by this act, it shall

Plans and cost.

have prepared plans and specifications of such work; and if the cost thereof is in excess of one thousand dollars, shall advertise for bids, for two weeks, in at least two daily newspapers, or four weeks in two weekly newspapers, in each of such counties; and the contract shall be awarded to the lowest responsible bidder who shall furnish satisfactory security, to be approved of by said boards; and said boards, voting separately, shall approve of the plans and specifications and award the contract.

Award of contract.

Receipt and opening of bids.

3. In order to receive the bids each board shall appoint certain of its members, who together shall constitute a joint committee, and such joint committee shall receive the bids at the time and place specified in the advertisement, and shall open the bids, in open meeting of such committee, and publicly announce the amount or items comprising each bid, and the members of the committee from each county shall forthwith report the bids to their board for action thereon.

Proportionate cost.

4. The contract for said work shall specify the share or proportion of the cost thereof to be borne and paid by each county, and each county shall be severally liable only for such share or proportion.

Bonds may be issued.

5. If in the opinion of said boards, or either of them, to be determined by a resolution passed by either of said counties separately for the purpose, to place in the tax levy for any one fiscal year its share or proportion of the cost of acquiring said lands, doing the work and making the improvements herein authorized, would be too burdensome on the taxpayers of such county or counties, then it shall be lawful for such board to issue the bonds of such county, to raise the funds wherewith to defray the cost aforesaid, which bonds shall run for a period not exceeding fifty years, shall bear interest at not exceeding four per centum per annum, and shall be sold for not less than par, and shall be signed by the director of the board and the county collector, under the corporate seal of the county; and the board so issuing such bonds shall annually thereafter place in the tax levy a sufficient sum to meet the interest on said bonds, and a further sum to be

Time and rates.

COMMISSIONER OF PUBLIC ROADS.

145

deposited in a sinking fund, to be created for the purpose, to pay and discharge said bonds at maturity. Sinking fund.

6. This act shall take effect immediately.

Approved March 27th, 1906.

CHAPTER 185.

An act relative to past due assessments under an act entitled "An act to provide for the permanent improvement of public roads in this State," approved March twenty-second, one thousand eight hundred and ninety-five.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. It shall be the duty of the collector or receiver of taxes in any city, township, borough, or other municipality, in which may lie the lands assessed for the amount of peculiar benefits conferred thereon in the manner prescribed by the act of the Legislature of this State entitled "An act to provide for the permanent improvement of public roads in this State," approved March twenty-second, one thousand eight hundred and ninety-five, to accept the amount due thereon, both of principal and all interest, as prescribed by the said statute, in full satisfaction of such assessments, and to give a receipt for the amount paid in satisfaction thereof to the person paying the same, which receipt, signed by such collector or receiver of taxes, shall be sufficient evidence of the payment and satisfaction of such assessments, and upon presentation thereof to the clerk of the county in which such land is situate, he shall satisfy the assessment and other record or records in his office relating to such unpaid assessments so far as relates to the payment of the said assessment on payment to him of a fee of twenty cents for his services. Fee.

Satisfaction
of assessment
by county
clerk.

2. This act shall take effect immediately.

Approved May 2d, 1906.

CHAPTER 189.

Supplement to an act entitled "An act to provide for the permanent improvement of public roads in this State" (Revision of 1905), approved March twenty-seventh, one thousand nine hundred and five.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Joint im-
provement of
road lying in
different mu-
nicipalities.

1. Wherever any road or portion thereof is on the dividing line between two or more counties of this State, and part of the width thereof is in one county and part in another, or part of the length and part of the width thereof is in one county and part in another, and (a) the boards of chosen freeholders of such counties, or (b) the board or boards of chosen freeholders of such county or counties, together with one or more of the municipalities of such county or counties abutting on said road, or any part thereof, or (c) the municipalities of different counties abutting on said road or any part thereof, desire the said road, or a portion thereof, should be improved within the limits of said counties, in accordance to the act to which this is a supplement, and the supplements thereto and the amendments thereof, it shall and may be lawful for such board or boards of chosen freeholders and municipalities, or any of said municipalities acting together, or such municipalities of different counties abutting on said road, or any part thereof, acting together, to improve said road for its entire length, or any portion thereof, within the limits of such counties, regardless of whether or not a portion or portions thereof may be wholly in one county or more counties, and agree upon the proportion of the expense thereof to be borne by such board or boards of chosen freeholders and the municipality or municipalities undertaking said improvement.

Resolutions
of intent.

2. If said boards of chosen freeholders and said municipalities, or such of them as are authorized to make said improvement under the first section of this act, desire

COMMISSIONER OF PUBLIC ROADS.

147

to undertake said improvement, such board or boards of chosen freeholders shall pass a resolution in accordance to the act to which this is a supplement, and any supplement thereto and amendment thereof; and if such municipality or municipalities desire to make said improvement either in conjunction with or without such board or boards of chosen freeholders, the governing body of such municipality or municipalities shall pass a resolution in the form and in accordance with the terms of the act to which this is a supplement, and any supplement thereto and amendment thereof, which said resolution or resolutions shall be passed and approved (if approval is necessary) in the same manner that resolutions are passed and approved by such board or boards of chosen freeholders or governing body of such municipality or municipalities.

3. That after the passage of said resolutions, the board or boards of chosen freeholders and municipality or municipalities undertaking said improvement shall cause surveys to be made, and plans, cross-sections and specifications of the work to be done on the road to be prepared, and do and cause to be done the various acts and things required to be done under the act to which this is a supplement, and the supplements thereto and amendments thereof, in the same manner as if such road or portion thereof lay wholly within one county and the improvement was undertaken by the board of chosen freeholders of such county.

Surveys
made and
plans pre-
pared.

4. In order to receive bids, the board or boards of chosen freeholders or municipality or municipalities undertaking said improvement shall each appoint certain of its members, who together shall constitute a joint committee, and such joint committee shall organize by electing a chairman and clerk. Said joint committee shall advertise for bids under the terms, conditions, and in the manner specified in the act to which this is a supplement, and the supplements thereto and the amendments thereof, which advertisement shall have at the foot thereof the names of the chairman and clerk of said joint committee, and said bids shall be received at the time and place speci-

Joint com-
mittee.

Invite
proposals.

Opening of
bids.

fied in the advertisement and opened in open meeting of such joint committee, and the amount or items composing each bid shall be publicly announced, and the members of the committee from said board or boards of chosen freeholders or municipality or municipalities appointing them shall forthwith report the bids to the board or body so appointing them for action thereon; and thereupon the board or boards of chosen freeholders and the governing body or bodies of such municipality or municipalities undertaking said improvement, voting separately, shall by resolution award the contract for said improvement in the same manner provided in the act to which this is a supplement, and the supplements thereto and amendments thereof, as if said road lay wholly in the body of one county and the improvement was undertaken by the board of chosen freeholders of such county.

Award con-
tract.

Proportion-
ate cost.

5. The contract for said work shall specify the share or proportion of the cost of such improvement to be borne and paid by the county or counties and municipality or municipalities engaging in said improvement, and each of the respective boards or bodies engaging in said improvement shall be liable for such share or proportion, and no more.

May issue
bonds to
meet expense.

6. If in the opinion of any board of chosen freeholders or any municipality joining in or undertaking such improvement, to be determined by a resolution passed by such board of chosen freeholders or the governing body of such municipality in the manner that resolutions are passed and approved (if such approval is necessary) by such board or body, to place in the tax levy for any one fiscal year the proportion of the expense of said improvement to be borne by it would be too burdensome on the taxpayers of such county or municipality, then it shall be lawful for such board or municipality to issue bonds for its proportion of the expense of said improvement to be borne by it. These bonds shall be designated as "road improvement bonds," and shall be for such sums and such amounts, payable in not less than six nor more than thirty years from the date thereof, with interest at a rate not

Title of
bonds.

COMMISSIONER OF PUBLIC ROADS.

149

exceeding five per centum per annum, payable annually or semi-annually, as such board of chosen freeholders or governing body of such municipality by resolution may determine. Said bonds may be either registered or coupon and interchangeable from registered to coupon or coupon to registered at the will of the holder thereof, and shall be signed, sealed and executed in the manner that bonds of such county or municipality are usually signed, sealed and executed, or as such board of chosen freeholders or governing body of such municipality may by resolution direct; that annually after the issue of such bonds there shall be placed in the tax levy of such board or municipality issuing said bonds a sum sufficient to pay the interest accruing on said bonds, and likewise a sum which, with interest and accumulations thereon, will be sufficient to pay off and discharge said bonds at maturity, which said sums of money collected for the discharge of principal, together with the accumulations and interest, shall be deposited and kept in a sinking fund, to be used for the payment of said bonds at maturity.

Time and rate.

Payment at maturity.

7. After the completion of said improvement the said road or portion of road so improved shall be maintained by the board or boards or municipality or municipalities joining in the improvement, who shall bear and pay the same share and cost of maintenance and repair that they severally bear towards the cost of the improvement.

Maintenance of improved road.

8. This act shall not be taken or construed to repeal any existing act.

Act construed.

9. This act shall take effect immediately.

Approved May 2d, 1906.

NEW JERSEY STATE LIBRARY

CHAPTER 100.

An act to amend an act entitled "A supplement to an act entitled 'An act to provide for the permanent improvement of public roads in this State (Revision of 1905),' approved March twenty-seventh, one thousand nine hundred and five," which supplement was approved May second, one thousand nine hundred and six.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Section 7 amended.

1. Section seven of the act to which this is an amendment be and the same hereby is amended to read as follows:

By whom road maintained.

7. After the completion of the said improvement, the said road or portion thereof shall be maintained by the municipalities abutting said road or portion thereof so improved, unless the board of chosen freeholders of either county, by resolution, passed by a majority of the whole board, shall accept and adopt said road or the portion thereof so improved as a county road, in which case the duty of maintaining that part of said road or portion thereof so improved lying in such county shall thereafter be upon such board of chosen freeholders.

2. This act shall take effect immediately.

Approved April 23d, 1907.

CHAPTER 322.

An act concerning roads.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Repair and maintenance of roads.

1. Whenever any road or section of road which has been or shall be constructed by the board of chosen freeholders of any county, with or without State aid, shall lie within the corporate limits of any borough, town,

COMMISSIONER OF PUBLIC ROADS.

151

township or other municipality, such borough, town, township or other municipality, except cities, may enter into an agreement, in writing, with said board of freeholders, whereby said borough, town, township or other municipality shall hereafter assume the repair and maintenance of said road or section of road, and from and after the making of said agreement, and the approval thereof by the State Commissioner of Public Roads, said road or section thereof shall cease to be a county road and shall be exclusively under the jurisdiction and control of said borough, town, township or other municipality, and shall thereafter be repaired and maintained by the same under the supervision of the State Commissioner of Public Roads.

2. All acts and parts of acts inconsistent with the provisions of this act be and the same are hereby repealed.

3. This act shall take effect immediately.

Approved June 26th, 1906.

 CHAPTER 239.

A supplement to an act entitled "An act to provide for the permanent improvement of public roads in this State," approved April first, one thousand nine hundred and three.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Wherever any road in this State runs in or through two or more counties, and said counties engage in the maintenance and operation thereof in its entirety, at joint expense, it shall and may be lawful for the boards of chosen freeholders of such counties, by resolution, to be passed separately by each board, to declare their intention to cause such road, in its entirety, or any portion thereof, to be improved under the provisions of the above-entitled act, and the supplements thereto and amendments thereof, as well as this supplement; and to cause

Joint improvement of roads.

all necessary surveys to be made and specifications to be prepared; and after said specifications shall be approved by such boards of freeholders, by resolutions passed separately by each board, the said specifications shall be certified to the State Commissioner of Public Roads, for his approval or rejection, and if approved by him, such boards are authorized to appoint members from the board, to comprise a joint committee, to advertise for bids for said improvement, which bids shall be furnished in sealed envelopes and presented to the committee in open meeting, at the time called for in the advertisement, and the amount of each of said bills shall, in open meeting, be publicly announced, and thereafter the members of the committee from each county shall report the amount of the bids to their respective boards, with their recommendations, and the contract shall be awarded, on resolution of each board voting separately, to the lowest responsible bidder, who shall furnish satisfactory security, to be approved of by said boards; that the contract for such improvement shall specify the proportion of the cost that each county will bear of said improvement, as between themselves, and neither county shall be liable for a greater amount than the proportion so specified; and the joint committee shall advertise for bids in at least two daily newspapers, printed and circulating in each county, for the period of two weeks, or in at least two weekly newspapers, printed and circulating in each of said counties, for at least four weeks; and all proceedings touching and concerning the improvement of such road shall conform, as nearly as possible, to the proceedings mentioned in the act to which this is a supplement, or any supplement thereto or amendment thereof, except as modified by this act; and such counties taken together shall be entitled to receive one-third of the cost of the improvement set out in the specifications presented to the State Road Commissioner, as aforesaid, or as modified with his consent, in the manner specified in said act for the payment to any county for improving a road wholly within its limits; *provided, however*, that of said one-third so paid by the State each county shall receive the

Specifications and proposals.

Awarding contract.

Apportion cost.

Advertising.

Proceedings.

State aid.

Proviso.

COMMISSIONER OF PUBLIC ROADS.

153

same proportion as it bears or is charged with on account of the cost of said improvement.

2. If, in the opinion of either of such boards, to place **Meeting cost.** necessary to pay for the work aforesaid would be too burdensome on the taxpayers of such county, then, in order that each county may raise the funds wherewith to pay its share of the cost of such improvement, either board being of the opinion aforesaid may, by a resolution adopted by a vote of at least two-thirds of all its members, borrow such sum or sums of money as may be necessary for the payment of its share or proportion of such cost, by the sale of the bonds of such county, issued in the name of the board of chosen freeholders thereof, and in such sum as the board may deem proper, said bonds to bear interest at a rate not exceeding five per cent. per annum, and to be sold for not less than par, and said bonds shall not exceed in the aggregate the cost of the improvement to said board, and shall be so divided that one-tenth of the **May issue bonds.** account of the bonds issued shall fall due in one year from their date and one-tenth each succeeding year thereafter, for the period of ten years from their date, and shall be either coupon or registered bonds, as the board of freeholders may determine; the principal and interest thereof shall be made payable at the office of the county collector of such county; said bonds shall be signed by the director of such board and the county collector, and shall be sealed with the seal of the county, and the county collector shall keep a record thereof; it shall be the duty of the board of chosen freeholders each year to place in the tax levy for such county, in each year, so long as said bonds shall run, a sufficient sum to pay the interest accruing thereon for said year and the principal of the bonds that shall mature in said year. **When payable.**

3. Whenever the character of the soil or foundation of any road, or any part thereof, sought to be improved, and the traffic over the same, are such that in the opinion of any board seeking the same, if the road lies wholly within one county, or in the opinion of the boards jointly engaged in the maintenance and operation of a road in its **Interest and principal.** **Paving public roads.**

entirety, running through two or more counties, ascertained by resolution passed by such boards separately for such purpose, it is necessary to build a foundation for such road and pave the same with a block or other substantial pavement other than that specifically mentioned in the first section of the act to which this is a supplement, it shall be lawful for such boards to include such work in the specifications for said work to be presented to the State Commissioner of Public Roads, as aforesaid.

4. This act shall take effect immediately.

Approved April 8th, 1903.

CHAPTER 231.

Supplement to an act entitled "An act to provide for the permanent improvement of public roads in this State," approved April first, one thousand nine hundred and three.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Whenever any public road has been or shall hereafter be improved under the provisions of the act to which this is a supplement, in the course of improving such road the grade of the roadbed shall have been or shall be changed so that it shall not conform to the grade of the remaining portion of the road, including the sidewalks, it shall be lawful for the municipal authorities of each municipality through which such road passes to cause the remaining portion of such road within the limits of their several municipalities to be graded and formed so as to conform in grade to that established for the roadway constructed under the provisions of the act to which this is a supplement, and to cause such work to be done under the same proceedings and in the same manner as may be provided by law in their several municipalities for the grading of the streets of such municipalities.

Cause portions of road to conform to altered grade.

Proceedings.

COMMISSIONER OF PUBLIC ROADS.

2. The proper municipal authorities of any municipality through which any such road may run shall have full power and authority to make any municipal improvement upon or within any such road within the limits of their several municipalities which may be authorized by law to be made in any of the other public streets or roads of such municipalities; *provided, however,* no such improvement shall be made by such municipal authorities which may in any way interfere with or impair the roadway improved under the provisions of the act to which this is a supplement, without the approval and consent of the board of chosen freeholders of the county within which such road may be located.

Municipalities may improve road.

Proviso.

3. The cost and expense of any of the public improvements authorized by this act shall, so far as the same can be, be assessed upon the lands and real estate specially benefited by the improvement in proportion to the benefit received; and no lot or parcel of land shall be assessed more than it is so specially benefited, and such assessment shall be made in the same manner and under the same procedure as is directed by law for the making of other assessments for street improvements within every such municipality.

Assessment for benefits.

4. Nothing in this act contained shall be construed to in any way impose upon any such municipality therein referred to any part of the cost of the maintenance and repair of the roadway of any road improved under the provisions of the act to which this is a supplement.

Maintenance of road.

5. This act shall take effect immediately.

Approved April 8th, 1903.

CHAPTER 61.

An act to authorize the board of chosen freeholders of any of the several counties of this State to straighten, change the location of and vacate any portion of any public road or highway heretofore or hereafter acquired, constructed and improved in any such county by the board of chosen freeholders thereof, and to improve the portion included in such changed location; *provided*, any owner or owners of real estate along such portion is or are willing to contribute the whole cost and expense thereof; *and provided further*, every owner of land upon that part of said road proposed to be vacated under this act shall consent in writing to such change of location and vacation.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey*:

Change and
improve
roads.

1. The board of chosen freeholders of any of the several counties of this State shall have the power and authority to straighten, change the location of and vacate any portion of any public road or highway heretofore or hereafter acquired, constructed and improved in any such county by the board of chosen freeholders thereof, and to improve the portion included in such changed location; *provided*, any owner or owners of real estate along such portion is or are willing to contribute the whole cost and expense thereof; *and provided further*, every owner of land upon that part of such road or highway proposed to be vacated under this act shall consent in writing to such change of location and vacation.

Proviso.

Presentation
by owners.

2. The property owner or owners desiring such straightening, change of location and vacation, and the improvement of the portion included in such changed location, may present to the board of chosen freeholders of any such county a petition therefor, which shall be accompanied by a map and specifications showing the proposed straightening, change of location and vacation,

Map and
specifications.

COMMISSIONER OF PUBLIC ROADS.

157

and in what manner the portion included in such changed location is to be improved, and offering to contribute the whole cost and expense thereof; and said board, if it approve of the same, and is satisfied that every owner of land upon that part of said road or highway proposed to be vacated consents thereto, shall authorize the same; and thereupon it shall be lawful for said board to acquire the land necessary for said change of location, by gift, grant for nominal consideration, or by exchange of said portion so vacated for said portion necessary to be acquired; and said board is empowered, if required in any such exchange, to make, execute and deliver a deed or deeds of conveyance, conveying in fee-simple the title, if any, of any such board to the land so conveyed by it; and it shall be further lawful for said board, upon such terms as it shall determine, or as shall be agreed upon with such owner or owners, either to proceed and make the said improvement itself, the whole cost and expense thereof to be paid by said owner or owners, or to allow the said owner or owners to make the same themselves, subject to the approval of said board, and after the completion of the same, the portion which shall be superseded by said changed location shall be deemed and taken as vacated as a part of said county or public road or highway.

Power of
freeholders.

3. All acts and parts of acts inconsistent with this act be and the same are hereby repealed, and this act to be deemed and taken as a public act, to take effect immediately. Repealer.

Approved March 24th, 1903.

CHAPTER 114.

An act to enable boards of chosen freeholders to accept as county roads, roads or sections of roads, in townships, which have been or shall hereafter be permanently improved without state or county aid.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Roads improved by townships may be transferred to county on petition.

1. Whenever any public road or section of road, located in any township in this State, has been or shall hereafter be permanently improved, without state or county aid, by the construction thereon of a macadamized road, or telford or other stone road, so that the same is or shall be, with reasonable repairs thereto, firm, smooth and convenient for travel at all seasons of the year, and approved by the State Commissioner of Public Roads, such public road or section of road may, upon the petition in writing of the township committee of the township wherein such public road or section of road so improved lies, addressed to and filed with the board of chosen freeholders of the county within which such township is situate, accompanied by a map or survey of the public road or section of road so improved, and a copy of the specifications under which such improvements were made, together with proofs showing full payment to the contractor or contractors for all work done, be, by said board of chosen freeholders, by resolution, accepted as and declared to be a county road, if in the judgment of said board of freeholders said road is of sufficient public importance; and such public road or section of road shall, upon such acceptance, forever thereafter be a county road and subject to the exclusive jurisdiction of said board of chosen freeholders, in the same manner as roads built by state aid, and the duty of keeping the same in repair shall devolve exclusively upon such board of chosen freeholders.

Becomes a county road.

COMMISSIONER OF PUBLIC ROADS.

159

2. More than one public road or section of road in the same township may be included in one petition. Petition may include.

3. This act shall take effect immediately.

Approved March 28th, 1904.

CHAPTER 264.

An act to enable boards of chosen freeholders to accept roads or sections of roads in cities, towns, townships or boroughs, and to maintain the same as county roads.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Whenever any public road or street, or section of a road or street, located in any township, town, city, borough or other municipality in this State, runs to the boundary of such township or other municipality and is maintained as a township road, and at the boundary of such municipality meets and is continued as another road or street in another municipality in the same county, the board of chosen freeholders of such county may, upon the petition of the common council, township committee or other governing body of such municipalities, respectively, accept such road and thereafter maintain the same as a county road and have exclusive jurisdiction thereof in the same manner as other county roads are maintained and cared for. Improved roads in different municipalities accepted and maintained as county road.

2. This act shall take effect immediately.

Passed October 10th, 1907.

CHANGING LOCATION OR IMPROVING.

CHAPTER 75.

An act to amend an act entitled "An act to provide for the permanent improvement of public roads in this State," approved March twenty-second, one thousand eight hundred and ninety-five.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. The eighteenth section of the said act shall be amended so as to read as follows:

Property owners to contribute whole expense of improvement.

18. That if any property owners or owner along any road in any county of this State which has not been improved or is not undergoing improvement under the previous sections of this act shall desire any section of any road in such county to be improved or to be changed in location and improved, and are or is willing to contribute the whole expense of such improvement, and provided every owner of land upon that part of the road proposed to be vacated under this act shall consent in writing to such vacation, the supervisor of roads of such county shall, upon a written request of such owners or owner, make a plan of such sections of roads so to be improved or changed in location and improved, in which shall be given the levels and distances, and also specifications stating the materials that may be used and the manner of using them; and a copy of such plan, location, change of location, specifications and of any bids to do such work shall then be submitted by such owners or owner to the board of chosen freeholders, and if such board shall approve them and any change of location which may be proposed, it shall then be lawful for such owners or owner to accept any bid or bids so approved from among the bidders, or at their own expense to proceed to build such section of road according to such plan, location and specifications, and such owners or owner shall have control of the expenditure of moneys used to

Owner to have control of expenditures.

COMMISSIONER OF PUBLIC ROADS.

161

make such improvements, subject to the approval and supervision of the supervisor of such county; and upon the completion of the improvement to the satisfaction of the said supervisor and said board of chosen freeholders, and upon the submission to said board of receipts showing full payment for materials furnished and work done under the plan and specifications, such section of road so improved shall, if the board of chosen freeholders shall so declare, thereafter be a county road, but otherwise shall remain an ordinary public highway, and any and all portions of any road now existing which may have been rendered unnecessary or be superseded by the new road so constructed shall be vacated and abandoned as a public road, without other action or proceedings than the approval of the board of chosen freeholders as hereinbefore provided; and the said supervisor shall be paid by the aforesaid owners or owner the sum of ten dollars for making the plan, the sum of five dollars for drawing the specifications, and the sum of five dollars for the supervision of the work, and in case such supervisor is not a civil engineer, and actual survey is necessary, then such owners or owner, at their or his expense, shall procure a survey, which shall be subject to the approval of such supervisor, which survey shall take the place of the plan before mentioned, and shall include all the new roads proposed to be constructed and all the old roads proposed to be abandoned.

Old road
vacated.

Approved March 23d, 1896.

CHAPTER 119.

An act providing for the widening of certain county roads.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Freeholders may acquire lands to widen road.

1. It shall be lawful for the board of chosen freeholders of any county in this State to acquire by purchase lands adjoining any public road under the care of said board or any commission in said county, and running through two or more municipalities therein, for the purpose of widening said road at any point where such widening shall, in the judgment of said board, for any reason be desirable. In case such board shall be unable to agree with the owners of said lands for the purchase thereof, then it may acquire the same by condemnation in the manner provided in "An act to regulate the ascertainment and payment of compensation for property condemned or taken for public use (Revision of 1900)," approved March twentieth, one thousand nine hundred, and the supplements thereto.

Public road.

2. Said lands when so acquired shall be incorporated in and become a part of said public road.

Bonds to meet payment.

3. Said board of chosen freeholders shall have power to pay for said lands, when purchased or condemned, by the issuance and sale, for not less than par, of temporary loan bonds, bearing interest at not exceeding four per centum per annum, payable half-yearly. The payment of said bonds, with interest, shall be provided for in the tax levy or budget next thereafter made.

Amount.

4. The total limit of expenditure under this act in any county shall not exceed five thousand dollars.

5. This act shall take effect immediately.

Approved April 6th, 1905.

COMMISSIONER OF PUBLIC ROADS.

163

CHAPTER 63.

An act to provide for the extension and maintenance of public roads in this State.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Whenever the common council, board of aldermen, town council, township committee or other governing body of any city, town, township, borough or other municipality in this State shall, by resolution in writing, consent to the extension of any public road, boulevard or highway constructed under the provisions of chapter ninety-seven of the laws of one thousand nine hundred and three, or any supplement thereto or amendment thereof, or by any board of freeholders or under the jurisdiction of any board of freeholders in this State, under any act authorizing such construction, and which lies partly within such municipality, and shall, in such resolution, request the further extension of such public road, boulevard or highway as a county road for the purpose of making and effectuating a complete and continuous county road in or through or partly in such municipality, then and in such case it shall be lawful for the board of chosen freeholders of the county wherein said city, town, township, borough or other municipality is situated, by resolution to lay out, open, construct, reconstruct, extend, improve and maintain an extension of any such public road in and through any such city, town, township, borough or other municipality; and for such purpose such board of chosen freeholders shall have the right to improve, reconstruct, take over, accept and maintain any public road, or section of road, already laid out in such city, town, township, borough or other municipality, in such manner as the said board of chosen freeholders shall deem necessary.

Extension of highways to become county roads.

Rights of freeholders.

Such extension of such public road can be authorized, accepted and adopted by said board of chosen freeholders only upon the following conditions:

Conditions of acceptance.

- Necessary. (a) The extension must be, in the judgment of such board of chosen freeholders, of public importance.
- Approval by road commissioner. (b) The State Commissioner of Public Roads shall approve the resolution authorizing such extension before the same shall become effective.
- Certificate of consent. (c) The consent presented to such board of chosen freeholders by any such city, town, township, borough or other municipality must be accompanied by a certificate that the whole of the proposed road, or section of road, if any, which is to be used for the purpose of such extension, has been permanently improved without State or county aid by the construction thereon of a macadamized road, or telford or other stone road, so that the same is, or shall be, with reasonable repairs thereto, firm, smooth and convenient for travel at all seasons of the year; and accompanied by a map or survey of such road, or section of road, and a brief description of the specifications under which such improvements were made, together with evidence that full payment to the contractor or contractors for all work done has been made.
- Capable of repairs.
- Map.
- Freeholders to have exclusive jurisdiction. Any such extension of such county road, upon its acceptance by any such board of chosen freeholders, shall forever thereafter be a county road and subject to the exclusive jurisdiction of said board of chosen freeholders, except as hereinafter provided. It shall be constructed, reconstructed, laid out, improved and maintained under the provisions of chapter ninety-seven of the laws of one thousand nine hundred and three, or any supplement thereto or amendment thereof, and the duty of keeping the same in repair shall devolve exclusively upon such board of chosen freeholders.
- Lighted by municipality. 2. Except for the purpose of maintaining such road in good repair for the purposes aforesaid, and for such other purposes as are set forth in chapter ninety-seven of the laws of one thousand nine hundred and three, or any supplement thereto or amendment thereof, such city, town, township, borough or other municipality in which such extension shall be constructed, reconstructed, laid out, improved and maintained, shall have the right to light the

COMMISSIONER OF PUBLIC ROADS.

165

same, as part of the system of streets in such city, town, township, borough or other municipality.

3. Chapter one hundred and twenty-nine of the laws of one thousand eight hundred and ninety-seven, and all other acts and parts of acts inconsistent with the provisions of this act are hereby repealed. Repealer.

4. This act shall take effect immediately.

Approved March 28th, 1905.

REPAIR OF COUNTY ROADS.
CHAPTER 182.

A supplement to an act entitled "An act to enable boards of chosen freeholders to acquire, improve and maintain public roads," approved March nineteenth, one thousand eight hundred and eighty-nine.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. It shall be lawful for the boards of chosen freeholders in the several counties of this State that have heretofore acquired and improved, or that may hereafter acquire and improve, any road or roads under the act to which this is a supplement, to keep and maintain such roads in repair in the same manner and to the same extent as State aid roads may now be repaired and maintained under the act entitled "An act to provide for the permanent improvement of public roads in this State (Revision of 1905)," and it shall not be necessary to advertise or contract for work or materials for such repair otherwise than as required for State aid road repairs in and by said last-mentioned act, its supplements and amendments. Maintenance
of county
roads.

2. It shall be lawful for the board of chosen freeholders of any county that has heretofore acquired and improved any road or roads under the act to which this is a supplement (and which has a county supervisor of State aid roads), by resolution, to place the repair and maintenance Under county
supervisor of
roads.

of all such roads, so acquired and improved, under the charge and supervision of such county supervisor of roads.

3. This act shall take effect immediately.

Approved May 13th, 1907.

CHAPTER 77.

An act concerning roads.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

Freeholders to regulate use of improved streets or roads.

1. The board of chosen freeholders in any county in this State that shall have improved any roads or streets in such county, and shall be charged with the repair of such roads or streets, shall have power, by resolution, to regulate or prohibit the tearing up or excavating in any such roads or streets for the laying, replacing or repairing of water, gas or sewer pipes, for making any drain or for any other purpose; to prevent the disturbing or tearing up of such roads or streets by the locking of wheels of any vehicle or attaching a drag to such vehicle; to prevent the filling up of gutters along such roads or streets, and to prevent obstruction and damage to such roads or streets by spilling or throwing stones, dirt or other materials on such roads or streets.

Penalty for violation.

2. The board of chosen freeholders of any such county may prescribe a penalty by a fine not exceeding one hundred dollars for the violation of any such resolution or any section thereof, and that the court of justice before whom proceedings shall be instituted shall determine the amount of the fine, not to exceed the sum of one hundred dollars, and may commit the defendant to the county jail until the fine is paid, with costs.

Procedure for complaint and process.

3. Complaint against any person violating said resolution, or any section thereof, may be made before a district court of any city in such county, or in case there shall not be any district court in such county, then before

any justice of the peace of such county, and such court or justice shall issue process at the suit of such county in the nature of a summons, and the same procedure shall be had thereunder as is prescribed in the act entitled "An act concerning townships (Revision of 1899)," for the violation of any ordinance of a township.

4. Such resolution before it shall take effect shall be published at least once a week for two weeks in two newspapers published and circulated in such county. Resolution advertised.

5. This act shall take effect immediately.

Approved April 16th, 1907.

CHAPTER 182.

An act concerning streets and highways in townships.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. The township committee of any township shall have power and authority by ordinance to lay out, open, widen, straighten, name, alter or vacate any street, avenue, road or highway, or any part or section of the same, and to take and appropriate for any of such purposes any lands and real estate, upon making compensation therefor in the manner now or hereafter provided by law for the taking of lands in townships for other public improvements, or by agreement with the owner. Securing land for streets in townships.

2. No ordinance exercising the powers given by this act shall be adopted until ten days' notice of the time and place fixed for its consideration shall have been given by publication for one insertion in a newspaper printed in the county and circulating in the township. Such notice shall state in general terms the object of the proposed ordinance and the property to be affected. Public notice of intention.

3. Whenever a petition for any such improvement shall have been presented to the township committee, signed by twenty-five owners of property to be benefited thereby, then the expenses thereof, including the compen- Assessment for benefits.

- sation, if any, paid for lands so taken, may be assessed upon the property benefited in proportion to the benefits received, but not to exceed the benefit so received. Such assessment shall be made in the manner now or hereafter provided by law for assessing the benefits of any public improvements in townships, and shall include an assessment against every petitioner.
- How made.** 4. This act shall take effect immediately, but its provisions shall not become operative in any township until assented to by a majority of the votes cast by the legal electors thereof at an election to be held in said township at any time to be fixed by the township committee thereof.
- Act must be assented to.** No such election shall be called unless a petition for the same, signed by not less than one hundred taxpayers of said township, shall be filed with such township committee. The township clerk of said township shall cause public notice of the time and place of holding such election and the purpose thereof to be given by advertisements set up in at least five public places in said township and published for at least one insertion in one or more newspapers published in said county and circulating in said township, at least ten days previous to the date of such election. Said clerk shall provide for each elector voting at such election printed ballots, on which shall be either the words "for the adoption by this township of the provisions of an act to permit the township committee to lay out, open, widen, straighten, name, alter or vacate any street, avenue, road or highway, or any section of the same," or the words "against the adoption by this township of the provisions of an act to permit the township committee to lay out, open, widen, straighten, name, alter or vacate any street, avenue, road or highway, or any section of the same." The polls for such election shall be held at the usual places of holding elections therein, and shall be opened at one o'clock in the afternoon and close at seven o'clock in the evening, and such election shall be conducted by the proper election officers of said township for the time then being, and such officers shall return to the township committee of said township a true and correct statement, in writing, under their hands, of the result
- Petition.**
- Ballots.**
- Polls.**

COMMISSIONER OF PUBLIC ROADS.

of said election, which shall be entered at large upon the minutes of said body.

5. Nothing in this act shall give authority to any township committee or other body to lay out, open, widen, straighten, name, alter or vacate any street, avenue, road or highway, or section of the same, in or through any portion of the grounds of any incorporated camp meeting association, nor to condemn any lands used for railroad purposes.

Limitations
to act.

Approved April 20th, 1905.

INCREASED POWER TO BORROW.

An amendment to an act entitled "A supplement to an act entitled 'An act to enable boards of chosen freeholders to acquire, improve and maintain public roads,'" approved March nineteenth, one thousand eight hundred and eighty-nine, which supplement was approved April ninth, one thousand eight hundred and ninety-two.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. The first section of an act entitled "A supplement to an act entitled 'An act to enable boards of chosen freeholders to acquire, improve and maintain public roads,'" approved March nineteenth, one thousand eight hundred and eighty-nine, which supplement was approved April ninth, one thousand eight hundred and ninety-two, be amended so as to read as follows:

Section be
amended.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. In counties of the second class it shall be lawful to raise a sum not to exceed four hundred thousand dollars for which bonds may be issued by the board of chosen freeholders of any such county, under the act to which this is a supplement, or any supplement or amendment thereof; *provided, however,* that if work under said act

Amount
authorized
to raise and
bonds issued.

Proviso.

and supplements or amendments has already been done to an amount exceeding said sum, bonds under said act and supplements may be issued to an amount sufficient to raise and pay for such work; *and provided also*, that no county road bond shall be issued to such an amount as, in addition to existing debt, shall raise the debt of the county for all purposes above three per centum of the assessed value of the real estate therein; and in case any such bonds shall be issued in excess of the limit aforesaid, all such bonds so issued in excess shall be void in the hands of any person or party, notwithstanding any recitals therein or any representations that may be made concerning the same; in case application has already been made to the circuit court and a certificate shall have been recorded and filed, as required by said act, such application need not be repeated in case of any subsequent issue of such bonds where the original certificate on file shows that the new issue of bonds will not exceed three per centum of the assessed value of the real estate in said county as limited by this act.

2. The second section of said act be amended so as to read as follows:

2. In any county of the second class wherein the board of chosen freeholders thereof shall heretofore or may hereafter issue bonds under said act and supplements, that such board of such county shall not use any of the money so raised for any other purpose except to grade, macadamize or improve any road in any such county, under the provisions of the act to which this is a supplement and the several supplements and amendments thereof; *provided*, nothing herein shall prohibit the doing of the necessary repair of any road heretofore graded, macadamized or improved by any such board or that may be hereafter graded, macadamized or improved under said act and supplements.

3. All acts and parts of acts inconsistent herewith be and the same are, so far only as they conflict herewith, repealed, and that this act shall take effect immediately.

Approved March 24th, 1897.

Proviso.

Board not to use money raised except to grade, &c.

Proviso.

COMMISSIONER OF PUBLIC ROADS.

171

CHAPTER 93.

POWER OF FREEHOLDERS TO BORROW.

A supplement to an act entitled "An act in relation to county expenditures," approved April second, one thousand eight hundred and seventy-eight.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. In case of the injury or destruction by freshets or otherwise of any of the roads or sections of roads in this State that have become county roads under and by virtue of any law of this State whereby it shall be deemed necessary for the board of chosen freeholders, within the limits of whose county such roads or sections of roads so injured or destroyed may lie, to repair or rebuild the same, the said board of chosen freeholders may order and cause such roads or sections of roads to be repaired or rebuilt, notwithstanding the expense of repairing or rebuilding the same shall exceed the limit of the appropriations made for that year; and such board of chosen freeholders may borrow money on temporary loans for that purpose in anticipation of the next tax levy; and in the said tax levy there shall be incorporated a special appropriation under the head of "debts and interest, special deficiency," to pay for such temporary loans.

Repair of roads damaged by freshets.

Special charge.

2. This act shall take effect immediately.

Approved April 2d, 1902.

CHAPTER 132.

An act to provide for the acquirement of turnpike roads for free public use, and for the permanent improvement and maintenance of the same.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Acquirement
of turnpike
road for free
public use.

1. Whenever there shall be presented to the State Commissioner of Public Roads a petition signed by the owners of at least two-thirds of the land and real estate fronting or bordering on any turnpike road, praying that said road may be acquired for free public use, and setting forth that they are willing that the peculiar benefits conferred on the lands fronting or bordering on said road shall be assessed thereon to an amount not exceeding ten per centum of the entire purchase price of the said road, together with the amount necessary to resurface, rebuild or improve the said road in the manner prescribed for other roads in the act entitled "An act to provide for the permanent improvement of the public roads in this State," approved March twenty-second, anno domini one thousand eight hundred and ninety-five, and the supplements thereto, said commissioner shall thereupon notify the Governor of such action, and the Governor shall thereupon appoint five commissioners from the county or counties through which the said road runs; the said commissioners, when appointed, shall take an oath or affirmation faithfully and fairly to perform their duties, and shall thereupon proceed to estimate and determine the fair and just value of the said road and of the portions thereof in each county in which the same is located, having given ten days' notice of the time and place when and where they will meet to hear any representation in behalf of the said corporation or of the board or boards of chosen freeholders of the various counties through which the said road runs, or of the applying freeholders in the said matter; said notice shall be served upon the president or other chief officer of the turnpike company, upon the

Appointment
of commis-
sioners by
Governor.

Hearing.

COMMISSIONER OF PUBLIC ROADS.

173

director of the said board or boards of chosen freeholders, and shall be published at least one week prior to the time of meeting in one newspaper published in each county through which said turnpike runs; such meeting shall be adjourned from time to time at the discretion of the said commissioners; when the said commissioners shall have arrived at a price or value of the said turnpike road satisfactory to themselves they shall report the same to the State Commissioner of Public Roads, who may thereupon ratify the same and report it to the board or boards of chosen freeholders of the counties through which the said road runs, which said board may thereupon purchase the same, or whenever the board of chosen freeholders of any county in this State shall agree with the owner or owners of any turnpike road or toll road within such county upon the price to be paid for such turnpike road or toll road, and shall, by resolution, accept the same, and said proceeding be approved by the State Commissioner of Public Roads in writing, said board may thereupon purchase the same and said road shall be paid for and maintained as a county road as hereinafter provided for; and they are hereby empowered to make temporary loans upon the credit of the said county or counties for the acquirement of the said roads as aforesaid.

Report to
State Com-
missioner of
Roads.

2. One-third of the cost of all roads so acquired, together with one-third of the amount expended in improving the same as aforesaid, which improvement shall be made in the manner prescribed for the roads under the aforesaid act, shall be paid for out of the State road appropriation; *provided*, that the amount so paid shall not in one year exceed the amount of forty thousand dollars. If one-third of such cost shall exceed the sum of forty thousand dollars, the said sum of forty thousand dollars shall be appropriated by the Governor and State Commissioner of Public Roads among the counties of this State in proportion to the cost of the roads acquired by them for such year, as shown by the statement of cost filed in the office of the State Commissioner of Public Roads. The Governor and the said commissioner shall, between December fifteenth and thirty-first in each year, certify

One-third
paid from
State appro-
priation.

Proviso.

to the State Comptroller the amount to be paid to each county for such year, and the State Comptroller shall thereupon draw his warrants in favor of the respective county collectors for the sums certified to as aforesaid upon the State Treasurer, who shall pay the same out of any moneys in the State treasury not otherwise appropriated; *provided further*, that the cost of all turnpike roads acquired under this act in any county in any one year, together with all roads built or repaired, shall not exceed one-half of one per centum of the ratables of such county for the last preceding year.

Proviso.

Duty of county board of assessors.

3. On or before August first in each and every year it shall be the duty of the board of chosen freeholders to certify to the county board of assessors, either in the annual tax budget or separately, the two-thirds of the cost of purchasing and improving of all turnpike roads acquired and improved as aforesaid during the year, and the county board of assessors shall include the sum so certified in the county tax assessed for such year, and the same shall be assessed, collected and paid over to the county in the same manner and within the same time that other county taxes are assessed, collected and paid over. If a deficiency shall exist in consequence of the receipt of less than one-third of the cost from the State treasury, the board of chosen freeholders shall have authority to borrow on temporary loans to the amount of such deficiency until the next annual taxes shall be assessed, collected and paid over to the county.

Loan to meet deficiency.

When turnpike in two or more counties.

4. If the said road shall run through more than one county, the petition to the State Commissioner of Public Roads shall be signed by at least two-thirds of the owners of the land and real estate bordering on said road in each county before the Governor shall be required to appoint the five commissioners mentioned in the first section of this act; and each of the said counties shall bear the expense of the acquirement of the said road in proportion to the value thereof within the said counties, and all proceedings after the appointment of the said five commissioners that may be required by virtue of this act shall be

COMMISSIONER OF PUBLIC ROADS.

175

had separately and independently in each of the said counties.

5. Any road so acquired shall forever thereafter be a free county road, and shall be kept in good order and repair and in the same manner as are other county roads. Maintenance.

6. When the said turnpike roads shall have been so acquired and improved by petition as aforesaid, the board of chosen freeholders shall apply to the Circuit Court of the county for the appointment of commissioners to estimate and to assess the peculiar benefits conferred by such acquirement and improvement upon the lands and real estate bordering on the road so acquired and improved, of the time and place of which application notices shall be given by ten days' publication in two daily newspapers printed and circulating within the said counties, or by four weeks' publication in two weekly newspapers printed and circulating therein, at which time and place, or such other time and place as the court shall designate, shall, without unnecessary delay, appoint three commissioners, who shall be freeholders and residents of the county in which the application is made, to assess the benefits aforesaid. The said court shall have power to remove any commissioner and appoint another in his place, and also fill any vacancy that may occur in the office of any commissioner at any time. Assessment
of benefits

7. The said commissioners shall then proceed in like manner as the commissioners appointed to assess the benefits conferred by the improvement of the public roads of this State under and by virtue of an act of the Legislature, entitled "An act to provide for the permanent improvement of the public roads of this State," approved March twenty-second, one thousand eight hundred and ninety-five, and supplements thereto, and the report of the said commissioners when filed and approved shall be a lien upon the properties assessed in like manner, and the said assessment shall be collected in like manner as the assessment in the said act last before mentioned. Manner of
assessment.

Approved March 22d, 1901. Report a lien.

VACATION OF TURNPIKE.

SUPPLEMENT.

Deed of cession and transfer of turnpike road, how executed and filed.

Sec. 1. That whenever any turnpike company of this State shall execute to any city, township or other municipality of this State a deed of cession and transfer of all or any part of any turnpike road lying within the limits of any such city, township or other municipality, and shall have the same duly proven in the manner required for the proof of deeds or conveyances of lands, and shall deliver the same, together with a map or survey of the road, or of the part of road, so ceded and transferred to the common council, township committee or other governing board of such city, township or other municipality, and the said common council, township committee or other governing board shall accept the said deed of cession and transfer, by a writing indorsed thereon, the said deed, proof, map or survey and acceptance shall then be recorded in the office of the clerk of the county in which the road so ceded and transferred lies, in the book containing the records of public roads for said county, and after being so recorded shall be filed in the office of the Secretary of State; *provided*, that where the charter or act of incorporation of any city or other municipality prescribes the manner in which deeds of dedication of lands for public highways or streets shall be accepted, the proceedings for the acceptance of any deed of cession and transfer by a turnpike company as aforesaid shall, in any such city or other municipality, be the same as is required for the acceptance of a deed of dedication of lands for a public highway or street.

Proviso.

Company released from control, &c., of part of road ceded when deed is filed in office of Secretary of State.

Sec. 2. That any turnpike company making a cession and transfer of any part of their turnpike road in the manner aforesaid shall, from the date of filing the deed of cession and transfer in the office of the Secretary of State, be released and discharged from all authority and control over the part or parts of their road so ceded and transferred, and from all liability on account of the same,

COMMISSIONER OF PUBLIC ROADS.

177

and the same shall thereafter be, to all intents and purposes, a public road or highway in such city, township or other municipality, and be subject to the same jurisdiction, authority and control by such city, township or other municipality as it has over other public roads or highways within the limits thereof.

Approved February 13th, 1884.

An act authorizing turnpike companies to vacate or dispose of a portion of its road and property.

Sec. 1. That when any turnpike company in this State may deem it advisable to dispose or vacate any portion of their road, not in excess of one-half of its entire length, they shall hereby have the power and privilege of so doing at any time when the same may be favored by a vote represented by those owning two-thirds of the capital stock of said company, to be voted at a special meeting of said stockholders called by the officers of said company, and the notice of said meeting being published in at least one newspaper in each county where said road is located, for the space of thirty days, once in each week, said notice to state the time and object of said meeting. The said stockholders may, by a vote represented by those owning two-thirds of the capital stock of said company, authorize and empower their president and secretary to sell or vacate to the freeholders of the county or counties the portion so desired; and if vacated without compensation, a committee of the board of freeholders of the county or counties may view the same and report to the said board upon what terms they have agreed to take said road, and the action of a majority of said board of freeholders in accepting or rejecting said report shall be final.

When turnpike company may vacate or dispose of portion of road.

Approved April 20th, 1885.

An act to authorize turnpike companies to abandon a portion of their roads and property.

Turnpike companies may abandon portion of road.

Sec. 1. That any turnpike company in this state may abandon any portion of their road not exceeding two-thirds of the entire length of the road, when the same may be favored by a vote of those owning a majority of the capital stock of said company; the resolution to abandon a portion of said turnpike shall describe the part so abandoned, and shall be signed by the president and secretary of said turnpike company, duly acknowledged before an officer authorized to take the acknowledgment of deeds in this State, and shall thereupon be recorded in the office of the clerk of the county wherein such turnpike company is situated; *provided*, that the part of said turnpike so abandoned shall be in all respects in as good repair as when the said company began operating the same.

Passed June 1st, 1886.

CHAPTER 63.

A supplement to an act entitled "An act to provide for the acquirement of turnpike roads for free public use," approved May eleventh, one thousand eight hundred and ninety-seven.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Compensation.

1. The pay of the commissioners heretofore or hereafter appointed under said act shall be a sum not exceeding five dollars per day, and necessary expenses not exceeding two dollars per day, for actual number of days employed in such service.

Settlement when road not accepted.

2. If the freeholders of the county or counties fail to accept the turnpike roads appraised under the act to which this is a supplement within twelve months after the commission have submitted their award to the State Road

COMMISSIONER OF PUBLIC ROADS.

179

Commissioner, the bill of said commissioners, upon the approval of the State Road Commissioner and the signature of the Governor, shall be presented to the Comptroller of the State, who thereupon shall draw his warrant therefor upon the State Treasurer, who shall pay the same out of the annual State appropriation for roads.

3. This act shall take effect immediately.

Approved March 20th, 1900.

 CHAPTER 133.

A supplement to an act entitled "An act to provide for the acquirement of turnpike roads for free public use, and for the permanent improvement and maintenance of the same," approved March twenty-second, one thousand nine hundred and one.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. When any commissioner heretofore or hereafter appointed under the act to which this act is a supplement shall die pending the proceedings under the said act to which this act is a supplement, or shall be disqualified or shall be unable to act or shall fail or refuse to act and perform the duties of his appointment, the other four commissioners appointed under said act shall proceed to perform the duties of their appointment with the same powers and effect as if all the commissioners were acting, and a report signed by the other four of said commissioners shall have the same force and effect as a report signed by all of the commissioners appointed under the said act, and a majority of said commissioners shall have the power to adjourn their meetings from time to time.

2. When any commissioner heretofore appointed under the act to which this act is a supplement shall have died pending the proceedings under the said act, or shall have been disqualified or unable to act or shall have failed or refused to act and to perform the duties of his appoint-

ment or to attend the meetings of the commissioners appointed under the said act, all the proceedings heretofore had and acts heretofore performed by the other four of the commissioners appointed under the said act are hereby confirmed and made valid, legal and effectual to the same extent that the same would have been valid, legal and effectual if all the commissioners appointed under the said act had taken part in all of said proceedings.

3. This act shall take effect immediately.

Approved March 28th, 1904.

CHAPTER 138.

A further supplement to an act entitled "An act to provide for the control and operation of roads and bridges owned or claimed to be owned by any plank road company whose charter has expired or may expire," approved March twenty-second, one thousand nine hundred and one.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

Widening
plank roads
acquired by
county.

1. After such road shall have been acquired and taken possession of by any board or boards of chosen freeholders of any county or counties in this State, such road may be widened to any width not exceeding one hundred feet, providing the board or boards of chosen freeholders of the county or counties in which said road may lie and be situate shall adopt a resolution determining that such widening is of public importance, and setting forth the width proposed and the location of said widening, and the points between which such widening is to be made; such resolution, in case said road lies in two or more counties, shall receive the approval of each of said counties before the same shall be valid and operative.

Acquirement
of lands.

2. The title to the lands required for such widening may be acquired by gift, devise, purchase or condemna-

COMMISSIONER OF PUBLIC ROADS.

181

tion, and shall vest in the county corporation of the county or counties within the territorial limits of which the lands acquired may lie, respectively, and the cost and expense of acquiring such lands shall be paid by the county within which the same shall lie, but nothing in this act contained shall be construed to alter or in anywise affect the provisions of law under which such road, including the bridges thereof, are or shall be constructed, renewed, repaired or maintained.

3. This act shall take effect immediately.

Approved March 28th, 1904.

 CHAPTER 173.

An act to provide for the purchase, by boards of chosen freeholders, of turnpike or toll roads, or portions thereof, which have been improved by the construction thereon of a macadam, telford, rubble or other stone road, for free public use as county roads, and for the repair, improvement and maintenance of the same.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. The board of chosen freeholders of any county may agree with the owner or owners of any turnpike or toll road, or portion thereof, lying within such county and being not less than one mile in length, which has been improved by the construction thereon of a macadam, telford, rubble or other stone road, upon the price to be paid for the same, and may by resolution agree to purchase the same for free public use at the price agreed upon, subject to the approval of the State Commissioner of Public Roads, and upon receiving the approval of said commissioner, in writing, the said board may thereupon purchase such turnpike or toll road, or portion thereof, at the price agreed upon, and the road or portion of road so purchased shall thereupon be and become a county road, and shall be cared for, repaired, improved and main-

Freeholders
may purchase
turnpike and
maintain
same as
county road.

tained for free public use in the same manner that other county roads are cared for, repaired, improved and maintained.

Require part
cost paid by
municipality.

2. The board of chosen freeholders may, before purchasing any such turnpike or toll road, or portion thereof, require as a condition of such purchase that each township or other municipality in which said road or any portion thereof intended to be purchased lies shall pay ten per centum of the cost of the part lying within such township or other municipality, said payment to be applied to the purchase price of the road or portion of road acquired under this act.

State's por-
tion.

3. One-third of the cost of any turnpike or toll road, or portion thereof purchased in accordance with the provisions of this act, shall be paid for out of the State road appropriation; *provided*, that the amount paid out of

Proviso.

said appropriation for all turnpike or toll roads acquired pursuant to the provisions of this or any other act of the

Amount.

Legislature of this State now in force, shall not exceed in any year the sum of fifty thousands dollars. If one-third

of the entire cost of the turnpike or toll roads so acquired in any year shall exceed the sum of fifty thousand dollars,

the said sum of fifty thousand dollars shall be appropriated by the Governor and the State Commissioner of

If deficiency.

Public Roads first in payment of any deficiency remaining due from the State to any county or counties in any

previous year, for one-third of the cost of turnpike or toll roads purchased as aforesaid, and afterwards among the

several counties in proportion to the cost of the turnpike or toll roads acquired by each of them respectively during

the current year pursuant to the provisions of this or any other act of the Legislature of this State now in force,

as shown by the statements of cost filed in the office of the State Commissioner of Public Roads, the Governor and

the said commissioner shall, between December fifteenth and thirty-first in each year, certify to the State Comptroller the amount to be paid to each county for such year

for such deficiency, if any, and on account of the purchase of turnpike or toll roads, or portions thereof, in such

county, and the State Comptroller shall draw his warrant

COMMISSIONER OF PUBLIC ROADS.

on the State Treasurer in favor of the county collector for the amount certified, and the State Treasurer shall thereupon pay the same; *provided further*, that the cost of all turnpike or toll roads or portions thereof acquired under this or any other act of the Legislature of this State now in force, by any county in any one year, together with all the roads built or repaired therein under the provisions of any act of the Legislature of this State providing for the permanent improvement of public roads in this state, shall not exceed one-half of one per centum of the ratables of such county for the last preceding year.

Proviso.

4. On or before the day fixed for the meeting of the county board of assessors in any county in each year, the board of chosen freeholders of such county shall certify to the said county board of assessors, either in the annual tax budget or separately, two-thirds of the cost of any turnpike or toll road or portion thereof purchased or agreed to be purchased pursuant to the provisions of this act since the day fixed by law for the meeting of the board of assessors in the year next preceding. The county board of assessors shall include in their assessment of county taxes the sum so certified, and the same shall be collected and paid over to the county in the same manner and at the same time that other county taxes are collected and paid over. If a deficiency shall exist, in consequence of the receipt of less than one-third of the cost from the State, the said board of chosen freeholders shall have authority to borrow, on temporary loans, such deficiency, until such time as the same shall be paid by the State, as provided by section three of this act.

Notice to county assessors.

Collection of assessment.

If deficiency temporary loan.

5. Any board of chosen freeholders that shall enter into an agreement for the purchase of a turnpike or toll road or portion thereof, in accordance with the provisions of this act, shall, on or before making payment for the same, require the turnpike or toll road or portion thereof so purchased to be released and discharged from the lien of any mortgage given to secure a bonded or other indebtedness, and from any other lien or incumbrance whatsoever.

Turnpike acquired free of indebtedness.

6. This act shall take effect immediately.

Approved April 18th, 1905.

CHAPTER 145.

An act to amend the title of and a supplement to an act entitled "An act to provide for the purchase, by boards of chosen freeholders, of turnpike or toll roads, or portions thereof, which have been improved by the construction thereon of a macadam, telford, rubble or other stone road, for free public use as county roads, and for the repair, improvement and maintenance of the same," approved April eighteenth, nineteen hundred and five.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Title amended to read.

1. The title of the act to which this is a supplement is hereby amended to read as follows, to wit:

An act to provide for the purchase or condemnation, by boards of chosen freeholders, of turnpike or toll roads, or portions thereof, which have been improved by the construction thereon of a macadam, telford, rubble or other stone road, for free public use as county roads, and for the repair, improvement and maintenance of the same.

Condemnation of turnpikes by counties.

2. Whenever the board of chosen freeholders of any county shall be unable to agree with the owner or owners of any turnpike or toll road, or portion thereof, lying within such county and being not less than one mile in length, which has been improved by the construction thereon of a macadam, telford, rubble or other stone road, upon the price to be paid for the same, and shall by resolution adjudge it to be advisable that the same should be acquired for free public use, notwithstanding such inability to agree upon a price for the same, it shall and may be lawful, and such board of chosen freeholders is hereby authorized and empowered, upon receiving the approval, in writing, of the State Commissioner of Public Roads, to condemn such turnpike or toll road, or portion thereof, lying within such county, in the manner provided by the act of the Legislature entitled "An act to regulate the

Action approved by road commissioner.

COMMISSIONER OF PUBLIC ROADS.

185

ascertainment and payment of compensation for property condemned or taken for public use" (Revision of 1900), approved March twentieth, one thousand nine hundred, and the acts amendatory thereof and supplemental thereto.

3. Upon the filing of the report of the commissioners, and the approval, in writing, of the State Commissioner of Public Roads, such board of chosen freeholders is hereby empowered to borrow temporarily, upon the credit of the county, such sum or sums of money as shall be necessary to pay, in the first instance, the amount awarded by said commissioners, but one-third of the cost of any turnpike or toll road, or portion thereof, condemned in accordance with the provisions of this act shall be paid out of the State road appropriation, as provided by the act to which this is a supplement, in case of the purchase thereof.

Borrow
money to
make pay-
ment.

State's share
one-third.

4. Any board of chosen freeholders may, before commencing such condemnation proceedings, require that each township or other municipality in which such turnpike or toll road, or portion thereof, lies shall agree to assume and pay ten per centum of the cost of the part or portion of such turnpike or toll road lying within such township or other municipality.

Liability of
subdivisions
of county.

5. Two-thirds of the cost of any turnpike or toll road, or portion thereof, condemned in accordance with the provisions of this act, less the sum or sums assumed and paid by any township or other municipality as herein provided, shall be certified to the county board of assessors, and assessed and collected in the manner provided by the fourth section of the act to which this is a supplement.

Collection of
county's
share by
taxation.

6. This act shall take effect immediately.

Approved April 20th, 1906.

VIADUCT.

CHAPTER 31.

An act to amend an act entitled "An act to enable the board of chosen freeholders of any county in this State to erect, construct and maintain a viaduct between two or more municipalities in such county, connecting streets or roads of such county or municipalities, and to extend roads to connect with such viaduct, and to acquire lands for the same, and to issue bonds for the payment of the cost of the erection, construction and acquisition thereof," approved March twenty-eighth, one thousand nine hundred and four.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Section amended.

1. Section two (2) of the act to which this is an amendment be and the same is hereby amended to read as follows:

Lawful to construct connecting roads.

2. If, in the judgment of such board, it is wise and expedient to erect such viaduct at a point where it does not connect at one or more ends with a public highway, then it shall and may be lawful for such board to construct and maintain a road or roads from either one or more ends of such viaduct, to connect with a street or streets, road or roads, of such county or municipalities; and such viaduct proper and the road or roads so constructed shall be considered and classed as a viaduct within the meaning of this act; and wherever in this act the word "viaduct" is used it shall be construed, treated and considered as referring to such viaduct proper as well as the road or roads which may be constructed at either one or more ends thereof as aforesaid. If in the construction of such viaduct it becomes necessary to construct the elevated portion thereof through a portion of the length of any street or road of any municipality, it shall be lawful for said board to take and use such portion of such street or road for such elevated structure, and divert and continue such

Use of street for elevated structure.

COMMISSIONER OF PUBLIC ROADS.

street or road to and on either side of such elevated structure, and improve the portion so diverted and continued in the same manner that the said street or road was theretofore improved, and thereafter such portion of such street or road so diverted and continued shall become and be a road of the municipality, and under the care, custody and control thereof.

Care of diverted portion.

2. Section four (4) of the act to which this is an amendment be and the same is hereby amended to read as follows:

Section amended.

4. If it shall become necessary to acquire lands for the building of such viaduct, or for the diversion and continuance of a street or road on either side of the elevated portion of such viaduct, the board of chosen freeholders of such county is authorized to acquire such lands by gift, grant, purchase or in the manner set out under the act entitled "An act to regulate the ascertainment and payment of compensation for property condemned or taken for public use," approved March twentieth, one thousand nine hundred (Revision of 1900), and the supplements thereto and amendments thereof, and the title to the lands shall be taken in the name of such board.

Freeholders may acquire lands.

3. Section five (5) of the act to which this is an amendment be and the same is hereby amended to read as follows:

Section amended.

5. The total expense of viaducts contracted to be built under this act in any one year shall not exceed one-fourth of one per centum of the ratables of such county, as ascertained for the then current fiscal year; nor shall there be issued for the erection of viaducts under this act in any period of five years bonds in the aggregate to exceed one-fourth of one per centum of the ratables as aforesaid.

Total expenses allowable.

4. Section six (6) of the act to which this is an amendment be and the same is hereby amended to read as follows:

Section amended.

6. If, in the opinion of the board of chosen freeholders of such county, to place the entire cost of such viaduct, including the acquisition of lands authorized hereunder and the improvement of any street or road diverted and continued as aforesaid, in the tax levy for any one fiscal

May issue bonds.

FOURTEENTH ANNUAL REPORT.

year would be too burdensome to the taxpayers of such county, it shall and may be lawful for such board to issue the bonds of such county to defray the expense thereof, which said bonds shall be of the denomination of one thousand dollars each, and be registered or coupon, as

Rate; time. such board may determine, and shall bear interest at a rate not exceeding four per centum per annum, payable semi-annually, and shall run for a period not exceeding thirty years, and shall be signed by the director and clerk of such board and countersigned by the county collector, and shall be sold at public sale to the highest bidder for not less than par; and said county shall annually thereafter place in the tax levy a sum sufficient to pay the interest on such bonds as they mature, and shall likewise

Sinking fund. create a sinking fund for the payment of said bonds at maturity, and place in the tax levy annually thereafter a sum sufficient, with the accumulations thereof, to pay off and discharge said bonds at maturity; or the board, in its judgment, may, from time to time, place part of such cost in the tax levy year by year, and raise part only of said cost by the issue of the bonds aforesaid. If the board should at any time, or from time to time, pass a resolution or resolutions to place in the tax levy a certain sum to be used for the purposes authorized and mentioned in this act and the act amended hereby, such moneys shall

Temporary loan bond. be available forthwith, and the board may raise such sum by the issue of temporary loan bond or bonds, to run not exceeding two years, and to bear interest not exceeding the rate of five per centum per annum, in anticipation of

How met. the collection of such taxes; and at the time of making up the next tax budget of such county after the passage of such resolution or resolutions said board shall, pursuant to said resolution or resolutions, place therein a sum sufficient to pay off and discharge said temporary loan bond or bonds at maturity, with the interest thereon, as it accrues.

5. This act shall take effect immediately.

Approved April 9th, 1907.

COMMISSIONER OF PUBLIC ROADS.

189

An act for the better protection of travelers, pedestrians, vehicles and animals on the public streets and highways.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Whoever places upon the surface of any public street, highway or other way customarily and lawfully used for public travel, or upon any sidewalk appurtenant to such way, any broken glass, bottle, metal, loose stones, earthenware, or other substance of a nature likely to cause injury to travelers or pedestrians, or to carriages, bicycles or other vehicles traveling or moving on said way, or which might wound, disable or injure any horse or other animal, or which might injure, cut or puncture any pneumatic tire, shall forfeit for each offense five dollars, to be sued for and recovered in an action of debt by any person who will sue for the same.

Penalty for placing glass, bottles, &c., upon public highways.

2. Any overseer of the highways, committeeman, contractor, or other person whomsoever, who shall place or spread broken stone on any of the highways of this State, for the purpose of improving or repairing the same, shall, if such stone be of the dimension of an inch and one-half or more in diameter, cause the same to be covered with fine stone, earth or screenings, within such period of time as it shall be possible to obtain such fine stone, earth or screenings after said broken stones are spread upon said road, unless prevented by causes beyond his control, under a penalty of twenty dollars for each offense, to be sued for in an action of debt and recovered, with costs, by any person who shall be injuriously affected by the willful neglect or failure to cover said stone as herein provided.

Broken stone of dimension one inch or more placed on highways to be covered.

3. This act shall take effect immediately.

Approved May 12th, 1896.

CHAPTER 98.

Further supplement to an act entitled "An act concerning roads," approved April sixteenth, one thousand eight hundred and forty-six.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

Highway
must be kept
clear of
weeds, &c.

1. The owner or occupant of land abutting on any highway in any township in this State shall, during the month of September of each year, cut and remove all brush, briars and weeds growing in or upon such portion of such highway as his or her lands abut upon, and in case such owner or occupant shall fail to perform the duty imposed hereby, the township committee of the township in which such lands abut as aforesaid shall cause such work to be done, and the owner of such lands shall pay the expense thereof, with costs, to be recovered in an action upon contract before any justice of the peace of the county at the suit of such township committee.

2. This act shall take effect immediately.

Approved March 23d, 1900.

LAYING OUT ROADS.

Receiving many inquiries how to proceed to lay out roads, change location, etc., to save correspondence we give the following quotations from the statutes:

Laying Out Roads by Freeholders After General Election.

It shall be lawful for the board of chosen freeholders of any of the several counties of this State, when said board deem it for the best interests of such county, to lay out, construct and maintain public roads extending

COMMISSIONER OF PUBLIC ROADS.

191

through such county in any direction, to submit, by resolution, the question whether or not such public roads shall be laid out to the electors of said county, at an election to be held at the same time and place of holding the general election in and for said county for members of the General Assembly of this State, by the same officers, but in separate ballot-box, and if at such election a majority of the electors shall vote "against public roads," nothing in this act shall apply or be effective in said county; but if a majority of the electors vote "in favor of public roads," then the board shall proceed as directed by the act entitled "An act to authorize the board of chosen freeholders of any of the several counties of this State to lay out, open, construct, improve and maintain a public road therein," approved April 7th, 1888. P. L. 1888, page 397.

LAYING OUT, VACATING OR ALTERING PUBLIC ROADS BY
SURVEYORS OF HIGHWAYS. (Revised Statutes,
page 2828-119, Sec. 1.)

That when ten or more persons, being freeholders, shall think a public road necessary, or any public road which hath been or shall be laid out unnecessary, or any alteration in such road necessary in any part of the county in which they reside, it shall be lawful for the said persons to make application, in writing, to the Inferior Court of Common Pleas of the said county, in open court, having given previous notice for at least ten days of such intended application, and also of the day on which such application is intended to be made, by advertisements, under their hands, and set up at three of the most public places in the township in which the said road is proposed to be laid out, vacated or altered, and if there be more townships than one through which the said road may run, by advertisements, to be set up at three of the most public places in each township; and the said court, when applied to as aforesaid, on due proof being made that the

advertisements have been set up according to law, on which the judgment of the court shall be final and conclusive, are hereby authorized and required to appoint six of the surveyors of the highways of the said county, ever having regard to the appointment of the surveyors of the highways of the township or townships where the said road shall be so applied for to be laid out, vacated or altered; *provided*, that no surveyor shall be appointed through whose land the road may run, or who for any other reason which the court in their discretion shall deem sufficient, think ought not to be appointed; and the said surveyors shall meet at such time and place as the said court shall direct, a copy of which appointment shall be served on each of the said surveyors at least six days prior to the time of their meeting; and two of the said applicants shall, at least twelve days prior to the said time, sign and set up advertisements at three of the most public places in the said township or townships, setting forth the time and place of the meeting of the surveyors agreeably to the directions of the court, and designating the points or places from and to which the said road is proposed to be laid out, vacated or altered. (See Secs. 138 and 168, *post*.)

VACATING AND RELAYING OF PUBLIC ROADS BY FILING
CONSENT WITH CLERK AND RECORDING.

138. Sec. 1. That whenever ten or more persons, being freeholders, shall think any alteration of any public road necessary in any part of the county wherein they reside, by having such road or a portion thereof vacated, and the same relaid or another road substituted therefor, they may make application in writing to the Inferior Court of Common Pleas of such county, or to one of the judges thereof, setting forth in writing the road or portion thereof as aforesaid which it is proposed to have vacated, describing the same by courses and distances, and also describing the road as it is to be relaid, or the road which is to be

COMMISSIONER OF PUBLIC ROADS.

193

substituted therefor, to which description there shall be attached a map showing the location of the road or portion of the road to be vacated and the road as relaid, or the road which is to be substituted therefor; and if within ten days after such application shall have been made as aforesaid, or if at the time of making such application there shall be presented to said court or judge the consent in writing of the owners of all the lands intersected by such old road or portion thereof proposed to be vacated, and of all the property intersected by the road as proposed to be relaid, or by the road which it is proposed to substitute therefor, and also the written consent of the township committee of the township wherein such road or roads do lie, that said application shall be granted, then it shall be lawful for said court or judge to cause said application, with the accompanying survey, map and return, and the written consents of the owners of lands as aforesaid, and of the township committee, to be filed with the clerk of the county, to be by him recorded in the book of roads for said county; and when said application and other papers shall have been so filed, such old road or portion thereof shall thereupon and thereby be deemed to be vacated, and the road as relaid, or the new road substituted therefor, shall thereupon and thereby be deemed and taken to be a public road.

VACATION OF PUBLIC ROADS BY CONSENT AND FILING
WITH COUNTY CLERK.

186. Sec. 1. That whenever ten or more persons, being freeholders, shall think the vacation of a part of any public road necessary in any part of the county wherein they reside, they may make application in writing to the Inferior Court of Common Pleas of such county or to one of the judges thereof, setting forth in writing the road or portion thereof which it is proposed to have vacated, describing the same by courses and distances, to which description there shall be attached a map showing the loca-

FOURTEENTH ANNUAL REPORT.

tion of the road or portion thereof to be vacated, and if within ten days after such application shall have been made as aforesaid, or if at the time of making such application, there shall be presented to said court or judge the consent in writing of the owners of all the lands by such old road or portion thereof proposed to be vacated, and also the written consent of the township committee of the township wherein such lands do lie, that such application shall be granted, then it shall be lawful for said court or judge to cause said application, with the accompanying survey, map and return, and the written consents of the owners of lands as aforesaid, and of the township committee to be filed with the clerk of the county, to be by him recorded in the book of roads for said county, and when said application and papers have been so filed, such portion of such old road shall thereupon and thereby be deemed to be vacated; *provided*, that no portion of any old road proposed to be vacated under this act shall exceed one thousand yards in length.

Appendix C.

NUMBER OF TONS OF STONE PER MILE REQUIRED TO BUILD THE FOLLOWING DEPTHS AND WIDTHS.

For the information of intending road builders, we have compiled the following tables, which approximate the number of tons of thoroughly rolled stone necessary to construct each mile at the designated depths and widths.

The basis is 3,000 tons of loose stone or 3,500 tons of compressed stone for a road one mile long, sixteen feet wide and eight inches deep. A road eight inches deep, when finished, will have required at least ten inches of stone. It should be placed in two layers of five inches each, and each layer rolled down to four inches. Then the application of the three-quarter inch and screenings will bring the road to the prescribed depth; for other thickness the stone should be placed in proportion to the intended finished depths.

An observance of this rule will insure the contract thickness for the roadbed, and save the sometimes necessary expense of resurfacing before acceptance from the contractor.

A road 8 feet wide and 4 inches deep will require					875	tons of stone per mile.		
"	8	"	6	"	1,312½	"	"	"
"	8	"	8	"	1,750	"	"	"
"	8	"	10	"	2,187½	"	"	"
"	8	"	12	"	2,625	"	"	"
"	9	"	4	"	984⅜	"	"	"
"	9	"	6	"	1,476 ⁹ / ₁₆	"	"	"
"	9	"	8	"	1,968¾	"	"	"
"	9	"	10	"	2,460 ¹⁵ / ₁₆	"	"	"
"	9	"	12	"	2,953⅛	"	"	"
"	10	"	4	"	1,093¾	"	"	"
"	10	"	6	"	1,640⅝	"	"	"
"	10	"	8	"	2,187½	"	"	"
"	10	"	10	"	2,734⅜	"	"	"
"	10	"	12	"	3,281¼	"	"	"

FOURTEENTH ANNUAL REPORT.

A road 11 feet wide and 4 inches deep will require 1,203 $\frac{1}{8}$ tons of stone per mile.

"	11	"	"	6	"	"	1,804 $\frac{11}{10}$	"	"	"
"	11	"	"	8	"	"	2,406 $\frac{1}{4}$	"	"	"
"	11	"	"	10	"	"	3,007 $\frac{13}{10}$	"	"	"
"	11	"	"	12	"	"	3,609 $\frac{3}{8}$	"	"	"
"	12	"	"	4	"	"	1,312 $\frac{1}{2}$	"	"	"
"	12	"	"	6	"	"	1,968 $\frac{3}{4}$	"	"	"
"	12	"	"	8	"	"	2,625	"	"	"
"	12	"	"	10	"	"	3,281 $\frac{1}{4}$	"	"	"
"	12	"	"	12	"	"	3,937 $\frac{1}{2}$	"	"	"
"	13	"	"	4	"	"	1,421 $\frac{7}{8}$	"	"	"
"	13	"	"	6	"	"	2,132 $\frac{3}{10}$	"	"	"
"	13	"	"	8	"	"	2,843 $\frac{3}{4}$	"	"	"
"	13	"	"	10	"	"	3,554 $\frac{11}{10}$	"	"	"
"	13	"	"	12	"	"	4,265 $\frac{5}{8}$	"	"	"
"	14	"	"	4	"	"	1,531 $\frac{1}{4}$	"	"	"
"	14	"	"	6	"	"	2,296 $\frac{7}{8}$	"	"	"
"	14	"	"	8	"	"	3,062 $\frac{1}{2}$	"	"	"
"	14	"	"	10	"	"	3,828 $\frac{1}{8}$	"	"	"
"	14	"	"	12	"	"	4,593 $\frac{3}{4}$	"	"	"
"	15	"	"	4	"	"	1,640 $\frac{5}{8}$	"	"	"
"	15	"	"	6	"	"	2,460 $\frac{3}{10}$	"	"	"
"	15	"	"	8	"	"	3,281 $\frac{1}{4}$	"	"	"
"	15	"	"	10	"	"	4,101 $\frac{9}{10}$	"	"	"
"	15	"	"	12	"	"	4,921 $\frac{7}{8}$	"	"	"
"	16	"	"	4	"	"	1,750	"	"	"
"	16	"	"	6	"	"	2,625	"	"	"
"	16	"	"	8	"	"	3,500	"	"	"
"	16	"	"	10	"	"	4,375	"	"	"
"	16	"	"	12	"	"	5,250	"	"	"
"	17	"	"	4	"	"	1,859 $\frac{3}{8}$	"	"	"
"	17	"	"	6	"	"	2,789 $\frac{1}{10}$	"	"	"
"	17	"	"	8	"	"	3,718 $\frac{3}{4}$	"	"	"
"	17	"	"	10	"	"	4,648 $\frac{7}{10}$	"	"	"
"	17	"	"	12	"	"	5,578 $\frac{1}{8}$	"	"	"
"	18	"	"	4	"	"	1,968 $\frac{3}{4}$	"	"	"
"	18	"	"	6	"	"	2,953 $\frac{1}{8}$	"	"	"
"	18	"	"	8	"	"	3,937 $\frac{1}{2}$	"	"	"
"	18	"	"	10	"	"	4,921 $\frac{7}{8}$	"	"	"
"	18	"	"	12	"	"	5,906 $\frac{1}{4}$	"	"	"
"	19	"	"	4	"	"	2,078 $\frac{1}{8}$	"	"	"
"	19	"	"	6	"	"	3,117 $\frac{3}{10}$	"	"	"
"	19	"	"	8	"	"	4,156 $\frac{1}{4}$	"	"	"
"	19	"	"	10	"	"	5,195 $\frac{5}{10}$	"	"	"
"	19	"	"	12	"	"	6,234 $\frac{3}{8}$	"	"	"

COMMISSIONER OF PUBLIC ROADS. 197

A road 20 feet wide and 4 inches deep will require	2,187½	tons of stone per mile.
" 20 " " 6 " "	3,281¼	" " "
" 20 " " 8 " "	4,375	" " "
" 20 " " 10 " "	5,468¾	" " "
" 20 " " 12 " "	6,562½	" " "

TABLES.

As many persons interested in the construction of stone roads are asking questions about their cost, we enclose a table to show at a glance the number of square yards at different widths in a mile of road; also the cost at different widths, and various prices per square yard. Any variations from these prices can be quickly ascertained by adding, subtracting, multiplying and dividing for a less or greater width. For example, a road eight feet wide has 4,693⅓ square yards in one mile. To obtain the number of square yards in a road having a width of nine feet, add one-eighth to the foregoing figures, and in one having a width of seven feet, subtract one-eighth; in one of twice the width given in the table, multiply by two.

SQUARE YARDS IN ONE MILE OF

8 feet in width	.....	4,693⅓ square yards.
10 "	.....	5,866⅔ "
12 "	.....	7,040 "
14 "	.....	8,213⅓ "
16 "	.....	9,386⅔ "
18 "	.....	10,560 "
8 feet wide, or	4,693⅓ square yards, at 25c. per yard.....	\$1,173 33⅓
10 "	5,866⅔ " 25c. "	1,466 66⅔
12 "	7,040 " 25c. "	1,760 00
14 "	8,213⅓ " 25c. "	2,053 33⅓
16 "	9,386⅔ " 25c. "	2,346 66⅔
18 "	10,560 " 25c. "	2,640 00
8 "	4,693⅓ " 30c. "	1,408 00
10 "	5,866⅔ " 30c. "	1,760 00
12 "	7,040 " 30c. "	2,112 00
14 "	8,213⅓ " 30c. "	2,464 00
16 "	9,386⅔ " 30c. "	2,816 00
18 "	10,560 " 30c. "	3,168 00

FOURTEENTH ANNUAL REPORT.

8 feet wide, or	4,693 ¹ / ₃	square yards, at	35c.	per yard.....	\$1,642 66 ² / ₃
10 "	5,866 ² / ₃	"	35c.	"	2,053 33 ¹ / ₃
12 "	7,040	"	35c.	"	2,464 00
14 "	8,213 ¹ / ₃	"	35c.	"	2,874 66 ² / ₃
16 "	9,386 ² / ₃	"	35c.	"	3,285 33 ¹ / ₃
18 "	10,560	"	35c.	"	3,696 00
8 "	4,693 ¹ / ₃	"	40c.	"	1,877 33 ¹ / ₃
10 "	5,866 ² / ₃	"	40c.	"	2,346 66 ² / ₃
12 "	7,040	"	40c.	"	2,816 00
14 "	8,213 ¹ / ₃	"	40c.	"	3,285 33 ¹ / ₃
16 "	9,386 ² / ₃	"	40c.	"	3,754 66 ² / ₃
18 "	10,560	"	40c.	"	4,224 00
8 "	4,693 ¹ / ₃	"	45c.	"	2,112 00
10 "	5,866 ² / ₃	"	45c.	"	2,640 00
12 "	7,040	"	45c.	"	3,168 00
14 "	8,213 ¹ / ₃	"	45c.	"	3,696 00
16 "	9,386 ² / ₃	"	45c.	"	4,224 00
18 "	10,560	"	45c.	"	4,752 00
8 "	4,693 ¹ / ₃	"	50c.	"	2,346 66 ² / ₃
10 "	5,866 ² / ₃	"	50c.	"	2,933 33 ¹ / ₃
12 "	7,040	"	50c.	"	3,520 00
14 "	8,213 ¹ / ₃	"	50c.	"	4,106 66 ² / ₃
16 "	9,386 ² / ₃	"	50c.	"	4,693 33 ¹ / ₃
18 "	10,560	"	50c.	"	5,280 00
8 "	4,693 ¹ / ₃	"	55c.	"	2,581 33 ¹ / ₃
10 "	5,866 ² / ₃	"	55c.	"	3,226 66 ² / ₃
12 "	7,040	"	55c.	"	3,872 00
14 "	8,213 ¹ / ₃	"	55c.	"	4,517 33 ¹ / ₃
16 "	9,386 ² / ₃	"	55c.	"	5,162 66 ² / ₃
18 "	10,560	"	55c.	"	5,808 00
8 "	4,693 ¹ / ₃	"	60c.	"	2,816 00
10 "	5,866 ² / ₃	"	60c.	"	3,520 00
12 "	7,040	"	60c.	"	4,224 00
14 "	8,213 ¹ / ₃	"	60c.	"	4,928 00
16 "	9,386 ² / ₃	"	60c.	"	5,632 00
18 "	10,560	"	60c.	"	6,336 00
8 "	4,693 ¹ / ₃	"	65c.	"	3,050 66 ² / ₃
10 "	5,866 ² / ₃	"	65c.	"	3,813 33 ¹ / ₃
12 "	7,040	"	65c.	"	4,576 00
14 "	8,213 ¹ / ₃	"	65c.	"	5,338 66 ² / ₃
16 "	9,386 ² / ₃	"	65c.	"	6,101 33 ¹ / ₃
18 "	10,560	"	65c.	"	6,864 00

COMMISSIONER OF PUBLIC ROADS.

8 feet wide, or	4,693 ¹ / ₃	square yards, at	70c. per yard.....	\$3,285	33 ¹ / ₃
10 "	5,866 ² / ₃	"	70c. "	4,106	66 ² / ₃
12 "	7,040	"	70c. "	4,928	00
14 "	8,213 ¹ / ₃	"	70c. "	5,749	33 ¹ / ₃
16 "	9,386 ² / ₃	"	70c. "	6,570	66 ² / ₃
18 "	10,560	"	70c. "	7,392	00
8 "	4,693 ¹ / ₃	"	75c. "	3,520	00
10 "	5,866 ² / ₃	"	75c. "	4,400	00
12 "	7,040	"	75c. "	5,280	00
14 "	8,213 ¹ / ₃	"	75c. "	6,160	00
16 "	9,386 ² / ₃	"	75c. "	7,040	00
18 "	10,560	"	75c. "	7,920	00
8 "	4,693 ¹ / ₃	"	80c. "	3,754	66 ² / ₃
10 "	5,866 ² / ₃	"	80c. "	4,693	33 ¹ / ₃
12 "	7,040	"	80c. "	5,632	00
14 "	8,213 ¹ / ₃	"	80c. "	6,570	66 ² / ₃
16 "	9,386 ² / ₃	"	80c. "	7,509	33 ¹ / ₃
18 "	10,560	"	80c. "	8,448	00
8 "	4,693 ¹ / ₃	"	85c. "	3,989	33 ¹ / ₃
10 "	5,866 ² / ₃	"	85c. "	4,986	66 ² / ₃
12 "	7,040	"	85c. "	5,984	00
14 "	8,213 ¹ / ₃	"	85c. "	6,981	33 ¹ / ₃
16 "	9,386 ² / ₃	"	85c. "	7,978	66 ² / ₃
18 "	10,560	"	85c. "	8,976	00
8 "	4,693 ¹ / ₃	"	90c. "	4,224	00
10 "	5,866 ² / ₃	"	90c. "	5,280	00
12 "	7,040	"	90c. "	6,336	00
14 "	8,213 ¹ / ₃	"	90c. "	7,392	00
16 "	9,386 ² / ₃	"	90c. "	8,448	00
18 "	10,560	"	90c. "	9,504	00
8 "	4,693 ¹ / ₃	"	95c. "	4,458	66 ² / ₃
10 "	5,866 ² / ₃	"	95c. "	5,573	33 ¹ / ₃
12 "	7,040	"	95c. "	6,688	00
14 "	8,213 ¹ / ₃	"	95c. "	7,802	66 ² / ₃
16 "	9,386 ² / ₃	"	95c. "	8,917	33 ¹ / ₃
18 "	10,560	"	95c. "	10,032	00
8 "	4,693 ¹ / ₃	"	\$1.00 "	4,693	33 ¹ / ₃
10 "	5,866 ² / ₃	"	1.00 "	5,866	66 ² / ₃
12 "	7,040	"	1.00 "	7,040	00
14 "	8,213 ¹ / ₃	"	1.00 "	8,213	33 ¹ / ₃
16 "	9,386 ² / ₃	"	1.00 "	9,386	66 ² / ₃
18 "	10,560	"	1.00 "	10,560	00

TABLE FOR GRAVEL.

Table showing number of cubic yards of gravel required in the construction of one mile of gravel road, of widths varying from 6 feet to 20 feet, and depths from 6 to 12 inches. The within quantities should be multiplied by $1\frac{1}{2}$ to give the number of cubic yards of loose gravel required to make the within depths of compact gravel.

ONE MILE IN LENGTH.	Number of feet in width.	Number of cubic yards in road 6 inches deep.	Number of cubic yards in road 7 inches deep.	Number of cubic yards in road 8 inches deep.	Number of cubic yards in road 9 inches deep.	Number of cubic yards in road 10 inches deep.	Number of cubic yards in road 11 inches deep.	Number of cubic yards in road 12 inches deep.
One mile	6 feet wide.....	586 $\frac{2}{3}$	684 $\frac{1}{2}$	782 $\frac{2}{3}$	880	977 $\frac{7}{8}$	1,075 $\frac{5}{8}$	1,173 $\frac{1}{2}$
One mile	7 feet wide.....	684 $\frac{1}{2}$	798 $\frac{3}{4}$	912 $\frac{3}{4}$	1,026 $\frac{3}{8}$	1,140 $\frac{3}{8}$	1,254 $\frac{3}{8}$	1,368 $\frac{3}{8}$
One mile	8 feet wide.....	782 $\frac{2}{3}$	912 $\frac{3}{4}$	1,042 $\frac{1}{2}$	1,173 $\frac{1}{2}$	1,303 $\frac{1}{2}$	1,434 $\frac{2}{7}$	1,564 $\frac{2}{7}$
One mile	9 feet wide.....	880	1,026 $\frac{3}{8}$	1,173 $\frac{1}{2}$	1,320	1,466 $\frac{3}{8}$	1,613 $\frac{1}{3}$	1,760
One mile	10 feet wide.....	977 $\frac{7}{8}$	1,140 $\frac{3}{8}$	1,303 $\frac{1}{2}$	1,466 $\frac{3}{8}$	1,629 $\frac{1}{7}$	1,792 $\frac{1}{6}$	1,955 $\frac{5}{8}$
One mile	11 feet wide	1,075 $\frac{5}{8}$	1,254 $\frac{3}{8}$	1,434 $\frac{2}{7}$	1,613 $\frac{1}{3}$	1,792 $\frac{1}{6}$	1,971 $\frac{1}{8}$	2,151 $\frac{1}{8}$
One mile	12 feet wide	1,173 $\frac{1}{2}$	1,368 $\frac{3}{8}$	1,564 $\frac{2}{7}$	1,760	1,955 $\frac{5}{8}$	2,151 $\frac{1}{8}$	2,346 $\frac{3}{8}$
One mile	13 feet wide.....	1,271 $\frac{1}{2}$	1,482 $\frac{3}{8}$	1,694 $\frac{2}{7}$	1,906 $\frac{3}{8}$	2,118 $\frac{1}{4}$	2,330 $\frac{1}{4}$	2,542 $\frac{2}{7}$
One mile	14 feet wide	1,368 $\frac{3}{8}$	1,597 $\frac{1}{7}$	1,825 $\frac{1}{7}$	2,053 $\frac{1}{8}$	2,281 $\frac{1}{7}$	2,509 $\frac{1}{7}$	2,737 $\frac{1}{7}$
One mile	15 feet wide	1,466 $\frac{3}{8}$	1,711 $\frac{1}{8}$	1,955 $\frac{5}{8}$	2,200	2,444 $\frac{1}{8}$	2,688 $\frac{1}{8}$	2,933 $\frac{1}{8}$
One mile	16 feet wide	1,564 $\frac{2}{7}$	1,825 $\frac{1}{7}$	2,085 $\frac{2}{7}$	2,346 $\frac{3}{8}$	2,607 $\frac{1}{7}$	2,868 $\frac{1}{7}$	3,128 $\frac{3}{8}$
One mile	17 feet wide.....	1,662 $\frac{2}{8}$	1,919 $\frac{1}{7}$	2,216 $\frac{2}{7}$	2,493 $\frac{1}{8}$	2,770 $\frac{1}{7}$	3,047 $\frac{1}{7}$	3,324 $\frac{3}{8}$
One mile	18 feet wide	1,760	2,053 $\frac{1}{8}$	2,346 $\frac{3}{8}$	2,640	2,933 $\frac{1}{8}$	3,226 $\frac{3}{8}$	3,520
One mile	19 feet wide.....	1,857 $\frac{7}{8}$	2,167 $\frac{1}{2}$	2,477 $\frac{1}{7}$	2,786 $\frac{3}{8}$	3,096 $\frac{3}{7}$	3,405 $\frac{5}{7}$	3,715 $\frac{5}{8}$
One mile	20 feet wide.....	1,955 $\frac{5}{8}$	2,281 $\frac{1}{2}$	2,607 $\frac{1}{7}$	2,933 $\frac{1}{8}$	3,259 $\frac{7}{7}$	3,585 $\frac{7}{7}$	3,911 $\frac{1}{8}$

INDEX.

(203)

Illustrations.

	PAGE
Midvale Road, Passaic County, Showing the Straightening	Frontispiece.
Haddonfield and Coffin's Corner, Camden County, Kay's Hill	Facing 22
Berlin and Milford Road, Camden County	" 23
Goshen Road, Cape May County	" 25
Upper River Road, Mercer County	" 29
Spruce Street, Mercer County	" 30
Princeton Avenue, Mercer County	" 31
Port Reading Railroad, Middlesex County	" 32
Berkeley Township, Main Shore Road, Ocean County	" 34
Midvale Road, Passaic County	" 35
Bernardsville and Oak Stump Road, Somerset County	" 36
Midvale Road, Passaic County	" 39
Upper River Road, Mercer County	" 59
Goshen Road, Cape May County	" 61
Haddonfield Hill, Camden County	" 76
Linden Avenue, Camden County	" 80
Goshen Road, Cape May County	" 82
Upper River Road, Mercer County	" 85
Quaker Bridge Road, Mercer County	" 87
Allentown and Davis Station Road, Monmouth County	" 92
Midvale Road, Passaic County	" 96

INDEX.

	PAGE
Acquirement of Turnpikes	172-175
A Plan for the Preservation of Our Improved Roads	59, 60
Appendix A.	
Standard Specifications for Gravel Roads	118-130
Standard Specifications for Stone Roads	103-117
Appendix B.	
Assessments Past Due May be Paid to Local Collector ..	145
Brush, Briers and Weeds, Removal of	190, 191
Changing Location and Improving	156, 157
Changing Location and Vacating	160, 161
Extension of Improved Highway	163-165
Freeholders, Power to Borrow	171
Glass, Bottles, &c., Penalty for Placing on Road	189
Increased Power to Borrow	169
Improved Roads in Adjoining Municipalities May be Taken by County	159
Improved Township Roads, Transferred to County	158
Joint Improvement by Counties	146-149
Joint Improvement by Counties, Amendment	150
Joint Improvement, Amendment to Law of 1903	151-154
Joint Rebuilding	143
Laying Out	190, 191
Laying Out, Vacating and Altering	191
Plank Road, Widening	180, 181
Prevent Digging Up	166
Repair of County Roads	165
Repair of Roads Damaged by Freshets	171
Road Law	131-141
Sidewalks, Supplement Authorizing Grading of	154, 155
Transfer of County Road to Township, &c.	150, 151
Township Roads Transferred to County	158, 159
Township Roads, Authority to Lay Out and Open	167
Turnpikes—	
Abandonment	178
Acquirement	172-175
Commissioners, Compensation of	178
Commissioners, Proviso in Case of Death	179
Condemnation of	184, 185
Purchase of	181-183
Vacation of	176, 177
Vacation and Relaying by Filing Consent with Clerk ..	193, 194
Vacation and Relaying by Filing Consent and Recording,	192
Viaduct	186-188
Widening County Road	162
Widening Plank Road	180

	PAGE
Appendix C.	
Gravel, Quantity per Mile	201
Stone, Number of Tons per Mile	195, 196
Stone, Square Yards per Mile and Cost	197-199
Brush, Briars and Weeds, Removal of	190, 191
Changing Location and Improving	156, 157
Changing Location and Vacating	160, 161
Commissioners, Compensation of	178
Commissioners, Proviso in Case of Death or Disqualification	179
Cost of Roads	9-14
Description of Roads Improved in 1907—	
Atlantic County	21
Bergen County	22
Burlington County	22
Camden County	22-25
Cape May County	25, 26
Essex County	26-28
Hunterdon County	28
Mercer County	29-31
Middlesex County	32
Monmouth County	33
Morris County	33
Ocean County	34
Passaic County	34, 35
Somerset County	36, 37
Union County	37, 38
Extension of Provisions of Act to Roads Accepted by Freeholders	163-165
Freeholders, Power to Borrow	171
Glass, Loose Stones, Penalty for Placing upon Highways	189
Grading Sidewalks	154, 155
Gravel Pits, List of	73, 74
Increased Power to Borrow	169
Improved Township Roads, Transferred to County	158
Laying Out Roads	190, 191
Laying Out, Vacating and Altering	191
Meadow Road Repairs	61-63
Plank Road Widening	180, 181
Quarries, List of	69-71
Road Improvement in New Jersey, 1907	5-8
Road Law	131-141
Road Coatings and Dust Preventatives	65-67
Road Repairs	39-57
Roads Approaching Completion, Cost of	15, 16
Sidewalks, Supplement Authorizing Grading of	154, 155
Statements by Engineers and Supervisors—	
Atlantic	75
Bergen	76
Camden	76-81
Cape May	81, 82
Essex	83, 84
Hunterdon	85
Mercer	85-91
Middlesex	91, 92

INDEX.

209

	PAGE
Monmouth	92
Morris	93
Ocean	94
Passaic	94-96
Somerset	97, 98
Union	99, 100
Surveys, Authorized	17-19
Table, Number of Miles of Road Improved in Each County	20
Total Amount Paid by State and Number of Miles Paid for in Each County	19
Township Roads Transferred to County	158, 159
Turnpikes, Condemning	184, 185
Purchasing	181-183
Vacating	176, 177
Viaducts, County May Build	186-188

ROAD MAP
OF
THE STATE OF
NEW JERSEY

From original surveys of the U.S. Geological Survey
and other authorities of the U.S. Coast and Geodetic Survey

Scale 1:500,000

1907

Legend

The lines on this map represent roads of various classes. The thickness of the lines indicates the class of the road. The lines are colored as follows: Red, for main roads; Black, for secondary roads; Blue, for waterways; Green, for railroads; and Grey, for canals.

