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THE RESULTS OF PHYSICAL TESTS OF ROAD-BUILDING ROCK.

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INTRODUCTION.

The purpose of this bulletin is to furnish highway engineers with the results of physical tests of road-building rock made in the laboratories of the United States Office of Public Roads and Rural Engineering to January 1, 1916. It is proposed to revise this bulletin from time to time, so that additional data secured by the office may become promptly available. Detailed descriptions of the methods of determining the physical properties of road-building rocks have been given in a recent publication by Jackson.¹ Interpretation of the results of these tests has, however, been reserved for publication with the tabulated data here given. It should be noted that Bulletins Nos. 347 and 370 therefore constitute a complete revision of Office of Public Roads Bulletin No. 44, by Albert T. Goldbeck and Frank H. Jackson, Jr., which was published in 1912. As a matter of interest it may be stated that since January 1, 1912, approximately 1,350 additional samples have been classified and tested, raising the total number from the United States and Canada to about 3,650.

¹ United States Department of Agriculture Bulletin No. 347.

AGENCIES CAUSING ROAD DETERIORATION.

Roads may deteriorate from both external and internal causes. The destructive agencies may be classified as mechanical, chemical, and physical, but in some respects it is more convenient to consider deterioration as being due to the effect of (1) traffic, (2) climatic conditions, and (3) faulty construction. The first two are external agencies and the latter is internal.

Traffic.—Traffic divides itself into two classes, (a) horse-drawn vehicles and (b) self-propelled or motor-driven vehicles. In the former the impact of horses' feet tends to disturb the position of individual fragments of rock in the wearing course and also to fracture the rock. At the same time wheels, especially steel-tired wheels, not only exert an abrasive action which grinds away the rock surfaces, but tend to crush the fragments of rock in proportion to the load per unit width of tire.

Automobile traffic exerts a severe shearing action upon the road surface which tends to loosen the individual fragments and, ultimately, to remove them from the road. Where chains or armored tires are used, considerable abrasion may also result, especially under those conditions which favor slipping or skidding.

Climatic agencies.—So far as the rock itself is concerned, climatic or weather conditions are not important destructive agencies. While it is true that rain and surface waters gradually dissolve or react with certain rock-forming minerals, the action is so slow as to be practically negligible as a source of deterioration during the life of a road. Frost may cause some deterioration in the more porous types of rock, but both rain and frost are more destructive to the road structure than to the rock of which it is built. Wind also is a negligible factor so far as the rock is concerned.

Faulty construction.—Faulty construction may result in rapid deterioration of the road proper, due to a number of causes, such as poor drainage, lack of proper consolidation, the use of the wrong size or wrong grading of broken stone, etc. Destruction or disintegration of the fragments of rock may also be hastened by these errors in construction.

FACTORS INFLUENCING THE SELECTION OF ROCK FOR ROAD BUILDING.

In accordance with the preceding discussion it is evident that from the standpoint of destructive agencies traffic conditions are the most important factors to be considered in the selection of rock for road building. Availability as well as relative cost are also important factors in so far as ultimate economy is concerned, but need not be considered in this bulletin. In addition, the type of road to be

constructed is a most important consideration, and in general the selection of rock should be based upon the character and volume of traffic as related to the type of road in which it is to be used.

The more common types of road in which stone is used are:

1. Water-bound broken-stone roads, as macadam, maintained as such.
2. Water-bound macadam roads maintained with dust palliatives.
3. Water-bound macadam roads with bituminous carpet.
4. Bituminous broken-stone roads with a seal coat of bituminous material constructed according to the penetration method.
5. Bituminous concrete roads with a seal coat of bituminous material.
6. Bituminous concrete roads without a seal coat of bituminous material.
7. Portland cement concrete roads with a coarse aggregate of broken stone.
8. Stone-block pavements.

The destructive effect of traffic, both with respect to character and volume, varies to a considerable extent for the different types of road.

PHYSICAL PROPERTIES OF ROAD-BUILDING ROCK.

The success or failure of a rock for road building depends largely upon the extent to which it will resist the destructive influences of traffic. The three most important physical properties are hardness, toughness, and binding power. Hardness is the resistance which the rock offers to the displacement of its surface particles by abrasion; toughness is the resistance which it offers to fracture under impact; and binding power is the ability which the dust from the rock possesses, or develops by contact with water, of binding the large rock fragments together. In order to approximate as closely as possible in the laboratory the destructive effects produced by the various agencies which have been mentioned, certain physical tests have been developed. Brief descriptions of these tests are as follows:

HARDNESS TEST.

Hardness is determined by subjecting a cylindrical rock core 25 mm. in diameter, drilled from the specimen to be examined, to the abrasive action of quartz sand fed upon a revolving steel disk. The end of the specimen is worn away in inverse ratio to its hardness and the amount of loss is expressed in the form of a coefficient as follows:

Coefficient of hardness = $20 - \frac{1}{3} w$, where w equals the loss in weight after 1,000 revolutions of the disk.

TOUGHNESS TEST.

Toughness is determined by subjecting a cylindrical test specimen 25 by 25 millimeters (1 by 1 inch) in size to the impact produced by the fall of a 2-kilogram (4.4-pound) hammer upon a steel plunger whose lower end is spherical and rests upon the test piece. The energy of the blow delivered is increased by increasing the height of fall of the hammer 1 centimeter (0.39 inch) after each blow. The height of blow in centimeters at failure of the specimen is called the toughness.

DEVAL ABRASION TEST.

A test devised by the French for measuring the combined action of abrasion and impact is as follows: Five kilograms (11 pounds) of freshly broken rock between 2 and 2½ inches in size is tested in a special form of cylinder so mounted on a frame that the axis of rotation of the cylinder is inclined at an angle of 30° with the axis of the cylinder itself. The fragments of rock forming the charge are thus thrown from end to end twice during each revolution, causing them to strike and rub against each other and the sides of the cylinder. After 10,000 revolutions the resulting material is screened through a $\frac{1}{16}$ -inch sieve and the weight of the material passing is used to calculate the per cent of wear. The French coefficient of wear is calculated from the per cent of wear as follows:

$$\text{French coefficient of wear} = \frac{40}{\text{Per cent wear}}.$$

CEMENTING-VALUE TEST.

To determine the binding power, or cementing value, as it is usually called, 500 grams (1.1 pounds) of the material to be tested is crushed to pea size and ground with water in a ball mill until it has the consistency of a stiff dough. It is then molded into cylindrical briquettes 25 by 25 millimeters (1 by 1 inch) in size, which, after thorough drying, are tested to destruction in a special form of impact machine. A 1-kilogram (2.2-pound) hammer falls through a constant height of 1 centimeter (0.39 inch) upon an intervening plunger, which in turn rests upon the test piece. By means of a suitable arrangement a graphic record of the number of blows required to destroy the specimen is obtained. The number of blows producing failure is called the cementing value of the material.

SPECIFIC GRAVITY—WEIGHT PER CUBIC FOOT—WATER ABSORPTION.

The specific gravity, weight per cubic foot, and the water absorption in pounds per cubic foot are obtained on samples of rock which are tested to determine their road-building qualities. The weight

DI
(2)

20
OF WEAR

(5)

20

(5)

20

VI

(5)

20

OF WEAR

(5)

20

(5)

20

ETTES

VARIATIONS IN THE PHYSICAL PROPERTIES OF ROAD BUILDING ROCK

per cubic foot is calculated from the specific gravity of the material obtained on a 10-gram sample by the usual displacement method. The gain in weight of this fragment after four days' continuous immersion in water is used to calculate the water absorption in pounds per cubic foot of the solid rock.

VARIATIONS IN RESULTS OF TESTS.

Because of the fact that the various rock families, when subjected to the tests outlined above, give results which are more or less distinctive of a group or type, these results can best be discussed in many cases collectively. There are 14 families of rock which are more or less commonly used in macadam-road construction. The variations which have been found to exist in the three principal tests for each of these are shown in graphic form in the accompanying chart. The values of the tests are arranged as abscissæ, with the zero points to the left and the values numerically increasing toward the right. The ordinates or vertical lines represent the percentages of the total number of samples having values corresponding to the abscissæ on which they are plotted. The figures in parentheses in the upper right-hand corner of each block represent the total number of determinations from which these percentages were calculated.

TRAP-ROCK GROUP.

The first six rock families, *Andesite*, *Basalt*, *Diabase*, *Diorite*, *Gabbro*, and *Rhyolite*, comprise the well-known group of road-building rocks commonly known as "trap." They are all of igneous origin, but are denser and finer grained than the granites, possessing as a rule a peculiar interlocking crystalline structure which imparts to them their distinguishing characteristic—high toughness. Thus, by referring to the chart, it will be noted that the average toughness of all the traps, with the exception of gabbro, which runs somewhat lower, is about 18. This is a considerably higher average than that shown by any of the other types or groups. The same relationship holds true in the abrasion test, the average French coefficient of wear running from about 13 to 15. Comparatively slight variations in hardness are noted for any family or for the group as a whole, the average hardness for which is about 18. The binding power of the traps, as determined by test, varies through wide limits, depending largely on the degree of weathering they have undergone, as shown by Lord.¹ The specific gravity of this group averages about 2.9, giving an average weight per cubic foot of 180 pounds. Individual samples are seldom less than 2.7 nor more than 3.2 specific gravity. Water absorption may vary from a few hundredths of 1 per cent to over 7 per cent.

¹ United States Department of Agriculture Bulletin No. 348.

GRANITES.

Granite, the typical rather coarse-grained igneous rock, is characterized by low toughness and high hardness. The average value for the former, as will be seen from the chart, is about 8, while that for the latter runs as high as for the trap group, about 18.5. The abrasion test develops an average French coefficient of wear of about 11, somewhat lower than for the trap-rock group. Cementing values made on granites run low, as has been demonstrated by experience, the only exceptions being very highly weathered material which usually shows low toughness and resistance to wear. The specific gravity of the granites averages close to 2.7 and is seldom less than 2.6 or more than 2.8. The weight per cubic foot, therefore, averages 168 pounds, and may ordinarily vary from 163 to 175 pounds. Water absorption has been found to run from about 0.04 to 3 per cent.

LIMESTONES AND DOLOMITES.

The limestones and dolomites, or magnesium limestones, are undoubtedly the most widely used road-building rock. It will be seen from the chart that they run much lower in hardness, toughness, and resistance to wear than do the traps or granites. The average French coefficient of wear is about 8, toughness 7, and hardness 15. The cementing values are usually good, about 75 per cent of all samples tested running over 25. The specific gravity of the limestones and dolomites averages close to 2.7, about that of the granites, and is seldom less than 2.6 or more than 2.85. In general, the weight per cubic foot will run from 160 to 178 pounds, with an average of about 168 pounds for the limestones and 170 pounds for the dolomite. Absorption may vary from a few hundredths of 1 per cent to over 13 per cent.

SANDSTONES.

The sandstones are characterized by wide variations in the results of all tests. In fact, the highest and lowest values obtained for all samples tested have, with one exception, been upon sandstone. The average French coefficient of wear is about 12, average toughness about 10, and average hardness about 16. The cementing value of sandstones varies widely, depending upon their composition. Thus certain varieties of feldspathic sandstone somewhat resembling trap rock in appearance almost invariably show high binding value in the laboratory. Their specific gravity also varies between wide limits, but usually lies between 2.4 and 2.8, with an average of 2.62. The weight per cubic foot therefore varies from 150 to 175 pounds and averages 164 pounds. Absorption runs from a few hundredths of 1 per cent to about 2 per cent.

MARBLE AND QUARTZITE.

Marble and quartzite are the two families of nonfoliated metamorphic rocks corresponding to limestone and sandstone, respectively. While in some respects it is convenient to consider marble with the limestone and dolomite group, it will be seen from the chart that the average toughness of marble, about 5, is lower, and that the average hardness, which is less than 14, is also somewhat lower. Marbles usually show good cementing value tests with about the same range as the limestones and dolomites. For those samples tested, the specific gravity ordinarily falls between 2.7 and 2.9 and the weight per cubic foot averages 173 pounds, which is somewhat higher than the average for either limestone or dolomite. As would therefore be expected, the maximum absorption is less, being under 2.5 per cent.

Quartzites show an average toughness of 15, as compared with 10 for the sandstones. The coefficient of hardness is also higher and for the samples tested shows a much smaller range of values than for the sandstones. The quartzites invariably show a low cementing value. Their specific gravity from tests made usually lies between 2.6 and 2.8 and their average weight per cubic foot is about 167 pounds. Their water absorption runs from a few hundredths of 1 per cent to nearly 3 per cent.

GNEISS AND SCHIST.

Both gneiss and schist belong to the foliated metamorphic type of rocks. The former is in reality a metamorphosed granite and therefore shows physical properties similar to the granites. The average French coefficient of wear for the gneiss samples is about 9, being somewhat lower than for the granites, while their average hardness and toughness is about the same. Their specific gravity, weight per cubic foot, and absorption are approximately the same as for granite.

The schists show an average French coefficient of wear of about 12. Their average hardness is about 17.5 and their toughness averages 11, the latter being higher than for gneiss. It should be noted, however, that the toughness test for both gneiss and schist is made perpendicular to the plane of foliation. If taken horizontal to the plane of foliation much lower results would be obtained, as failure would then occur along these natural lines of cleavage. The specific gravity of schists usually lies between 2.65 and 2.90 and the average weight per cubic foot is about 181 pounds. Water absorption is seldom over 2 per cent for this family.

With the exception of the highly altered varieties, both gneisses and schists show a rather low cementing value.

CHERT.

Chert is a very hard material, but frequently shows a low resistance to wear, owing to its tendency to fracture along lines which have developed as shrinkage cracks in the rock structure. For this reason it is extremely difficult to test for toughness. The cementing value of pure chert is usually low, but some highly weathered deposits develop in service good cementing value, especially if a high-binding clay is associated with it. Comparatively few samples which have been submitted for examination have been found suitable for all tests. Of those examined, however, the French coefficient of wear has usually been found to lie between 2 and 8, with an average of 5; toughness between 7 and 26, with an average of 16; and the hardness coefficient between 19 and 20. Specific gravity usually lies between 2.4 and 2.65 and the average weight per cubic foot is about 160 pounds. Water absorption may run from a few tenths of 1 per cent to over 8 per cent.

SHALE AND SLATE.

Shales and slates are highly laminated rocks that tend to break into flat plates not suitable for road-building purposes. They are seldom used in road construction, except perhaps as a filling for sub-foundations. They vary greatly in nearly all of their physical properties.

RARE ROAD-BUILDING ROCKS.

A comparatively few samples of a number of families of rocks which are occasionally used in road building have been examined in the laboratories of the United States Office of Public Roads and Rural Engineering. They need not be considered in detail, but the usual ranges as well as the averages of results of the more important physical tests of these rocks are given in Table I.

TABLE I.—*The rare road-building rocks.*

Number of samples.	Name.	French coefficient of wear.		Toughness.		Hardness.	
		Ordinary range.	Average.	Ordinary range.	Average.	Ordinary range.	Average.
20	Amphibolite.....	11.3-26.7	16.7	12-40	19	16.6-19.0	17.5
10	Eclogite.....	12.7-22.7	16.1	14-28	26	18.4-19.3	18.5
12	Epidosite.....	10.0-18.7	13.0	10-23	16	17.6-19.5	18.0
11	Felsite.....	11.9-21.3	15.8	-----	16	-----	18.7
6	Peridotite.....	7.6-13.2	10.3	9-12	10	13.3-16.6	15.0
8	Serpentine.....	2.6-14.2	10.1	11-21	14	18.3-18.6	18.4
5	Trachyte.....	11.5-23.5	16.2	21-34	22	17.7-19.1	18.1
19	Syenite.....	7.0-18.7	13.1	8-22	14	17.3-19.2	18.1

SLAGS.

Many slag varieties resemble in certain outward respects the common road-building rocks. However, in general, they are more porous and glassy, and vary so greatly in physical properties that with reference to their physical characteristics from the standpoint of road construction they can not well be considered as a single class with definite limits or general average numerical values.

INTERPRETATIONS OF RESULTS OF PHYSICAL TESTS.

The results of physical tests are only of value in predetermining the suitability of a rock for a given type of road under given conditions when the behavior of other rocks, having the same general physical characteristics, is known. Much investigation is still necessary to accurately correlate laboratory tests with service results, but in this connection certain facts have been determined from experience, which may be briefly discussed under the different types of roads.

As the amount of traffic to which a road is or will be subjected is a most important consideration, and as the terms light, moderate, and heavy are commonly used in describing the amount of traffic, such terms should be defined. For the purpose of comparison it has been assumed that traffic of less than 100 vehicles per day is light, between 100 and 250 moderate, and over 250 heavy.

WATER-BOUND MACADAM ROADS.

The ideal rock for the construction of a water-bound macadam road resists the wear of traffic to which it is subjected to just that extent which will supply a sufficient amount of cementitious rock dust to bind or hold the larger fragments in place. It is generally admitted that the ordinary macadam road is not well suited to any considerable amount of automobile traffic, because such traffic rapidly removes the binder without producing fresh material to take its place.

Cementing value is a necessary quality for rocks used in macadam road construction. As determined by test, cementing values below 25 are called low; from 26 to 75, average, and above 75, high. In general, the cementing value should run above 25. For rocks which show a low French coefficient of wear, however, a relatively high cementing value is more necessary than for those which have a high French coefficient. Interpretation of results of the cementing value test is subject to a number of influencing considerations. For instance, it has been found that certain feldspathic varieties of sandstone give excellent results in this test, while experience has shown that they do not bind well when used in the wearing course of macadam roads. In the case also of certain varieties of the trap

group low results are frequently shown by laboratory tests for rocks which bind quite satisfactorily upon the road, provided traffic is sufficiently heavy to supply the requisite amount of fine material. Certain granites, gneisses, and schists which are not suitable for use as binding material give good results in this test. In such cases it is usually found that the highly altered nature of the material reduces its toughness and resistance to wear to such an extent as to condemn it for use.

Experience has shown that in general the following table of limiting values for the French coefficient of wear, toughness, and hardness may be used in determining the suitability of a rock for the construction of the wearing course of a macadam road:

TABLE II.—*Limiting values of physical tests of rock for water-bound macadam road construction.*

Character of traffic.	Limits of tests.		
	French coefficient of wear.	Toughness.	Hardness.
Light.....	5-8=(5-8 per cent wear).....	5-9	10-17
Moderate.....	8-15=(2.7-5 per cent wear).....	10-18	Over 14
Heavy.....	Over 15=(less than 2.7 per cent wear).....	Over 18	Over 17

With relation to the limitations for hardness it may be noted that as a result of comparing hardness and toughness tests of some 3,000 samples, the authors¹ have shown that when any given value for toughness falls within certain limits which define the suitability of the material for macadam road construction under given traffic conditions, the corresponding value for hardness will fall within similar limits for hardness. In this connection it will be seen, in Table II, that a maximum limit for hardness is only given in the case of light traffic. It has been found that the great majority of samples having a French coefficient of wear of from 5 to 8 and a hardness of over 17 are granites, quartzites, and hard sandstones, which are unsuited for use in the wearing course of water-bound macadam roads due to their lack of binding power.

BITUMINOUS ROADS.

For broken-stone roads which are maintained with dust palliatives, the same limits for French coefficient of wear and toughness should hold as for ordinary macadam roads.

In bituminous work observations indicate that in some cases it is advantageous to use a rock of relatively high absorption rather than one with low absorptive qualities, owing to a better adhesion of the bituminous material by a partial surface impregnation of the rock.

¹ Relation Between the Properties of Hardness and Toughness of Road-Building Rock, Journal of Agricultural Research, Vol. V, No. 19, D-3.

While the binding or cementing value of a rock is a most important consideration from the standpoint of ordinary macadam construction, the same is not true of broken-stone roads which are carpeted or constructed with an adhesive bituminous material. The French coefficient of wear is also of relatively less importance, owing to the fact that the fine mineral particles produced by the abrasion of traffic combine, or should combine, with the bituminous material to form a mastic which is held in place and protects the underlying rock from abrasion so long as by proper maintenance it is kept intact. The toughness of the rock is of more importance, as the shock of impact is to a considerable extent transmitted through the seal coat and may cause the underlying fragments to shatter. It would, therefore, seem that the minimum toughness of a rock for use in the construction of a bituminous broken-stone road or a broken-stone road with a bituminous-mat surface should, for light traffic, be no less than for ordinary macadam subjected to the same class of traffic. For moderate and heavy traffic, however, the same minimum toughness should prove sufficient, owing to the cushioning effect of the bituminous matrix. No maximum limit of toughness need be considered for any traffic.

In the case of bituminous concrete roads, where the broken stone and bituminous material are mixed prior to laying and consolidation, it generally appears advisable to set a minimum toughness of 6 or 7 for light-traffic roads, instead of 5, in order to insure that the fragments of rock which have been coated with bitumen shall not be fractured under the roller during consolidation; and 12 or 13 for moderate and heavy traffic, instead of 10 and 19, as in the case of water-bound macadam roads.

Bearing in mind the fact that availability, cost, and various local conditions may often modify the selection of proper limits, Table III may be used as a general guide for minimum limits of French coefficient of wear and toughness in connection with bituminous broken-stone roads.

TABLE III.—*Minimum limits of physical tests of rock for bituminous-road construction.*

Type of road.	Light to moderate traffic.		Moderate to heavy traffic.	
	French coefficient of wear.	Toughness.	French coefficient of wear.	Toughness.
Broken stone with bituminous carpet.	5=(not over 8 per cent wear).	5	7=(not over 5.7 per cent wear).	10
Bituminous broken stone with seal coat.				
Bituminous concrete with or without seal coat.	7=(not over 5.7 per cent wear).	7	10=(not over 4 per cent wear).	13

PORTLAND CEMENT CONCRETE AND STONE BLOCK.

The most desirable limitations for broken stone to be used as coarse aggregate in Portland cement concrete wearing surfaces has not as yet been ascertained. In general, however, it would seem that the low limit for hardness should be no less than the hardness of the mortar which binds the rock fragments together. At the present time a minimum hardness of 12 for moderate and 16 for heavy traffic would appear reasonable. In consideration of the type of traffic to which concrete roads are subjected, a minimum toughness of 8 is suggested.

Stone blocks are usually manufactured from granite or sandstone, although other rocks may also be used. Specifications for granite block adopted in 1914 by the American Society of Municipal Improvements¹ call for a toughness of not less than 9 and a crushing strength of not less than 20,000 pounds per square inch. It would appear wise to also require that the hardness be not less than 16.

APPENDIX.

The results of all of the physical tests made on rock samples in the laboratory of the Office of Public Roads and Rural Engineering from the date of its installation in 1902 up to January 1, 1916, are included in Table V, together with the results obtained by Logan Waller Page for the Massachusetts State Highway Commission previous to 1902.

The rocks are classified according to their location, so that this table shows the availability and character of the materials, as far as they have been tested, throughout the United States.

Table IV shows the number of samples of material tested in the different States.

TABLE IV.—*Geographical distribution of samples tested.*

State.	Number of samples tested.	State.	Number of samples tested.	State.	Number of samples tested.
Alabama.....	29	Massachusetts.....	179	South Dakota.....	11
Arizona.....	3	Michigan.....	84	Tennessee.....	61
Arkansas.....	14	Minnesota.....	16	Texas.....	62
California.....	101	Mississippi.....	11	Utah.....	13
Colorado.....	21	Missouri.....	33	Vermont.....	32
Connecticut.....	43	Montana.....	4	Virginia.....	404
Delaware.....	30	Nebraska.....	11	Washington.....	212
Florida.....	9	New Hampshire.....	22	West Virginia.....	139
Georgia.....	157	New Jersey.....	72	Wisconsin.....	139
Idaho.....	9	New York.....	136	Wyoming.....	3
Illinois.....	122	North Carolina.....	137		
Indiana.....	151	Ohio.....	138		3,605
Iowa.....	23	Oklahoma.....	50	Canada.....	49
Kansas.....	11	Oregon.....	14	Porto Rico.....	12
Kentucky.....	41	Pennsylvania.....	599	Cuba.....	4
Louisiana.....	7	Rhode Island.....	38		
Maine.....	72	South Carolina.....	26	Total.....	3,670
Maryland.....	116				

¹ Proceedings of the 1914 Convention of the American Society of Municipal Improvements, p. 511.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916.

ALABAMA.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
1108	Francis.	Calhoun.	Chert.....	Pounds. 153	Pounds. 1.74	9.0	4.4	19.3	11	22
1478	Anniston.	do.	Limestone.....	168	.27	3.9	10.3	15.2	9	62
4382	do.	do.	Quartzite.....	165	.20	3.4	11.7	19.7	21	2
2490	Cullman.	Cullman.	Sandstone.....	153	.94	4.8	8.3	15.1	10	37
7387	do.	do.	do.	156	.97	9.2	4.4	18.5	6	4
7588	do.	do.	do.	150	.11	6.6	6.1	17.8	6	5
7786	do.	do.	Feldspathic sandstone.....	156	2.00	8.6	4.7	15.6	7	33
2451	do.	do.	Limestone.....	168	.55	3.4	11.6	15.1	8	37
2856	do.	do.	do.	163	.62	6.8	5.9	12.0	6	36
5054	Selma.	Dallas.	do.	163	1.56	7.8	5.1	15.0	7	25
7031	Gadsden.	Etowah.	do.	168	.31	4.7	8.5	15.4	4	15
805	Berry.	Fayette.	do.	168	.34	5.1	13.0	(1)	(1)	(1)
426	Farmsdale.	Hall.	do.	162	2.56	17.4	2.3	(1)	(1)	(1)
391	Birmingham.	Jefferson.	Chert.....	162	1.28	10.2	3.9	(1)	(1)	(1)
392	do.	do.	do.	159	2.24	8.2	4.9	(1)	(1)	(1)
393	do.	do.	do.	153	3.40	9.5	4.2	(1)	(1)	(1)
966	Leeds.	do.	do.	162	.64	15.8	2.5	(1)	(1)	(1)
395	Birmingham.	do.	Blast-furnace slag.....	168	.54	7.6	5.2	14.2	6	58
2493	do.	do.	Slag.....	159	1.32	9.9	4.0	15.7	6	14
8879	do.	do.	Blast-furnace slag.....	156	2.73	10.1	4.0	15.7	24	24
8880	do.	do.	do.	175	.68	(1)	(1)	17.0	49	81
442	do.	do.	Dolomite.....	168	1.24	5.7	7.1	(1)	(1)	(1)
1517	New Decatur.	do.	Limestone.....	159	2.91	6.5	6.1	15.4	10	129
6856	Leeds.	Morgan.	Crystalline limestone.....	172	.95	3.9	10.2	15.4	7	106
7937	do.	St. Clair.	Weathered chert.....	143	.54	13.8	2.9	(1)	(1)	13
2854	Dorville Switch.	Tuscaloosa.	Limestone.....	168	1.10	4.6	8.8	17.7	8	57
1575	Furnan.	Wilcox.	do.	162	2.76	4.8	8.4	10.3	7	55
1580	Snowhill.	do.	do.	162	2.57	17.1	8.9	17.1	8	68
1643	Pineapple.	do.	do.	156	4.89	5.3	7.5	11.0	6	65

ARIZONA.

7837	(2) Phoenix.	Cochise.	Limestone.....	168	0.41	5.3	7.6	18.1	6	43
4408	U. S. Government.	Maricopa.	Schist.....	187	.31	3.1	12.9	17.5	14	54
4103		do.	Altered andesite.....	162	1.95	2.4	16.5	17.6	23	500

¹ Test not made.² Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

ARKANSAS.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Commenting value.
4754	Herbert Springs.....	Cleburne.....	Slate.....	Pounds. 168	Pounds. 0.72	5.6	7.1	9.3	16	21
5680	(1).....	do.....	Argillaceous sandstone.....	168	1.35	3.6	11.2	11.4	19	117
5403	Van Buren.....	Cravford.....	Feldspathic sandstone.....	162	.87	4.5	8.9	15.2	10	34
8921	Alma.....	do.....	Sandstone.....	165	.79	2.3	17.0	18.3	10	8
2846	Conway.....	Faulkner.....	Ferruginous sandstone.....	159	1.63	4.9	8.1	17.1	9	23
438	Hot Springs.....	Garland.....	Chert.....	162	.46	11.1	3.6	(2)	(2)	(2)
7629	Hopk.....	Hempstead.....	Ferruginous sandstone.....	184	1.54	6.9	5.8	18.2	12	32
2298	Paris.....	Logan.....	Feldspathic sandstone.....	159	1.27	2.4	16.9	18.9	10	77
1353	Texasiana.....	Miller.....	Ferruginous sandstone.....	178	2.28	4.6	8.6	18.2	16	26
2158	Little Rock.....	Putasqui.....	Ferruginous sandstone.....	175	1.95	2.3	17.4	18.9	37	41
742	Fort Smith.....	Sebastian.....	Feldspathic sandstone.....	156	1.39	4.7	10.1	(3)	(3)	50
743	do.....	do.....	Sandstone.....	162	1.28	3.7	10.7	(3)	(3)	70
6351	Bald Knob.....	White.....	do.....	159	2.05	2.2	18.2	17.9	18	41
6954	(1).....	Yell.....	Quartzite.....	165	.54	2.7	14.8	19.0	22	8

CALIFORNIA.

1227	Oakland.....	Alameda.....	Rhyolite (altered).....	165	0.36	1.7	23.0	18.7	33	37
5150	do.....	do.....	Altered rhyolite.....	168	.50	2.7	14.8	17.9	14	25
4372	do.....	do.....	Feldspathic sandstone.....	168	.48	4.7	8.5	16.5	5	177
4373	do.....	do.....	do.....	168	.51	3.6	11.2	18.6	21	39
4377	do.....	do.....	do.....	168	.44	3.0	13.4	18.8	24	13
5151	do.....	do.....	do.....	168	.41	3.5	11.4	17.8	12	68
4376	do.....	do.....	do.....	168	.48	2.2	18.0	18.7	14	94
4375	do.....	do.....	Altered Basalt.....	178	1.43	5.3	7.5	18.0	15	130
8892	Newark.....	do.....	Quartz breccia.....	162	1.80	10.5	3.5	19.4	9	18
9369	Dumbarton.....	do.....	Chalcidonic quartz.....	165	.35	8.5	4.7	(3)	(3)	8
8891	Newark.....	do.....	Ferruginous chert.....	184	.14	15.9	2.5	(3)	(3)	33
9370	Dumbarton.....	do.....	Serpentine.....	156	4.04	11.0	3.6	12.3	6	86
9371	do.....	do.....	do.....	147	2.73	16.4	2.4	14.0	(2)	49
2031	do.....	do.....	Chert conglomerate.....	165	.05	7.1	5.6	(3)	(3)	5
2031	Milton (5 miles east of).....	Calaveras.....	Rhyolite.....	168	.19	2.1	19.0	19.5	20	17
2032	Milton (3 miles east of).....	do.....	Altered basalt.....	181	.58	27.4	19.2	19.2	19	42
2036	Milton.....	do.....	Altered andesite.....	178	.11	1.5	26.0	18.8	44	32
2350	Valley Springs (near).....	do.....	Quartzite.....	178	.41	3.4	11.8	19.5	15	3
2351	do.....	do.....	Hornblende chlorite schist.....	178	.84	2.8	14.4	18.9	17	29

5147	San Pablo.....	Contra Costa.....	Feldspathic sandstone.....	168	5.55	2.6	15.2	18.2	16	28
5148	Albany.....	do.....	do.....	168	1.04	5.0	7.9	17.0	11	56
2925	Red Hill.....	Fresno.....	Epidoite.....	187	2.22	2.1	18.7	17.6	11	29
7605	Bakersfield.....	Kern.....	Diorite.....	184	0.8	3.7	10.8	19.3	36	6
578	Los Angeles.....	do.....	Granite.....	162	5.91	14.8	2.7	(2)	(2)	28
2436	Claremont.....	do.....	do.....	162	5.7	(2)	18.1	18.1	4	22
2438	Glendale.....	do.....	Altered granite.....	165	9.9	4.8	8.4	18.5	20	27
3261	Glendale.....	do.....	Hornblende granite.....	165	4.2	2.5	15.9	19.0	22	2
2289	Spadra.....	do.....	Rhyolite.....	147	1.32	5.6	7.2	18.0	10	44
2553	do.....	do.....	do.....	168	4.40	2.6	15.2	19.7	21	46
2946	Spadra (near)	do.....	Weathered trachytic rhyolite.....	140	5.29	4.4	9.0	16.2	17	191
2947	do.....	do.....	Trachytic rhyolite.....	153	1.49	5.1	7.9	18.7	19	16
3163	do.....	do.....	Altered rhyolite.....	134	7.15	6.8	5.9	16.5	9	282
2290	do.....	do.....	Andesite.....	178	1.3	2.3	17.2	18.3	12	149
2291	Hollywood.....	do.....	do.....	172	5.9	(2)	18.7	18.7	17	108
2293	do.....	do.....	Augite andesite.....	165	2.43	3.4	11.9	16.6	18	500+
2139	do.....	do.....	Andesite.....	172	8.3	2.2	17.9	17.7	29	500+
2934	San Pedro (near)	do.....	Altered andesite.....	156	21	8.4	8.4	(2)	(2)	135
2935	do.....	do.....	do.....	137	6.59	8.1	4.9	12.9	9	27
2983	Los Angeles.....	do.....	do.....	156	1.05	4.0	10.1	17.3	16	500+
3262	do.....	do.....	do.....	159	1.67	2.7	15.0	18.2	15	500+
3263	do.....	do.....	do.....	147	4.71	4.8	8.4	18.2	10	343
3264	do.....	do.....	do.....	159	2.17	(2)	17.5	17.5	14	500+
3346	Los Angeles.....	do.....	Hornblende andesite.....	162	1.07	3.7	10.8	16.9	17	500+
2293	Hollywood.....	do.....	Diorite.....	172	1.44	4.8	8.3	18.4	9	71
2335	do.....	do.....	Limestone.....	162	1.44	5.8	6.3	14.2	7	233
2333	Los Angeles.....	do.....	Trufaceous limestone.....	162	4.65	3.7	10.8	17.2	10	15
2352	do.....	do.....	Tromolite schist.....	181	.33	3.0	13.2	(2)	(2)	17
2396	San Pedro.....	do.....	Quartzite schist.....	165	.19	5.3	17.2	(2)	(2)	18
2354	do.....	do.....	Syenite.....	165	.40	2.3	16.7	18.2	12	25
2355	do.....	do.....	Syenite gneiss.....	165	1.52	2.4	(4)	18.7	9	39
2356	do.....	do.....	Biotite gneiss.....	165	1.11	3.2	12.6	18.7	11	32
2437	Glendale.....	do.....	do.....	172	.17	3.7	10.7	18.3	10	226
3166	Los Angeles.....	do.....	Granite breccia.....	172	.34	24.6	1.6	(2)	(2)	34
2593	Hollywood (near)	do.....	Altered trachyte.....	162	1.99	1.7	23.5	17.8	60	119
2597	Lancaster (near)	do.....	Basalt.....	178	.53	4.0	10.0	18.6	18	35
3164	do.....	do.....	Feldspar basalt.....	168	1.69	2.8	14.4	18.3	13	24
3571	do.....	do.....	Weathered feldspathic quartzite.....	175	.75	2.0	20.4	18.7	16	24
2657	Jasper Station.....	Mariposa.....	do.....	172	.25	2.4	16.9	18.7	8	31
2658	do.....	do.....	Diorite.....	187	19	1.7	23.8	18.7	34	28
2377	Riverside.....	do.....	do.....	175	1.18	7.3	5.5	17.1	5	31
3544	do.....	do.....	Rhyolite.....	165	.62	2.2	18.0	18.2	20	31
2075	Corona.....	do.....	Altered rhyolite.....	168	.29	1.8	21.7	19.7	24	20
8643	Corono (near)	do.....	Andesite.....	172	1.10	3.5	11.3	17.7	16	16
2076	do.....	do.....	Hornblende granite.....	162	.87	2.5	16.1	18.8	16	10
3135	do.....	do.....	Dolomitic marble.....	165	.26	6.3	6.4	14.2	5	63
3545	do.....	do.....	Pyroxene quartzite.....	196	.31	3.7	10.8	18.4	15	8
3546	do.....	do.....	Altered andesite.....	175	.29	1.4	28.6	19.3	36	19
2420	Folsom.....	Sacramento.....	Altered basalt.....	187	.17	1.7	23.5	19.5	37	19
8300	Fair Oaks.....	do.....	do.....	187	.17	1.7	23.5	19.5	37	19

2 Test not made.

1 Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

CALIFORNIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
2288	Colton.....	San Bernardino.	Marble.....	Pounds. 172	Pounds. .22	5.8	6.9	14.5	3	28
2434	Barstow.....	do.....	do.....	168	.17	4.4	9.1	14.4	4	48
7426	San Luis Obispo (near).	San Luis Obispo.	Feldspathic sandstone.....	163	2.62	4.7	8.6	13.3	9	102
3085	Rockaway.....	San Mateo.	Limestone.....	168	.44	4.5	8.9	(1)	(1)	32
4143	Vistacon.....	do.....	Feldspathic sandstone.....	162	1.54	2.5	10.3	14.9	7	44
5152	Rockaway.....	do.....	Calcareous chert.....	165	.25	4.6	8.6	13.0	11	44
1703	Santa Barbara.....	Santa Barbara.	Feldspathic sandstone.....	136	2.52	7.0	5.7	10.3	5	138
2128	Hope Rancho.....	do.....	Limestone.....	(1)	(1)	3.3	12.0	13.9	12	76
2130	Lomboc.....	do.....	Altered chert.....	(1)	(1)	(1)	(1)	19.7	5	25
2133	Lomboc (near).....	do.....	Chert.....	(1)	(1)	10.9	3.7	(1)	(1)	97
1004	Saratoga.....	Santa Clara.	Feldspathic sandstone.....	168	.40	4.9	8.1	17.1	19	46
1025	Palo Alto.....	do.....	Feldspar basalt.....	168	1.18	3.1	12.8	18.6	16	162
1026	do.....	do.....	Banded chert.....	162	.72	23.5	1.7	(1)	(1)	12
2010	do.....	do.....	Altered trachyte.....	175	.66	3.2	12.3	17.7	11	331
8098	Coyote.....	do.....	Siliceous limestone.....	168	1.27	2.3	17.3	16.7	8	75
1750	Montague.....	Siskiyou.	Andesite.....	150	3.80	6.8	5.9	16.3	10	21
1186	Cordelia (near).....	Solano.	Olivine basalt.....	175	.93	2.3	17.7	18.8	30	214
2758	Cordelia.....	do.....	do.....	175	.38	1.7	24.1	18.9	31	16
2759	do.....	do.....	do.....	172	1.72	3.2	12.7	18.5	19	85
5149	Bencia.....	do.....	do.....	178	1.35	3.1	12.9	18.3	30	45
5153	do.....	do.....	do.....	178	1.29	2.0	20.0	18.3	21	31
1187	Cordelia.....	do.....	Diorite.....	187	.35	2.1	19.3	(1)	(1)	29
5079	Petaluma (near).....	do.....	Andesite tuff.....	115	12.50	17.4	2.3	5.0	5	111
6576	Petaluma.....	Sonoma.	Basalt.....	181	.89	2.0	19.6	18.2	26	33
1705	Camarello.....	do.....	do.....	143	5.18	6.1	6.5	7.9	7	500+
2132	do.....	Ventura.	Altered andesite.....	(1)	(1)	6.1	6.6	13.4	9	500+
2637	do.....	do.....	Andesite.....	172	1.27	2.8	14.2	17.8	21	131
2570	Round Mountain.....	do.....	Volcanic breccia.....	137	8.79	8.8	4.5	12.2	3	96
2572	Ventura.....	do.....	Limestone.....	168	.47	2.1	18.7	16.0	10	96
2573	do.....	do.....	Sandstone.....	162	1.69	2.0	20.2	16.7	17	55
2573	Santa Paula Creek.....	do.....	Garnetiferous hornblende schist.....	187	1.19	2.4	16.7	16.4	11	112
2286	do.....	(1)	Argillaceous limestone.....	156	2.04	4.7	8.4	10.4	8	500+
2291	do.....	(2)	do.....	156	5.04	4.4	9.0	10.4	11	500+
2292	Hacienda.....	do.....	do.....	156	5.04	4.4	9.0	10.4	11	500+

COLORADO.

3113	Boulder.....	Sandstone.....	146	2.11	5.3	7.6	16.5	7	16
3114	do.....	Augite andesite.....	175	.52	3.0	13.3	18.3	18	135
3116	do.....	Altered andesite.....	156	2.73	2.6	15.3	18.3	20	73
3204	Crags.....	Altered granite.....	165	.24	2.4	16.7	18.8	17	13
2106	Silver Cliff.....	Rhyolite breccia.....	134	5.53	7.8	5.1	(1)	(1)	500+
2384	do.....	do.....	128	6.11	5.6	7.1	15.5	7	47
4994	Denver.....	Slag (smelter).....	215	.25	4.3	9.3	(1)	(1)	82
2458	Colorado Springs (near).....	Trochite.....	134	4.21	3.2	12.7	19.1	21	14
1372	Portland.....	Biotite granite.....	162	.42	8.2	4.9	(1)	(1)	71
396	Lake City.....	Limestone.....	156	2.80	4.5	8.8	(1)	(1)	327
387	Sherman.....	Rhyolite breccia.....	162	3.21	5.7	7.7	(1)	(1)	(1)
398	Lake Shore post office.....	Porphyritic granite.....	175	.44	8.7	4.6	(1)	(1)	(1)
406	do.....	Rhyolite tuff.....	162	15	8.1	5.0	(1)	(1)	(1)
399	Capitol City (near).....	Brecciated felsite.....	156	2.90	10.3	3.8	(1)	(1)	(1)
407	Lake City (near).....	Andesite.....	162	3.13	3.4	11.9	(1)	(1)	(1)
408	do.....	Augite andesite.....	162	2.83	3.5	11.5	(1)	(1)	(1)
409	do.....	Diorite.....	168	2.00	6.4	11.3	(1)	(1)	(1)
3293	Golden.....	Basalt.....	172	1.03	3.3	12.5	(1)	(1)	(1)
4724	Fort Collins.....	Limestone.....	159	1.43	2.2	17.9	15.9	15	292
1602	La Junta.....	do.....	153	3.24	6.5	6.1	(1)	(1)	32
				6.04	7.3	3.5	3.0	7	95

CONNECTICUT.

2798	Danbury.....	Marble.....	172	0.39	5.7	7.0	15.2	6	41
3177	Bridgeport.....	Feldspathic quartzite.....	165	.38	2.2	18.2	18.5	12	15
3178	do.....	Granite gneiss.....	165	.37	2.4	16.8	18.5	10	35
6111	do.....	do.....	165	.25	2.5	16.3	18.8	9	15
6112	do.....	Biotite gneiss.....	162	1.02	3.0	13.3	18.0	11	16
3223	do.....	Dialase.....	190	.17	3.3	12.0	18.3	30	37
3477	do.....	do.....	184	.27	1.1	36.4	(1)	(1)	82
253	Danbury.....	do.....	(1)	(1)	2.4	17.0	(1)	(1)	(1)
2250	Rockyhill.....	Altered dialase.....	187	.55	1.7	23.8	18.2	24	500+
2381	Canton.....	Gabbroitic diabase.....	184	1.06	(1)	(1)	18.0	13	50
3320	Rockyhill.....	Altered diabase.....	184	1.35	1.8	22.7	16.8	22	192
5977	Suñid.....	do.....	187	.27	1.9	29.8	18.3	33	85
7309	Hartford.....	do.....	178	1.80	2.1	18.9	17.2	12	200+
4013	Plainville.....	Basalt.....	184	.30	2.1	13.4	18.1	22	170
2873	New Milford.....	Hornblende schist.....	187	.30	3.5	11.4	18.4	6	21
6995	Torrington.....	do.....	198	.12	3.0	13.3	16.5	8	9
5815	do.....	Granite gneiss.....	165	.35	(1)	(1)	18.3	17	32
6905	Sharon.....	Sliteous dolomite.....	178	.56	5.5	7.3	11.3	7	49
6750	Torrington.....	Amphibolite.....	196	.16	2.3	17.4	16.9	10	16
2241	Middlesex.....	Diabase.....	184	1.08	1.7	23.3	16.5	8	500+

² Exact locality not known.¹ Test not made.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916—Contd.

CONNECTICUT—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
11	Meriden.....	New Haven.....	Augite diabase.....	Pounds, 178	Pounds, (1)	3.2	12.5	(1)	(1)	(1)
71	do.....	do.....	Diabase.....	(1)	(1)	2.6	15.5	(1)	(1)	(1)
215	do.....	do.....	do.....	(1)	(1)	2.2	18.8	(1)	(1)	(1)
349	do.....	do.....	do.....	175	.77	3.5	11.5	(1)	(1)	(1)
467	Meriden.....	do.....	do.....	181	.65	2.4	16.9	(1)	(1)	287
1204	do.....	do.....	Altered diabase.....	172	1.03	2.4	16.5	17.6	15	500+
1324	Ansonia.....	do.....	Diabase.....	190	.16	1.8	22.3	17.9	32	154
2249	Meriden.....	do.....	Altered diabase.....	181	.43	1.8	22.2	17.3	17	500+
5002	do.....	do.....	do.....	175	.31	3.4	11.8	16.6	8	376
5758	Branford.....	do.....	do.....	184	2.17	2.0	20.4	18.6	23	40
8178	(3)	do.....	Diabase.....	184	1.24	2.1	19.0	17.5	19	114
954	Ansonia.....	do.....	Basalt.....	187	.59	2.1	19.2	(1)	(1)	(1)
1323	do.....	do.....	Biotite gneiss.....	168	.40	3.1	12.9	17.6	20	48
2795	Levyard.....	do.....	do.....	184	.19	3.4	11.8	18.0	18	28
1042	Rockville.....	New London.....	Hornblende schist.....	187	.23	2.0	19.6	(1)	(1)	101
1061	do.....	Tolland.....	Diabase.....	187	.18	1.9	21.1	18.7	43	58
940	do.....	do.....	do.....	168	.23	2.2	18.5	17.7	10	33
953	do.....	do.....	Gneiss.....	162	.08	4.7	8.5	16.6	(1)	35
1104	do.....	do.....	Altered biotite gneiss.....	190	.47	3.4	11.7	17.6	7	46
8177	do.....	do.....	Gneiss.....	162	.67	5.2	7.7	19.0	(1)	(1)
206	Windham.....	do.....	Hornblende schist.....	162	(1)	11.2	3.6	13.8	6	30
1615	Plainfield.....	do.....	Diabase.....	162	1.03	(1)	(1)	13.6	(1)	25
1616	Willimantic (near).....	do.....	Granite.....	165	1.12	(1)	(1)	(1)	(1)	(1)
	do.....	do.....	Biotite granite.....	165	1.12	(1)	(1)	(1)	(1)	(1)

DELAWARE.

858	Greenbank.....	New Castle.....	Quartzite.....	187	.08	2.7	15.1	18.4	30	31
862	do.....	do.....	Quartzite (micaceous).....	168	.10	2.6	15.2	(1)	(1)	20
864	Wilmington.....	do.....	Pyroxene quartzite.....	190	.12	2.2	18.3	(1)	(1)	13
1364	do.....	do.....	do.....	181	.10	2.1	18.7	18.5	24	7
5711	(2)	do.....	Feldspathic quartzite.....	168	.27	2.1	16.3	18.7	21	15
863	Wooddale.....	do.....	Hornblende schist.....	196	.12	3.0	13.6	16.5	18	54
2012	Mill Creek Hundred.....	do.....	Biotite schist.....	168	.83	6.6	6.1	(1)	(1)	75
2029	Wooddale.....	do.....	do.....	175	.39	3.3	12.2	16.8	10	33
2574	do.....	do.....	Hornblende schist.....	196	.23	2.8	14.3	17.4	19	20
3490	Ashland.....	do.....	do.....	187	.19	4.3	7.2	17.2	9	26
3535	Marshallton.....	do.....	do.....	190	.10	5.2	7.7	17.8	11	5

4033	Wooddale.....	do.	do.	175	19	4.5	8.8	17.8	10	26
4615	(2).....	do.	do.	175	43	5.4	17.2	17.2	11	21
5875	Newark.....	do.	Hornblende schist	187	29	2.6	15.4	17.7	(1)	40
885	Wooddale.....	do.	Granite.....	165	15	3.4	11.9	(1)	6	22
2515	do.....	do.	Biotite granite	175	37	3.9	10.3	17.7	8	34
4032	do.....	do.	do.....	168	37	5.1	7.9	18.3	18	17
1363	Wilmington.....	do.	Amphibolite	172	13	1.6	41.7	18.6	18	14
1365	do.....	do.	Gabbro.....	187	16	1.6	25.3	18.2	17	19
3998	(3).....	do.	Hypersthene gabbro	187	17	3.7	10.8	18.0	9	18
2247	(3).....	do.	Limestone	125	9.01	(1)	(1)	16.2	6	(1)
2248	(3).....	do.	do.....	125	8.86	(1)	(1)	17.6	6	(1)
3452	(3).....	do.	Serpentine	147	5.52	15.1	2.6	10.0	3	500+
3533	Rockesin.....	do.	Biotite gneiss.....	172	54	12.8	3.1	17.3	7	46
3534	Marshallton.....	do.	Hornblende gneiss	190	.02	5.6	7.2	18.0	12	21
4921	(4).....	do.	Biotite gneiss.....	175	.97	4.4	9.2	17.0	5	55
5713	(4).....	do.	do.....	172	.19	4.8	8.8	18.0	8	18
8736	Mill Creek Hundred.....	do.	do.....	175	.24	4.5	8.8	18.2	7	19
8919	Newark (near).....	do.	do.....	172	.57	5.0	8.0	15.9	5	21
5712	(2).....	do.	Dolomitic marble.....	178	.35	4.2	9.6	14.3	6	31

FLORIDA.

1129	Gainesville.....	Alachua.....	Chert.....	(1)	(1)	13.9	2.9	(1)	(1)	64
3018	Raleigh.....	do.....	do.....	153	1.66	7.1	5.6	(1)	(1)	6
1169	Floral City.....	Citrus.....	Siliceous limestone	155	6.93	17.6	2.3	(1)	(1)	230
6858	(2).....	do.....	Limestone	(1)	(1)	(1)	(1)	(1)	(1)	38
702	Tampa.....	Hillsborough.....	Dolomite.....	162	4.80	18.6	2.2	(1)	(1)	135
6963	do.....	do.....	Limestone.....	150	21	9.4	4.3	(1)	(1)	5
5974	Fort Myers.....	Lee.....	Shell limestone.....	153	3.17	13.1	3.0	12.3	6	65
8387	Ocala.....	Marion.....	Weathered chert.....	143	.30	10.9	3.7	18.8	13	10
7218	Live Oak.....	Suwannee.....	Limestone.....	162	1.06	(1)	(1)	12.1	3	37

GEORGIA.

417	(2).....	Bartow.....	Dolomite.....	181	0.76	8.2	4.9	(1)	(1)	(1)
8092	Cartersville.....	do.....	do.....	178	.18	(1)	(1)	17.5	14	26
9577	Union City.....	Campebell.....	Granite.....	165	.28	3.0	13.3	18.5	6	16
424	Chickamauga Park.....	Catoosa.....	Decomposed limestone	168	.32	4.9	8.3	(1)	(1)	(1)
8721	Graysville.....	do.....	Siliceous limestone	168	.32	5.5	7.3	14.7	7	30
8708	Summerville.....	Chattooga.....	Limestone.....	168	.27	4.5	8.9	15.7	9	41
9338A	Holton (2 miles north of).....	Bibb.....	Biotite gneiss.....	(1)	(1)	(1)	(1)	16.2	4	(1)
9338B	do.....	do.....	do.....	165	2.00	5.7	7.0	19.3	4	14
383	Canon.....	do.....	do.....	228	.14	2.9	13.8	(1)	(1)	15
9329	Ball Ground.....	Cherokee.....	Eclogite.....	168	.28	7.7	5.2	11.2	2	31
415	(4).....	Coweta.....	Marble.....	190	.21	2.3	17.4	(1)	(1)	8
			Dabase.....							

¹ Test not made.² Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916*—Contd.

GEORGIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
9580	Newman (near)	Coweta.	Diabase.	Pounds. 190	Pounds. .36	2.4	17.0	18.7	28	17
9581	do.	do.	do.	190	.40	2.2	19.3	19.3	37	31
421	Lithonia.	De Kalb.	Acid granite.	168	.12	4.8	8.3	(¹)	(¹)	9
423	Stone Mountain Station.	do.	do.	162	.16	5.3	7.5	(¹)	(¹)	15
9140	Atlanta.	do.	Hornblende gneiss.	175	.83	5.1	7.9	16.8	6	26
5580	Stone Mountain 2.	do.	Muscovite granite.	(¹)	(¹)	(¹)	(¹)	18.2	9	(¹)
9325	Lithonia.	do.	Granite.	165	.14	4.6	8.7	18.5	5	18
9326	do.	do.	do.	165	.36	5.1	7.8	18.3	3	9
9327	do.	do.	do.	165	.24	4.5	8.9	18.8	4	14
9579	Stone Mountain.	do.	Muscovite granite.	168	.25	4.4	8.1	18.5	6	12
416	New Elberton.	do.	Granite.	168	.15	3.0	13.1	(¹)	(¹)	9
7941	Oglethorpe.	do.	Biotite granite.	(¹)	(¹)	(¹)	(¹)	18.4	9	(¹)
8691	Rome.	Floyd.	Limestone.	168	.18	6.1	6.6	15.5	4	48
8907	Atlanta (near).	do.	Feldspathic quartzite.	165	.34	2.8	14.3	19.0	16	17
8921	do.	do.	do.	162	.51	5.1	7.8	18.5	20	8
9391	do.	do.	Schistose quartzite.	172	.32	3.5	11.4	18.8	11	25
7020	Atlanta (8 miles north of)	do.	Sericite schist.	168	.24	4.0	10.0	17.8	10	9
9576	Atlanta (near)	do.	Biotite schist.	168	.58	6.4	6.2	17.7	7	16
9320	do.	do.	do.	175	.26	5.4	7.4	15.5	16	26
9153	do.	do.	Orthoclase biotite schist.	168	.54	3.1	12.9	18.0	14	15
9177	do.	do.	Biotite schist.	168	.71	8.6	4.7	(¹)	(¹)	12
9178	do.	do.	Mica schist.	168	.49	6.1	6.6	18.3	(¹)	14
9180	do.	do.	Hornblende schist.	187	.52	4.3	9.4	17.7	6	19
9182	do.	do.	Biotite schist.	178	.55	4.6	8.7	16.5	9	42
9195	do.	do.	Hornblende schist.	187	.54	5.3	7.5	18.3	10	18
9197	do.	do.	Hornblende epidote schist.	184	.43	6.5	6.2	17.7	15	25
9198	do.	do.	do.	187	.24	5.3	7.6	17.7	9	27
9302	do.	do.	Biotite schist.	168	.47	7.0	5.7	(¹)	8	20
9304	do.	do.	do.	168	.59	7.6	5.3	(¹)	(¹)	39
9308	do.	do.	do.	172	.26	6.1	6.6	18.3	14	14
9589	do.	do.	Hornblende schist.	178	.32	3.5	11.4	18.0	15	26
422	do.	do.	Hornblende gneiss.	187	.98	3.9	10.2	(¹)	(¹)	(¹)
9142	do.	do.	Hornblende biotite gneiss.	172	.54	4.1	9.8	19.0	7	18
9145	do.	do.	Biotite gneiss.	172	.54	4.3	9.3	18.5	9	12
9138	do.	do.	Granite gneiss.	172	.27	2.8	14.3	18.2	7	20
9139	Atlanta.	do.	do.	165	.39	2.2	12.5	18.3	10	18
9141	Atlanta (near)	do.	do.	163	1.09	4.3	8.3	18.3	5	18
9146	College Park.	do.	Biotite gneiss.	168	.62	10.3	3.8	17.0	4	25
9148	Atlanta (near)	do.	do.	165	.67	11.8	3.4	(¹)	(¹)	17

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

GEORGIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.					
9301	Atlanta (near)	Fulton	Granite porphyry	139	2.39	6.9	5.8	(1)	(1)	68
9311	Atlanta	do.	Granite	168	.25	6.8	5.9	17.7	5	12
9313	Atlanta (near)	do.	Biotite granite	165	.31	6.8	5.9	18.5	31	15
9315	do.	do.	Weathered granite	165	1.13	13.4	3.0	14.3	5	21
3092	Atlanta	do.	Granite	(1)	(1)	(1)	(1)	18.3	8	(1)
3100	do.	do.	do.	(1)	(1)	(1)	(1)	18.3	8	(1)
9316	Atlanta (near)	do.	Biotite granite	168	.38	7.3	5.5	17.3	4	20
9317	do.	do.	do.	165	.60	12.8	3.1	15.0	4	23
9574	do.	do.	do.	165	.68	5.1	7.8	18.7	5	19
9575	do.	do.	do.	165	.43	3.1	12.9	18.5	9	25
9582	do.	do.	do.	168	.31	5.0	8.0	19.0	8	20
9583	do.	do.	Granite	162	.53	7.8	5.1	19.0	5	10
9585	do.	do.	Gneissoid granite	162	.69	7.9	5.1	17.7	(1)	34
9586	do.	do.	Altered granite porphyry	162	.62	8.1	4.9	17.7	(1)	21
9587	do.	do.	Biotite granite	168	.28	6.4	6.3	19.0	7	27
9587	do.	do.	do.	168	(1)	(1)	(1)	13.7	(1)	(1)
38	do.	do.	Chert	(1)	(1)	(1)	(1)	13.7	(1)	(1)
1639	Gameville	Cordon	Dolomitic marble	178	.26	7.0	5.7	13.7	7	57
1640	do.	Hall	do.	178	.21	4.1	3.9	9.6	5	27
1641	do.	do.	do.	175	.52	6.7	6.0	13.8	4	38
2469	do.	do.	do.	(1)	(1)	(1)	(1)	19.3	11	10
2470	do.	do.	Granite gneiss	(1)	(1)	(1)	(1)	18.2	8	11
2471	do.	do.	do.	(1)	(1)	(1)	(1)	15.5	6	26
9203	Cataula	do.	do.	(1)	(1)	(1)	(1)	15.5	6	26
9204	do.	Harris	Mica schist	172	.27	4.5	8.9	17.8	7	17
9331	do.	do.	Biotite gneiss	165	.26	4.6	8.7	18.7	7	20
9331	do.	do.	Granite gneiss	162	.98	2.6	15.3	19.0	7	9
9333	do.	Henry	Granite	162	.57	6.8	5.9	19.2	6	11
9336	do.	do.	do.	168	.36	6.5	6.2	18.3	4	10
420	Roberts Station	do.	Diabase	187	.42	2.6	15.2	(1)	(1)	(1)
9328	Harris City (2 miles from)	do.	Granite	162	.31	7.7	5.2	18.0	4	18
9578	Greenville (near)	Merrivether	do.	165	.47	3.5	11.4	18.7	6	21
8118	Holton (near)	do.	Biotite gneiss	168	.26	5.1	7.7	18.0	4	21
9334	Juliette (1 mile north of)	Monroe	Hornblende gneiss	184	.37	6.1	7.7	16.5	4	12
9332	Peach Quarry	do.	Quartzite	168	.39	2.3	17.4	18.0	15	27
9335	do.	do.	Aplite granite	165	.23	3.9	10.3	17.8	5	12
9539	Covington (near)	do.	Biotite granite	162	.85	9.1	6.8	18.5	(1)	12
9540	Oxford (near)	do.	Granite	162	.85	9.1	6.8	18.5	4	15
9541	do.	do.	do.	165	.55	4.9	4.9	18.5	(1)	15
9542	Covington	do.	Gneissoid granite	165	.63	8.0	10.0	18.2	(1)	14
9543	Covington (near)	do.	Altered rhyolite	162	1.25	10.5	3.8	18.2	7	37

	Pickens	Marble		10.2	3.9	12.7	29
9019	Tate	Marble	168	.34		4	29
9020	do.	do.	168	.48	(1)	4	29
9020	do.	do.	172	.26	12.3	8.7	29
9330	do.	do.	172	.19	12.0	12.0	41
6918	Portland	Siliceous limestone	172	.23	3.5	17.1	21
8857	Rock Mart	Dolomitic limestone	172	.23	3.4	10	33
8857	do.	do.	172	.26	11.6	15.7	45
8858	do.	Limestone	165	.37	9.0	(1)	(1)
419	Augusta (near)	Granite gneiss	165	.24	15.4	(1)	(1)
3733	Conyers	Biotite gneiss	165	.28	2.6	18.6	14
9503	Conyers (near)	do.	165	.24	4.4	18.0	24
9500	do.	Granite	165	.40	5.8	4	15
9501	do.	Gneissoid granite	165	.51	7.4	(1)	25
9502	do.	Granite	165	.08	3.7	18.0	19
9504	do.	do.	162	.04	4.7	18.7	11
9504	do.	do.	162	.32	8.9	18.3	11
9505	do.	do.	162	.18	10.8	18.7	9
468	Toccoa	Gneiss	162	.32	7.7	(1)	(1)
413	(?)	Limestone	162	3.35	10.6	(1)	86
414	Walker	Chert	143	3.42	27.9	(1)	6
418	(?)	do.	187	3.70	16.4	(1)	(1)

IDAHO.

	Ada	Rhyolite		6.1	6.6	15.3	14
1261	Boise	Basalt	134	5.87		6	14
1263	do.	do.	172	1.88	5.3	9	8
1264	do.	do.	180	1.02	14.9	12	500+
6162	Bannock	Olivine basalt	178	1.44	8.4	11	9
6163	Pocatello (2 miles southeast of)	Feldspathic sandstone	168	.74	(1)	6	7
6164	Pocatello (7 miles southeast of)	Feldspathic quartzite	165	.31	12.7	9	9
4394	Kootenai	Basalt	178	.98	19.0	32	2
1271	Coeur d'Alene	do.	153	5.14	5.2	6	464
1271	Moscow	do.	178	1.41	8.7	(1)	27

ILLINOIS.

	Quincy	Limestone		7.6	5.3	10.6	46
1322	Quincy	do.	165	1.66		6	46
2396	do.	do.	168	1.01	6.0	6	37
2397	do.	Limestone and chert	168	.51	7.8	5	67
437	Etco	Chert	156	3.30	5.9	(1)	12
584	do.	do.	150	4.13	2.7	(1)	5
1443	Ullin (near)	do.	162	.50	14.6	7	15
7148	Olive Branch	do.	150	1.69	6.9	(1)	(1)
7213	Brookville (near)	Argillaceous dolomite	162	1.82	12.0	3	64
7421	do.	do.	172	.82	6.4	10.6	105
7422	do.	do.	165	2.64	5.4	15.0	67
7423	do.	do.	165	3.45	6.1	14.2	74
7423	do.	do.	165	2.70	5.2	13.6	74
2391	Marshall	Limestone	165	.91	3.7	14.8	31

2 Exact locality not known.

1 Test not made.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

ILLINOIS—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
2392	Casey.....	Clark.....	Limestone.....	Pounds, 168	Pounds, .68	5.2	7.7	15.7	4	33
5846	do.....	do.....	do.....	168	.64	4.8	8.3	15.0	8	49
4422	Embaras.....	Coles.....	do.....	168	1.42	4.2	9.5	14.2	6	40
7615	Loxa.....	do.....	Argillaceous limestone.....	168	.43	4.8	8.3	15.0	7	38
716	Chicago.....	Cook.....	Dolomite.....	168	.58	4.4	9.1	(1)	(1)	30
756	do.....	do.....	do.....	168	.86	5.8	6.9	(1)	(1)	34
4126	(2).....	do.....	do.....	172	.84	6.0	6.6	15.1	8	34
5509	Thornton.....	do.....	do.....	162	2.15	4.9	8.2	13.5	7	16
5755	do.....	do.....	Siliceous dolomite.....	156	4.44	5.3	7.5	13.0	6	128
6953	do.....	do.....	Dolomite.....	172	1.02	6.1	6.6	12.7	7	24
7737	(2).....	do.....	do.....	168	.88	5.1	7.9	16.0	11	26
7739	Bellewood.....	do.....	Argillaceous dolomite.....	168	2.11	4.5	8.9	15.8	9	37
7754	Thornton.....	do.....	Dolomite.....	168	1.08	4.5	8.9	13.9	10	27
7768	Chicago.....	do.....	do.....	172	.76	4.8	8.3	15.8	10	40
7733	do.....	do.....	do.....	168	.99	4.2	9.5	13.8	7	34
8069	La Grange.....	do.....	do.....	168	1.59	6.5	6.1	16.0	6	32
8147	(2).....	do.....	do.....	162	1.53	4.9	8.1	13.0	4	46
8711	Hillside.....	do.....	Argillaceous dolomite.....	162	3.97	4.2	9.5	14.7	4	110
2165	do.....	do.....	Dolomite.....	(1)	(1)	12.7	3.1	15.8	4	33
2166	Chicago.....	do.....	Blasi-furnace slag.....	(1)	(1)	12.7	3.1	14.8	3	156
2167	do.....	do.....	do.....	(1)	(1)	9.4	3.3	15.0	8	11
2316	do.....	do.....	Slag.....	178	.33	13.5	3.0	17.5	(1)	16
8007	(2).....	do.....	Limestone.....	168	.56	4.7	8.5	16.5	4	52
5929	Chicago.....	do.....	Altered andesite.....	(1)	(1)	(1)	(1)	18.1	16	(1)
5929	do.....	do.....	do.....	162	1.64	9.1	4.4	14.2	6	32
2678	Naperville.....	Dupage.....	Dolomite.....	165	.34	4.6	4.6	17.0	8	40
5798	Emmhurst.....	do.....	Argillaceous dolomite.....	168	1.02	5.4	7.4	13.7	7	35
2389	Paris.....	Edgar.....	Limestone.....	165	.88	5.3	7.5	15.2	6	34
2390	do.....	do.....	do.....	165	.69	6.6	6.0	15.7	4	30
2424	Cherry point.....	do.....	do.....	168	.67	9.2	4.3	16.0	8	36
6370	Gillmore.....	Efingham.....	do.....	168	4.89	8.0	5.0	8.7	4	30
2401	Pontotoc.....	Hancock.....	Argillaceous limestone.....	159	3.71	8.5	6.2	8.7	5	40
2402	Hamilton.....	do.....	Limestone.....	159	3.71	6.5	5.0	17.2	4	61
2400	Gladstone.....	do.....	do.....	162	1.36	9.1	4.4	9.7	5	42
3258	Biggsville.....	Henderson.....	do.....	162	2.45	4.9	8.2	18.1	6	67
9228	Grafton.....	do.....	Argillaceous dolomite.....	159	3.68	6.1	6.6	12.5	5	26
9229	do.....	do.....	do.....	156	2.07	7.7	5.2	12.7	4	25
9230	do.....	do.....	do.....	162	1.83	7.1	5.6	16.5	4	14
452	(2).....	do.....	Limestone.....	168	1.80	13.1	3.0	(1)	(1)	(1)
4660	Tumell Hill.....	Jo Daviess.....	Sandstone.....	150	2.92	4.4	9.1	15.9	6	(1)
6598	Vienna (near).....	Johnson.....	Argillaceous limestone.....	165	2.92	3.8	10.5	17.8	20	73

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

ILLINOIS—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
770	Smithton.....	St. Clair.....	Limestone.....	Pounds..... 168	Pounds..... 30	4.4	9.2	(1)	(1)	(1) 88
786	do.....	do.....	do.....	168	17	5.9	6.8	(1)	(1)	81
7214	Columbia.....	do.....	do.....	162	2.56	3.4	11.6	11.9	5	48
7622	Stolle.....	do.....	do.....	168	28	4.3	9.2	14.3	7	23
7734	East St. Louis.....	do.....	do.....	168	47	4.3	9.4	14.3	8	69
8148	do.....	do.....	do.....	168	72	3.0	13.2	16.7	6	20
7652	Winchester.....	Scott.....	Argillaceous limestone.....	172	65	5.6	7.1	14.5	3	54
6083	Thornion.....	do.....	Dolomite.....	165	1.56	5.5	7.3	13.7	5	15
3225	Kalamazoo.....	Union.....	Limestone.....	168	61	4.2	9.5	(1)	(1)	16
5549	Anna.....	do.....	do.....	168	42	3.3	12.0	14.3	9	58
7623	do.....	do.....	do.....	165	1.68	5.0	8.1	15.3	5	40
2288	Farmount.....	Vermilion.....	do.....	163	1.20	5.1	7.9	14.0	8	35
1298	Joliet.....	Will.....	Dolomite.....	168	2.58	4.3	9.4	12.9	6	27
2774	do.....	do.....	do.....	165	1.33	5.8	6.9	15.4	5	23
2775	do.....	do.....	do.....	165	1.75	5.2	7.7	15.0	8	43
2776	do.....	do.....	do.....	172	2.87	4.7	8.4	15.7	10	74
2777	do.....	do.....	do.....	168	2.21	4.7	8.5	14.3	22	16
2773	do.....	do.....	Chert.....	153	3.84	7.1	5.6	19.2	6	100
(2)	do.....	do.....	Dolomite.....	165	.76	10.3	3.9	13.8	5	33
7374	Cook.....	do.....	Argillaceous dolomite.....	162	4.65	4.7	8.5	11.3		

INDIANA.

1346	Pleasant Mills.....	Adams.....	Dolomitic limestone.....	159	3.56	10.2	3.9	(1)	(1)	22
7744	Fort Wayne.....	Allen.....	Hornblende granite.....	168	.50	2.4	16.7	(1)	(1)	20
1382	Hope.....	Bartholomew.....	Limestone.....	172	1.71	5.9	6.7	10.2	5	41
1384	Burnsville.....	do.....	do.....	165	.97	6.0	6.7	7.3	8	25
1416	Grammer.....	do.....	do.....	139	1.37	6.2	6.5	14.8		49
1378	Montpelier.....	do.....	Dolomitic limestone.....	165	2.97	3.7	10.8	15.2	(1)	52
2077	do.....	do.....	Dolomite.....	172	1.19	6.4	6.2	(1)	(1)	28
9342	Harford.....	do.....	Dolomite.....	168	2.68	3.3	12.1	14.8	11	16
1206	Delphi.....	Carroll.....	Dolomitic limestone.....	172	.75	5.1	7.9	15.3	14	42
1344	Washington.....	do.....	Limestone.....	172	.50	8.7	4.6	16.2	21	30
5534	Logansport.....	Cass.....	do.....	168	.40	5.1	7.8	13.8	5	30
2851	do.....	do.....	Cherty limestone.....	168	.20	9.1	4.4	14.0	31	44
3865	do.....	do.....	Dolomite.....	168	.33	4.1	9.8	15.1	9	47

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916—Contd.

INDIANA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
1413	Deputy	Jefferson	Limestone	Pounds 168	Pounds .43	4.7	8.5	10.9	7	81
4699	do	do	do	168	.46	5.0	8.1	15.3	9	(1)
1458	Haydens	Jennings	do	168	.93	3.2	12.6	14.8	9	97
1488	Bewersville	do	Dolomitic limestone	168	.57	3.7	10.9	13.8	8	94
4702	North Vernon	do	do	162	3.79	4.4	9.1	14.9	8	(1)
515	Freelandville	Knox	Limestone	172	.65	3.8	10.6	(1)	(1)	42
540	Bicknell	do	Dolomitic limestone	168	.90	4.0	10.1	(1)	(1)	47
588	Freelandville	do	Argillaceous dolomite	175	1.26	2.5	16.1	(1)	(1)	179
4197	Mitchell	Lawrence	Limestone	153	5.77	8.1	5.0	2.7	4	75
do	do	do	Argillaceous dolomite	162	1.66	4.6	8.8	13.0	9	26
1423	do	do	Dolomitic limestone	168	.70	4.1	9.7	16.4	8	141
1489	Williams (near)	do	Limestone	159	3.08	6.2	6.4	10.3	6	(1)
4697	Bedford	do	do	156	2.46	13.3	3.0	5.7	3	(1)
4698	Lawrenceport	do	do	156	2.97	6.4	6.2	8.5	4	(1)
5027	Bedford	do	do	156	.76	4.2	9.5	15.3	9	38
5028	do	do	do	156	2.42	7.6	7.2	8.3	9	50
5029	(?)	do	do	165	.29	5.6	7.2	14.6	5	20
1379	Ingalls	Madison	do	165	1.41	4.3	9.3	11.8	7	28
1380	Alexandria	do	do	165	1.41	4.3	9.3	11.8	7	28
1381	Frankton	do	do	165	1.57	4.4	9.2	14.5	7	29
1714	Ingalls	do	do	168	.41	5.8	6.9	14.5	5	92
do	do	do	do	168	1.35	5.8	6.9	10.7	5	53
8752	Anderson	do	do	168	.41	4.5	8.9	17.0	4	39
1459	Shoals (near)	Martin	do	162	2.00	3.2	12.4	14.9	9	67
994	Peru	Miami	Dolomite	175	.73	3.6	7.1	14.2	14	(1)
1463	Bloomington	Monroe	Limestone	162	2.16	3.5	11.5	15.8	12	74
1464	do	do	do	150	4.44	10.8	3.7	0	4	63
1465	do	do	do	165	3.32	10.6	3.8	0	6	49
1466	do	do	do	165	.97	5.3	7.5	9.7	7	62
1467	do	do	Dolomitic limestone	165	1.70	3.0	13.4	15.2	13	41
8181	do	do	Limestone	168	.49	4.9	8.1	15.2	5	29
9450	Victor	do	do	162	1.98	9.9	4.1	11.8	5	(1)
1386	Waveland	Montgomery	do	160	1.85	3.9	12.2	8.7	5	43
1348	Kendall (near)	Newton	do	168	.33	4.1	9.7	16.4	12	33
8761	do	do	do	168	.33	3.8	10.5	14.8	15	35
6454	Petersburg	Pike	Carbonaceous limestone	175	1.64	2.7	15.0	17.2	20	66
2982	do	do	Siliceous limestone	165	2.23	4.4	9.0	18.8	6	86
2980	do	do	Sandstone, ferruginous	150	3.39	39.0	3.0	0	2	69
2981	do	do	Feldspathic sandstone	147	6.28	10.7	1.0	0	5	124
1461	do	do	Calcareous shale	172	.81	4.9	8.1	.2	9	71

1409	Rising Sun.....	Ohio.....	Limestone.....	168	.46	5.5	7.3	13.1	9
1462	Orleans.....	Orange.....	do.....	159	3.00	4.1	9.1	14.8	5
516	Spencer.....	Owen.....	do.....	163	.85	3.7	11.5	(1)	(1)
1341	Spencer (near).....	do.....	do.....	163	.88	3.7	10.9	13.8	17
1422	Spencer.....	do.....	do.....	162	3.00	3.4	11.8	9.5	21
1493	Mount Vernon.....	Posey.....	Dolomitic limestone.....	168	1.67	3.5	11.3	16.2	15
1492	do.....	do.....	do.....	168	1.8	1.8	21.7	13.4	108
1210	Greencastle.....	Putnam.....	Limestone.....	165	1.12	3.9	10.3	13.9	8
1343	Greencastle (near).....	do.....	do.....	168	1.79	3.9	10.3	17.3	8
1347	Greencastle.....	do.....	do.....	165	1.53	4.5	8.9	15.5	20
2111	do.....	do.....	do.....	168	.70	3.4	4.2	13.0	24
2112	do.....	do.....	do.....	168	.79	4.5	9.5	15.0	20
3368	do.....	do.....	do.....	168	.52	3.2	11.6	13.0	79
1212	Oakalla.....	do.....	do.....	168	.59	3.2	12.5	15.8	11
1345	Russellville.....	do.....	do.....	168	.62	3.2	12.5	14.2	72
1342	Greencastle.....	do.....	do.....	165	.99	4.4	9.0	13.7	29
5869	Ridgeville.....	Randolph.....	Dolomite.....	168	.43	4.3	9.2	12.9	22
1350	do.....	do.....	Dolomite.....	165	1.77	7.7	5.2	14.3	25
1659	do.....	do.....	Dolomite.....	165	.77	7.2	5.6	7.9	19
4701	Osgood.....	Ripley.....	Dolomite.....	168	2.11	8.7	4.6	16.7	6
4700	do.....	do.....	Dolomitic limestone.....	168	.62	5.0	8.0	13.5	10
5565	do.....	do.....	Limestone.....	168	.89	4.6	8.6	12.9	(1)
5737	Osgood.....	do.....	do.....	168	.64	4.0	10.0	14.2	(1)
1438	New Salem.....	Rush.....	Dolomite.....	168	1.06	8.1	5.0	13.7	9
1410	Lexington.....	do.....	Limestone.....	162	2.33	12.7	3.1	13.0	5
1436	Lexington.....	Scott.....	do.....	168	2.18	2.7	14.8	8.6	65
2005	Waldron.....	Shelby.....	do.....	165	2.27	3.3	12.3	12.2	9
2006	Shelbyville.....	do.....	do.....	162	2.37	4.2	9.5	7.7	103
2007	do.....	do.....	do.....	162	2.53	5.6	7.2	15.7	5
(1)	do.....	do.....	Argillaceous limestone.....	168	1.82	4.0	10.0	11.7	60
9135	Sullivan.....	Switzerland.....	Limestone.....	163	1.36	3.8	10.5	15.2	38
1411	Soapville.....	do.....	do.....	168	.80	5.4	10.0	11.1	20
1415	Vevay.....	do.....	Dolomitic limestone.....	168	.37	7.5	8.7	13.3	8
1494	Evansville.....	Vanderburg.....	Limestone.....	159	1.38	4.6	10.5	15.0	(1)
1349	Wabash.....	do.....	do.....	162	2.43	3.8	12.1	16.0	10
1390	do.....	do.....	do.....	162	3.29	3.3	9.3	13.0	27
1391	do.....	do.....	Dolomitic limestone.....	172	1.10	4.3	10.2	14.5	15
1647	do.....	do.....	Dolomitic limestone.....	165	.87	3.9	10.2	14.5	(1)
4657	do.....	do.....	Calcareous sandstone.....	156	5.10	7.0	5.7	17.2	142
880	Williamsport.....	Warren.....	do.....	168	.97	3.3	12.3	17.2	126
1460	Boonville.....	Warwick.....	Argillaceous dolomite.....	162	2.00	5.2	7.7	10.7	7
6773	(2).....	Washington.....	do.....	172	1.26	5.7	7.0	15.2	41
6876	Richmond.....	Wayne.....	Limestone.....	168	.89	4.5	8.9	15.3	6
1385	do.....	do.....	Dolomite.....	172	1.65	6.3	6.3	15.8	28
1377	Bluffton.....	Wells.....	do.....	172	.59	5.8	6.9	17.0	8
1387	do.....	do.....	Argillaceous dolomite.....	168	1.80	5.8	5.8	16.4	27
6872	do.....	do.....	Dolomitic limestone.....	168	1.04	7.7	11.9	14.3	4
1469	Monon.....	White.....	Limestone.....	168					20
9007	Columbia.....	Whitley.....	Limestone.....	168					4
9008	do.....	do.....	Argillaceous dolomite.....	172					8

Test not made.

Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916—Contd.

IOWA.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
462	Raymond.	Black Hawk.	Dolomite.	Pounds. 168	Pounds. 0.64	4.5	8.9	(¹)	(¹)	161
8912	Mason.	Cerro Gorda.	Limestone.	168	1.62	6.0	6.7	13.0	2	(¹)
8914	do.	do.	do.	165	1.53	3.7	7.1	13.0	3	(¹)
8913	do.	do.	Dolomite.	175	1.12	3.8	10.5	13.7	6	(¹)
455	Peosta.	Dubuque.	do.	159	3.30	11.6	3.4	(¹)	(¹)	32
7704	(²)	do.	Argillaceous dolomite.	171	1.59	14.6	2.7	13.6	6	42
7855	Farley (near).	do.	do.	168	4.13	11.3	3.5	5.1	4	45
7858	(²)	do.	do.	168	2.10	10.2	3.9	13.7	7	15
7859	Stone City.	do.	Dolomite.	(¹)	(¹)	7.6	5.2	(¹)	(¹)	24
7860	(²)	do.	Argillaceous dolomite.	173	.95	5.8	6.9	14.0	5	28
7854	(²)	do.	Argillaceous limestone	168	1.30	13.8	2.9	10.8	4	22
7856	(²)	do.	do.	165	3.10	12.0	6.2	12.0	5	37
7857	(²)	do.	do.	165	2.60	6.5	(¹)	5.2	3	36
8922	Dubuque.	do.	do.	172	1.57	4.7	8.6	13.7	9	32
5972	Ballenger.	Lee.	Limestone.	162	2.17	5.5	7.3	9.2	4	24
5525	Cedar Rapids.	Linn.	Dolomitic limestone.	172	1.34	6.7	6.0	16.8	11	30
6102	do.	do.	Dolomite.	156	3.81	14.9	2.7	(¹)	3	17
6103	do.	do.	Limestone.	168	1.64	4.6	8.8	10.0	8	18
5973	Peru.	Madison.	do.	165	1.55	4.6	8.7	15.6	8	29
5926	La Grande.	Marshall.	do.	165	2.14	4.6	8.7	15.3	6	56
7121	Buffalo.	Muscatine.	do.	165	2.50	5.1	7.9	7.9	3	45
383	Butterville.	Tama.	Argillaceous limestone.	162	3.23	21.9	1.8	(¹)	(¹)	(¹)
384	Montour.	do.	Dolomitic limestone.	162	1.65	6.7	5.9	(¹)	(¹)	(¹)

KANSAS.

1109	Arkansas City.	Cowley.	Limestone.	150	4.07	14.9	2.7	0.0	3	56
1111	do.	do.	do.	153	5.18	(¹)	(¹)	3.1	3	29
5248	Moline.	Elkford.	do.	159	1.62	7.2	5.6	10.8	5	23
1765	Oswego.	Labette.	do.	168	0.73	9.2	4.3	13.3	6	40
4127	do.	Leavenworth.	Quartzite.	165	0.33	2.2	18.2	19.3	25	18
4186	Fort Leavenworth.	do.	Argillaceous limestone.	162	2.38	4.6	8.7	15.1	7	37
4187	do.	do.	Limestone.	165	1.20	4.0	10.0	15.6	11	29
2689	Blue Rapids Township.	Marshall.	do.	156	3.22	6.3	4.2	9.0	4	31
2690	do.	do.	do.	150	5.65	9.6	6.4	15.0	3	34
2691	Stockdale.	do.	do.	150	6.18	8.6	4.6	11.7	3	35
9267	Fredonia.	Wilson.	Argillaceous dolomite.	168	1.01	9.0	4.6	12.8	4	12

KENTUCKY.

5748	Glasgow.....	Barren.....	Crystalline limestone	168	0.59	3.8	10.4	13.0	5	103
1993	Cadetsburg.....	Boyd.....	Sandstone.....	156	1.77	6.2	6.5	13.2	7	8
461	Cedar Bluff.....	Caldwell.....	Dolomite limestone.....	137	3.16	4.5	8.9	(1)	(1)	80
5552	Princeton.....	do.....	do.....	168	1.88	5.1	7.9	14.1	12	10
6575	Cedar Bluff.....	do.....	Limestone.....	168	1.11	4.3	9.4	16.1	10	43
7688	do.....	do.....	Argillaceous limestone.....	168	5.21	4.7	8.5	15.3	9	32
1631-1	Limestone.....	Carter.....	Limestone.....	165	1.25	(1)	(1)	14.3	7	71
1631-2	do.....	do.....	do.....	165	1.08	(1)	(1)	12.1	6	56
1631-3	do.....	do.....	do.....	165	1.08	(1)	(1)	12.1	6	55
5921	do.....	do.....	do.....	165	1.20	(1)	(1)	18.2	14	26
5922	do.....	do.....	Siliceous limestone.....	165	.75	4.2	9.6	(1)	(1)	27
446	Carter.....	do.....	Siliceous limestone.....	168	.59	3.3	12.2	14.6	7	58
447	Lexington.....	Fayette.....	Limestone.....	168	.76	6.2	6.4	(1)	(1)	56
2452	do.....	do.....	do.....	162	3.54	7.4	5.4	(1)	(1)	34
2453	do.....	do.....	do.....	165	.93	6.1	6.5	(1)	(1)	39
2454	do.....	do.....	do.....	168	.88	7.0	5.7	(1)	(1)	31
2409	Norton.....	Henry.....	Slag.....	178	.17	3.7	10.9	13.9	10	48
5635	Louisville.....	Hopkins.....	Dolomite.....	172	1.59	3.4	11.7	15.7	11	26
6134	Tucker Station.....	do.....	Dolomite marble.....	172	1.63	5.2	7.7	14.8	9	33
6135	do.....	do.....	do.....	168	1.87	5.1	7.8	16.2	11	32
8334	Tucker.....	do.....	Dolomite.....	165	1.87	5.1	7.8	16.2	11	32
8335	Louisville.....	do.....	Argillaceous dolomite.....	165	3.80	5.0	8.0	8.3	6	18
8336	do.....	do.....	Argillaceous limestone.....	168	.88	4.7	8.5	13.5	7	24
8337	do.....	do.....	Limestone.....	168	1.08	4.1	9.8	15.2	7	34
8338	do.....	do.....	Argillaceous limestone.....	168	1.08	4.1	9.8	15.2	7	34
8339	do.....	do.....	Argillaceous limestone.....	168	1.21	5.3	7.5	13.2	7	15
1654	Painville.....	Johnson.....	Feldspathic sandstone.....	165	1.56	2.1	18.7	16.7	10	51
8047	do.....	do.....	Limestone.....	168	1.64	7.7	5.2	14.5	6	16
457	Kittawa.....	Lyon.....	Sandstone.....	150	8.20	17.8	2.2	(1)	(1)	52
4919	Berea.....	Madison.....	Dolomite.....	175	.73	5.7	7.0	15.8	10	55
4983	do.....	do.....	Limestone.....	165	.81	3.0	10.2	16.3	8	35
7181	do.....	do.....	Crystalline limestone.....	168	.61	6.6	5.0	13.8	8	31
7182	do.....	do.....	do.....	168	.61	6.6	5.0	13.8	8	31
7183	do.....	do.....	Siliceous limestone.....	165	1.24	3.0	8.0	14.2	11	68
7189	do.....	do.....	do.....	165	.85	4.2	9.6	10.0	4	35
7292	do.....	do.....	do.....	168	.78	3.6	11.0	13.0	9	28
7293	do.....	do.....	do.....	165	.90	3.6	11.0	13.3	9	77
7545	Mount Sterling (6 miles south of).....	do.....	Fossiliferous limestone.....	168	.61	7.0	3.8	13.3	3	31
7546	do.....	do.....	Siliceous limestone.....	165	1.26	3.9	10.4	13.0	9	69
7190	do.....	do.....	Argillaceous limestone.....	168	1.03	6.3	6.4	8.5	6	70
1225	Narrows.....	do.....	Siliceous limestone.....	165	1.38	4.3	9.3	12.4	10	75
3163	Cerulean (1½ miles from).....	Ohio.....	Limestone.....	168	.42	3.7	10.8	15.0	10	107
		Trigg.....	do.....	168	.65	4.4	9.1	15.5	5	31

1 Test not made.

2 Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.*

LOUISIANA.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
7095	(1)	Bossier Parish.	Limonite ore.....	Pounds. 299	Pounds. 4.24	18.2	2.2	(2)	(2)	75
5634A	Shreveport.....	Cadco Parish.	Ferruginous sandstone.....	139	3.31	13.8	2.9	10.8	4	49
5634B	do.....	do.....	do.....	158	3.16	19.6	2.0	13.8	8	36
4316	Near De Lode Bluffs.	Rapides Parish.	Quartzite.....	147	1.33	3.9	10.5	13.3	10	25
6664	Many.....	Sabine Parish.	Siliceous Limestone.....	165	2.20	4.7	8.6	12.1	10	369
7024	Kentwood.....	Tangipahoa Parish.	Ferruginous limestone.....	133	3.65	30.3	1.3	14.7	2	76
3736	Winfield.....	Winn Parish.	Marble.....	168	.28	7.2	5.6	10.7	5	38

MAINE.

6467	Rumford Junction.....	Androscoggin.	Biotite gneiss.....	168	0.45	5.7	7.0	17.8	7	82
6469	(1).....	do.....	do.....	172	.49	5.4	7.4	(2)	(2)	41
2233	Standish.....	Cumberland.	Biotite schist.....	172	.39	4.0	10.0	10.8	7	26
5766	Westbrook.....	do.....	do.....	172	.32	4.3	9.3	17.0	7	75
2235	Portland.....	do.....	Quartzite schist.....	168	.27	2.6	15.4	17.7	14	48
7572	Freeport.....	do.....	Micaceous quartzite.....	172	.32	6.0	6.7	18.1	7	36
7612	Portland.....	do.....	Amphibolite quartzite.....	172	.27	2.5	16.0	18.4	10	29
2310	Harpswell Center (1 mile south of).	do.....	Diabase.....	178	.79	3.4	11.6	16.6	11	82
7552	Portland.....	do.....	Altered diabase.....	184	.03	2.4	16.9	16.8	25	52
6990	Yarmouth.....	do.....	Diabase.....	187	.37	3.0	13.3	19.0	24	58
7577	Falmouth.....	do.....	Altered diabase.....	184	.45	2.5	15.7	18.4	18	40
7649	Cumberland.....	do.....	Gneiss.....	165	.65	(2)	(2)	17.8	12	25
2958	Rocky Hill.....	do.....	Granite gneiss.....	165	.36	3.5	11.5	18.7	11	13
3433	Portland.....	do.....	Gneiss.....	165	.63	3.5	11.5	17.3	12	48
4411	Portland.....	do.....	Biotite gneiss.....	172	.17	4.0	10.1	17.2	10	40
5587	Yarmouth.....	do.....	do.....	168	.64	6.2	6.5	17.7	7	22
7573	Freeport.....	do.....	do.....	172	.31	6.9	5.8	18.0	7	20
7574	Brunswick.....	do.....	do.....	172	.93	10.7	8.1	16.2	5	27
8031	Cumberland.....	do.....	Granite.....	162	.41	4.9	8.1	18.9	7	5
7566	Falmouth.....	do.....	Biotite granite.....	172	.29	3.1	12.9	17.9	14	24
7567	do.....	do.....	Granite.....	162	.42	4.2	9.3	18.7	9	13
7568	do.....	do.....	Biotite granite.....	168	.37	3.8	10.5	16.8	10	12
7569	Cumberland.....	do.....	Granite.....	165	.31	3.4	11.8	17.6	14	16
7570	Freeport.....	do.....	do.....	162	.29	4.5	8.9	18.8	8	21
7571	do.....	do.....	do.....	162	.29	4.5	8.9	18.8	8	21

7578	Yarmouth.	do.	do.	165	6.3	6.4	18.8	6	17
7575	Brunsuick.	do.	Altered granite.	162	7.0	5.7	18.1	6	18
7576	do.	do.	Granite.	162	3.9	10.3	18.7	7	34
8505	Yarmouth.	do.	do.	165	3.4	11.8	19.0	6	19
5310	Portland.	do.	Basalt.	184	2.2	13.3	18.1	29	23
2313	North Jay.	do.	Granite.	165	2.3	17.4	(2)	(2)	16
2303	South Brooksville.	do.	Altered rhyolite.	175	7.7	12.2	18.1	9	201
2204	do.	do.	Altered andesite.	184	2.2	19.4	16.5	15	33
7438	Swans Island	do.	Biottite granite.	162	4.5	8.0	18.8	8	10
5312	Hallowell.	do.	Granite.	159	1.72	12.7	18.7	9	27
5343	Augusta.	do.	Biottite granite.	168	3.0	8.1	19.1	8	25
5844	do.	do.	do.	165	10.0	4.0	18.4	5	28
53	Rockport.	do.	Limestone.	(2)	4.9	8.3	(2)	(2)	(2)
54	do.	do.	do.	(2)	4.5	9.0	(2)	(2)	(2)
3866	(1)	do.	Dolomite limestone.	178	5.4	7.5	13.2	7	26
55	Rockport.	do.	Quartzite.	(2)	2.7	14.6	(2)	(2)	8
784	Rockland (2 miles southwest of).	do.	Hornblende quartzite.	175	12	15.2	(2)	(2)	20
2300	Camden.	do.	Feldspathic quartzite.	165	5.4	15.2	18.8	20	17
123	Rockport.	do.	do.	168	2.7	14.7	18.8	9	(2)
2301	Rockland.	do.	Biottite schist.	(2)	4.2	9.6	(2)	(2)	85
2305	North Haven Island.	do.	Marble.	168	5.6	7.1	10.5	5	37
2306	North Haven.	do.	Altered andesite.	184	2.7	15.0	17.6	12	106
2307	Vinal Haven.	do.	Rhyolite.	168	3.2	12.6	18.0	7	28
2308	Long Cove.	do.	Olivine diabase.	187	2.3	17.4	18.2	12	48
5915	do.	do.	Hornblende gabbro.	187	2.8	14.3	17.8	12	30
7435	Vinal Haven.	do.	Biottite granite.	165	4.5	18.5	18.7	12	15
7507	Long Cove.	do.	Granite.	105	2.4	11.9	19.3	9	21
8745	Vinal Haven.	do.	do.	165	2.29	14.5	18.8	10	12
9445	do.	do.	Biottite granite.	165	2.9	13.9	19.0	13	12
7607	Portland.	do.	do.	181	3.0	11.1	17.7	12	19
2309	Woolwich.	do.	Altered diabase.	178	4.1	9.7	18.8	8	57
2311	Sagadahoc.	do.	Gneissoid granite.	165	10.7	3.7	(2)	(1)	10
7439	Topsham.	do.	Pegmatite.	165	5.2	17.7	18.8	6	17
2236	Frankford.	do.	Biottite granite.	181	2.2	14.5	16.9	11	58
2285	Machias (2 miles east of).	do.	Altered diabase.	178	2.0	20.0	18.2	20	39
2237	Eastport.	do.	do.	181	1.6	24.7	17.9	27	82
806	Blackhead (8 miles south of).	do.	do.	181	2.9	13.6	(2)	(2)	35
1040	Machias.	do.	Diabase.	184	3.5	17.4	18.5	36	27
2229	Oregonit.	do.	Altered diabase.	187	0.4	2.3	15.5	11	500+
2230	Hills beach.	do.	Diabase porphyry.	184	4.2	15.4	16.2	11	135
4228	Wells beach.	do.	Gabbroic diabase.	184	2.0	20.4	17.5	17	26
2232	Kennebunk.	do.	Diabase.	187	1.8	21.7	18.8	37	47
2231	Kittery.	do.	Quartzite schist.	172	4.9	17.5	16.5	18	325
2234	do.	do.	Gabbro.	178	1.03	12.4	17.8	11	31
4229	Saco.	do.	Quartzite.	175	2.7	15.7	18.5	53	31
5724	Kittery.	do.	Calcareous sandstone.	175	3.4	11.6	18.0	22	25
	Sanford.	do.	Hypersethene granite.	181	4.1	9.7	17.7	9	34

2 Test not made.

1 Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

MARYLAND.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
4954	Cumberland.....	Allegheny	Limestone.....	168	0.15	4.0	10.0	16.5	12	37
5011	Mount Savage Junction.....	do	Siliceous limestone.....	165	.13	3.0	13.3	17.5	23	52
427	Cumberland.....	do	Sandstone.....	123	9.43	8.2	4.9	(1)	(1)	38
428	do.....	do	Calcareous shale.....	168	1.90	16.2	3.0	(1)	(1)	(1)
430	do.....	do	Silica rock.....	168	1.70	13.4	2.5	(1)	(1)	(1)
1328	Sparks Station.....	Baltimore	Blotite gneiss.....	178	.25	2.9	10.7	17.7	11	18
1333	Ruxton.....	do	Granite gneiss.....	165	.32	2.9	10.7	18.2	10	52
2206	do.....	do	Blotite gneiss.....	175	.45	2.2	10.2	16.3	8	52
873	Powhatan.....	do	Diabase.....	(1)	(1)	2.2	11.5	(1)	12	7
1613	do.....	do	Augite diorite.....	196	.31	3.6	11.2	18.3	23	52
5976	Loreley.....	do	do.....	190	.19	2.4	10.5	17.8	10	15
2544	do.....	do	Hornblende schist.....	196	.27	1.9	21.5	17.3	15	10
2992	do.....	do	do.....	190	.38	3.6	11.2	18.1	16	19
3062	Big Gun Powder.....	do	Dolomitic marble.....	178	.20	6.3	6.3	11.0	5	15
6867	Texas.....	do	Siliceous marble.....	168	.26	27.0	1.5	7.5	3	69
6868	do.....	do	do.....	178	.19	18.8	2.1	4.5	2	18
6869	do.....	do	do.....	172	.06	10.5	3.8	12.3	3	44
3187	Whitehall (near).....	do	Altered peridotite.....	165	.73	3.0	13.2	15.0	12	91
4104	Granite.....	do	Granite.....	168	.46	2.4	16.9	18.5	10	16
4105	Woodstock.....	do	do.....	165	.32	4.5	8.9	18.7	10	13
8351	Granite.....	do	do.....	168	.33	3.0	13.3	18.7	9	14
5318	Ashland.....	do	Blotite granite.....	178	.56	4.0	10.0	(1)	(1)	22
830	Groves Quarry.....	Caroline	Blast-furnace slag.....	172	.09	2.6	15.6	18.7	10	31
3459	Port Deposit.....	Cecil	Siliceous limestone.....	168	.17	2.0	20.2	18.9	13	13
6671	do.....	do	Granite gneiss.....	178	.30	2.2	20.4	18.2	24	43
8420	do.....	do	Quartzite.....	171	.26	2.2	18.2	19.2	9	29
343	do.....	do	Hornblende schist.....	175	.25	4.5	8.9	(1)	(1)	(1)
5688	Frederick.....	do	Dolomite.....	175	.20	3.1	12.8	16.3	15	46
439	do.....	do	do.....	162	.19	1.9	6.8	(1)	(1)	(1)
1314	Frederick (near).....	do	Argillaceous limestone.....	172	.19	2.8	14.1	14.6	12	60
487	Frederick.....	do	Limestone.....	168	.13	6.0	6.6	(1)	(1)	(1)
2473	Washington Junction.....	do	do.....	175	.21	3.9	10.2	(1)	(1)	(1)
3836	Frederick.....	do	do.....	168	.33	3.3	12.1	(1)	(1)	(1)
4884	do.....	do	do.....	175	.08	4.1	9.9	10.7	16	53
2474	Washington Junction.....	do	Diabase.....	187	.40	1.1	36.4	18.8	21	10
2227	do.....	do	Limestone.....	188	.43	3.7	10.9	15.3	4	96
2134	Bloomington.....	Garrett	Diabase.....	162	.74	2.8	10.8	18.8	9	59
5761	Sue Quarry.....	do	Diabase.....	165	.62	2.8	14.3	15.8	11	58
7291	Conowingo.....	Cecil	Hyperssthene diabase.....	187	.49	2.6	13.3	18.4	8	41

2608	(2)	Harford	Hornblende schist.....	184	55	3.3	12.0	17.8	19	35
2291		do	do	181		2.9	20.0	18.4	20	
3409		Havre de Grace	Quartz hornblende schist.....	172	18	2.2	18.6	18.4	17	
4443		do	Hornblende schist.....	181	38	3.3	12.8	17.3	19	23
4443		do	do	184	11	3.3	12.8	17.3	34	
4443		do	do	184	61	3.3	12.2	18.7	30	
4443		do	Schist.....	172	38	2.9	14.0	18.2	44	
5623		do	Quartz hornblende schist.....	172	38	2.7	14.8	(1)	(1)	
3407		do	Diorite.....	181	58	2.1	19.4	18.9	27	
3442		do	do	193	35	2.5	16.3	18.5	23	
3408		do	Basic diorite.....	165	26	4.2	9.5	18.5	12	
2293		do	Gneissoid granite.....	168	23	2.0	20.0	18.6	12	
5694		do	Altered granite.....	168	27	2.3	17.1	17.8	14	
5696		do	Gneissoid granite.....	168	48	1.7	23.5	18.8	17	
5698		do	do	168	29	2.0	19.6	18.6	14	
5699		do	do	168	22	2.2	18.5	18.3	10	
5699		do	do	168	22	2.4	16.8	18.8	16	
5699		do	do	168	21	3.0	13.4	18.6	16	
5699		do	Granite gneiss.....	168	10	3.2	12.3	18.8	12	
4441		do	do	190	14	3.5	11.6	(1)	(1)	
4211		Coil.....	Hornblende gneiss.....	168	10	1.4	29.0	18.8	32	
4073		do	do	184	14	2.6	15.5	19.0	9	
5294		Harford	Serfite gneiss.....	168	26	2.6	26.0	18.7	40	
5695		do	Amphibolite.....	193	16	1.5	26.0	18.7	(1)	
5697		do	do	190	14	1.6	25.3	(1)	(1)	
829		Savage Station	do	193	21	2.3	17.2	18.7	16	
(2)		do	do	(1)		4.5	8.9	17.5	4	
8587		do	Diorite gneiss.....	193	20	1.8	22.6	18.4	26	
8642		Ellicott.....	Hornblende schist.....	190	15	1.4	28.6	18.8	37	
1319		do	do	190	18	3.0	13.2	(1)	(1)	
4168		Savage Station (½ mile north of)	Granite.....	163	24	2.8	14.2	(1)	(1)	
1329		do	do	163	31	2.8	14.2	(1)	(1)	
4192		Gifford.....	do	187	14	2.8	14.2	(1)	(1)	
363		Dickerson.....	Diabase.....	181	56	2.2	18.4	(1)	(1)	
1336		do	do	181	56	2.2	18.4	(1)	(1)	
1620		do	do	187	51	1.8	22.5	(1)	(1)	
2494		do	do	187	39	2.0	20.2	18.5	25	
(2)		do	do	187	39	2.0	20.2	18.5	25	
2900		do	do	190	11	2.0	20.1	18.5	24	
Point of Rocks		do	do	190	11	1.9	21.3	18.6	46	
5348		do	do	187	49	1.8	21.7	18.0	63	
5722		German town.....	Altered diabase.....	187	45	1.9	20.6	19.2	28	
7316		Dickerson.....	Diabase.....	187	45	1.9	20.6	19.2	28	
8583		do	do	187	15	2.8	22.7	18.3	24	
(2)		do	do	187	15	2.3	17.2	18.7	82	
1157		do	Gabbro.....	193	11	5.8	6.9	17.3	20	
(2)		do	Dolomite.....	168	11	3.2	16.4	16.4	19	
8584		do	Muscovite granite.....	165	1.25	3.2	12.4	16.4	10	
(2)		Glen Echo (near)	Granite.....	171	28	14.3	18.7	19	7	
8290		do	Weathered granite.....	168	29	3.6	11.1	19.0	21	
2559		do	Hornblende serpentine.....	165	89	3.2	14.2	18.6	45	
Layonsville		do	Serpentine.....	165	50	3.2	12.5	18.3	10	
3405		Washington Grove	do	165	44	3.8	10.5	18.6	16	
3837		Gaithersburg.....	do	165	44	3.8	10.5	18.6	16	
4935		Rockville.....	do	165	19	2.5	16.0	18.4	17	
2360		Washington Grove	do	165	19	8.2	4.9	-9	3	
5299		Derwood.....	Talc schist.....	165	61	8.2	4.9	-9	3	
5300		do	Mica schist.....	172	28	12.2	17.3	18.8	14	
5300		do	Quartz mica schist.....	172	32	8.1	13.0	17.8	17	

Test not made.

2 Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.*

MARYLAND—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.					
5529	Seneca.....	Montgomery.	Mica schist.....	168	1.67	12.2	3.3	(1)	(1)	76
2454	Washington Grove.....	do.	Quartz.....	165	1.08	14.9	2.7	(1)	(1)	2
5723	Germanstown.....	do.	do.....	165	.05	7.3	5.5	(1)	(1)	0
6953	Rockville (near).....	do.	do.....	165	.20	10.9	3.7	(1)	(1)	1
2844	Seneca.....	do.	Sandstone.....	168	1.03	4.8	8.4	11.8	11	27
2845	do.....	do.	Ferruginous sandstone.	168	1.83	(1)	(1)	15.8	5	150
8136	Seneca (near).....	do.	do.....	156	.13	4.8	8.3	15.5	6	111
8137	do.....	do.	Feldspathic sandstone.	159	.30	3.1	12.7	16.3	7	36
3389	do.....	do.	Granite gneiss.....	178	.37	(1)	(1)	17.7	8	24
3390	do.....	do.	do.....	175	.23	(1)	(1)	17.7	8	21
3391	do.....	do.	Sericite gneiss.....	175	1.02	(1)	(1)	14.9	6	34
3809	do.....	do.	Gneiss.....	168	.34	4.2	9.5	17.8	15	15
3820	do.....	do.	do.....	178	.19	6.3	6.4	17.8	8	20
3821	do.....	do.	Quartz gneiss.....	178	.18	3.6	11.1	17.3	7	13
3870	Derwood.....	do.	Diorite gneiss.....	187	.28	5.7	7.0	17.6	7	24
4908	Clopper.....	do.	Altered gneiss.....	190	.38	5.5	7.2	16.8	12	19
5625	Rockville.....	do.	Sericite gneiss.....	181	.25	6.1	6.5	17.6	12	17
6957	do.....	do.	Chloritic gneiss.....	175	.16	7.0	5.7	16.6	7	5
8022	Potomac.....	do.	Chlorite sericite gneiss.....	168	.50	(1)	(1)	18.7	4	30
6009	Gathersburg.....	do.	Feldspathic quartzite.....	172	.04	5.7	7.0	18.1	15	18
3217	Laurel.....	Prince George.	Hornblende schist.....	190	.26	1.3	31.7	18.3	20	15
7921	Easton.....	Talbot.	Dolomite marble.....	(1)	(1)	3.9	10.6	(1)	(1)	(1)
8092	do.....	do.	Hornblende granite gneiss.....	168	.22	2.7	14.9	18.8	7	13
7505	Hancock.....	Washington.	Ferruginous sandstone.....	172	.62	2.7	14.7	18.2	18	26
5826	Hagerstown.....	do.	Limestone.....	168	.18	5.2	7.7	16.7	13	29
8445	Security.....	do.	do.....	168	.68	5.7	7.0	16.7	6	35
8446	do.....	do.	do.....	168	.43	6.0	6.7	15.9	4	45

MASSACHUSETTS.

10	Lenox.....	Berkshire	Mica schist.....	178	(1)	5.0	8.0	(1)	(1)	(1)
41	Lee.....	do.	Schist.....	(1)	(1)	3.3	12.2	(1)	(1)	(1)
69	Pittsfield.....	do.	Mica schist.....	172	(1)	4.1	9.8	(1)	(1)	44
2928	Lenox.....	do.	Sericite schist.....	187	0.19	4.1	9.8	16.8	8	(1)
47	Great Barrington.....	do.	Limestone.....	(1)	(1)	4.2	9.5	(1)	(1)	(1)
102	Pittsfield.....	do.	do.....	175	(1)	4.3	9.4	(1)	(1)	(1)

298	North Adams.	do.	do.	(1)	4.7	8.5	(1)
51	Lee.	do.	Gneiss.	(1)	3.5	11.4	(1)
287	North Adams.	do.	Biotite gneiss.	(1)	7.7	5.2	(1)
80	Great Barrington.	do.	Quartzite.	(1)	2.7	14.6	(1)
104	Lee.	do.	do.	(1)	3.4	11.7	(1)
121	do.	do.	do.	(1)	3.4	11.7	(1)
440	North Adams.	do.	do.	(1)	3.5	11.4	(1)
119	Florida.	do.	Syrtite.	(1)	19.8	2.0	(1)
101	Lee.	do.	Marble.	(1)	14.0	2.9	(1)
1118	Great Barrington.	do.	do.	(1)	5.4	7.4	(1)
326	Lanesborough.	do.	Blast furnace slag.	(1)	10.6	3.8	(1)
008	Becket.	do.	Gneissoid granite.	(1)	1.6	24.8	(1)
77	North Dartmouth.	do.	Granite.	(1)	2.7	14.8	(1)
81	North Westport.	do.	Hornblende granite.	(1)	2.2	14.2	(1)
445	Taunton.	do.	Granite.	(1)	4.1	9.7	(1)
485	New Bedford.	do.	Chlorite gneiss.	(1)	2.5	16.0	(1)
1	Salem.	Essex.	Augite diorite.	(1)	2.6	15.6	(1)
35	Newbury.	do.	Quartz diorite.	(1)	2.8	14.5	(1)
117	Beverly.	do.	Diorite.	(1)	2.4	16.7	(1)
611	Salem.	do.	Augite diorite.	(1)	2.7	14.7	(1)
351	Peabody.	do.	do.	(1)	3.0	13.4	(1)
945	Beverly.	do.	Hornblende granite.	(1)	2.8	14.5	(1)
15	Saugus.	do.	Diorite.	(1)	4.5	9.0	(1)
34	Rockport.	do.	do.	(1)	3.2	12.6	(1)
62	Beverly.	do.	do.	(1)	2.8	17.3	(1)
74	do.	do.	Granite.	(1)	1.9	21.2	(1)
89	do.	do.	Hornblende granite.	(1)	2.3	17.5	(1)
116	Inswich.	do.	do.	(1)	2.2	18.4	(1)
191	Lawrence.	do.	Gneissoid granite.	(1)	(1)	19.1	(1)
550	Beverly.	do.	Hornblende granite.	(1)	1.6	25.3	(1)
752	Gloucester.	do.	Granite.	(1)	3.1	18.9	(1)
012	Peabody.	do.	Hornblende granite.	(1)	2.0	20.2	(1)
890	Rockport.	do.	Biotite granite.	(1)	4.5	19.0	(1)
891	do.	do.	do.	(1)	3.3	12.1	(1)
892	do.	do.	do.	(1)	4.0	18.9	(1)
893	do.	do.	do.	(1)	1.7	10.1	(1)
894	do.	do.	do.	(1)	3.9	10.5	(1)
16	Lynn.	do.	Diabase.	(1)	3.7	18.8	(1)
21	do.	do.	do.	(1)	2.0	19.8	(1)
22	Saugus.	do.	do.	(1)	2.0	20.4	(1)
25	do.	do.	do.	(1)	2.5	16.1	(1)
28	do.	do.	do.	(1)	2.5	16.0	(1)
29	Lynn.	do.	do.	(1)	2.2	18.3	(1)
31	Newbury.	do.	Olivine diabase.	(1)	2.2	18.2	(1)
32	Saugus.	do.	Diabase.	(1)	2.0	20.4	(1)
37	Newbury.	do.	do.	(1)	1.9	21.2	(1)
61	Ipswich.	do.	Altered diabase.	(1)	2.5	16.1	(1)
115	Salem.	do.	Diabase.	(1)	1.7	24.1	(1)
312	do.	do.	do.	(1)	2.8	14.4	(1)
315	do.	do.	do.	(1)	4.5	8.9	(1)
315	do.	do.	do.	(1)	3.1	12.8	(1)

Test not made.

² Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

MASSACHUSETTS—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
329	Merrimac	Essex	Diabase	Pounds. (1)	Pounds. (1)	3.1 (1)	12.9 (1)	(1) 17.9	(1) 24	(1) 500
1100	Lawrence	do	do	184	.57	2.0	20.4	17.6	21	43
5825	Cliftondale	do	Altered diabase	181	.32	2.7	14.7	(1)	(1)	(1)
24	Lynn	do	Felsite	165	(1)	3.3	12.3	(1)	(1)	(1)
27	do	do	do	165	(1)	3.3	11.0	(1)	(1)	(1)
97	Rowley	do	do	165	(1)	3.6	12.3	(1)	(1)	(1)
26	Gloucester	do	Hornblende granite	172	(1)	3.2	12.9	(1)	(1)	(1)
30	do	do	Augite syenite	190	.28	3.1	12.7	17.8	14	62
2297	Swampscott	do	do	187	.23	2.2	18.5	17.3	8	375
2648	Salem	do	Altered syenite	175	(1)	2.4	16.8	(1)	(1)	(1)
33	Salisbury	do	Camptonite	172	(1)	2.3	17.2	(1)	(1)	(1)
65	Lawrence	do	Siliceous limestone	(1)	(1)	2.1	19.0	(1)	(1)	(1)
222	do	do	Limestone	(1)	(1)	2.9	14.0	(1)	(1)	(1)
181	Methuen	do	Quartzite	(1)	(1)	2.1	18.7	(1)	(1)	(1)
226	do	do	do	(1)	(1)	(1)	(1)	19.0	12	14
1192	Lawrence	do	Granite gneiss	165	.38	2.9	13.7	(1)	(1)	(1)
1375	Peabody	do	Altered gabbro	184	.23	3.2	12.3	18.4	17	26
3543	Haverhill	do	Hornblende mica schist	172	.51	4.1	9.8	(1)	(1)	(1)
39	Orange	Franklin	Hornblende granite	(1)	(1)	3.4	11.7	(1)	(1)	(1)
50	Buckland	do	Hornblende gneiss	(1)	(1)	3.9	10.3	(1)	(1)	(1)
52	do	do	do	(1)	(1)	3.4	11.7	(1)	(1)	(1)
211	Orange	do	do	(1)	(1)	1.4	28.8	(1)	(1)	(1)
76	Deerfield	do	Diabase	(1)	(1)	1.6	24.7	17.8	28	200
208	do	do	do	(1)	(1)	2.6	15.6	(1)	(1)	(1)
5671	Westfield	Hampton	Altered diabase	187	.62	2.0	19.7	(1)	(1)	(1)
12	West Springfield	do	Olivine diabase	184	(1)	1.8	22.1	(1)	(1)	(1)
66	Holy Oak	do	Diabase	(1)	(1)	1.8	22.1	(1)	(1)	(1)
67	West Springfield	do	do	(1)	(1)	1.6	25.0	(1)	(1)	(1)
68	Monson	do	do	187	(1)	1.9	21.6	(1)	(1)	(1)
91	West Springfield	do	Olivine diabase	(1)	(1)	1.3	30.7	(1)	(1)	(1)
93	do	do	Diabase	(1)	(1)	3.3	12.2	(1)	(1)	(1)
517	Westfield	do	do	187	.50	5.4	7.4	18.2	21	28
44	Chester	do	Schist	(1)	(1)	3.7	10.7	(1)	(1)	(1)
2423	Springfield	do	Dolomite	175	.98	3.1	12.8	18.3	11	24
6572	North Hampton	Hampshire	Hornblende granite	172	(1)	1.7	23.3	(1)	(1)	(1)
64	Ware	do	Altered biotite granite	187	.24	2.0	13.9	(1)	(1)	(1)
78	Amherst	do	Diabase	(1)	(1)	2.0	13.9	(1)	(1)	(1)
2	Everett	Middlesex	do	178	(1)	(1)	(1)	(1)	(1)	(1)
			Olivine diabase	(1)	(1)	(1)	(1)	(1)	(1)	(1)

19	Somerville	do.	Diabase.	178	()	4.2	9.3	()	3
20	Medford	do.	do.	190	()	2.5	15.8	()	3
26	Watertown.	do.	do.	()	()	2.5	13.7	()	3
270	Waltham.	do.	do.	()	()	2.1	18.9	()	3
318	Waltham.	do.	do.	()	()	2.5	16.0	()	3
386	Winchester.	do.	do.	()	()	6.3	6.4	()	3
700	do.	do.	Altered diabase.	200	()	3.7	10.4	()	11
8463	Winchester Highlands.	do.	Mica diabase.	187	.25	1.9	21.1	()	43
4	Waltham	do.	Altered diabase.	187	.41	3.3	12.2	()	35
60	Ashby	do.	Hornblende granite.	162	()	4.8	8.4	()	3
195	Malden.	do.	Granite.	()	()	2.8	14.1	()	3
2640	Dunstable.	do.	Hornblende granite.	165	.40	2.4	16.5	()	18
8871	Westford.	do.	Granite.	165	.28	2.3	17.2	()	8
8875	do.	do.	do.	162	.48	2.9	13.6	()	8
8882	do.	do.	do.	163	.31	2.3	16.0	()	34
108	Newton.	do.	Trachyte.	175	()	1.9	20.8	()	27
5744	Somerville.	do.	Slate.	172	()	4.7	8.5	()	7
5748	do.	do.	do.	175	.07	3.8	10.5	()	23
5818	Ashby	do.	Granite gneiss.	()	()	6.0	6.1	()	30
9333	Practical.	do.	Biotite hornblende gneiss.	178	.30	4.5	15.9	()	3
304	Winchester.	do.	Diorite.	()	()	3.9	10.2	()	3
1799	Marlborough	do.	Hornblende schist.	187	.30	2.1	19.4	()	10
5335	Pepperell.	do.	Calcareous sandstone.	172	.33	2.0	17.7	()	23
5957	Malden.	do.	Altered rhyolite.	168	.03	1.7	24.1	()	25
7	Brookline.	do.	Diabase.	178	()	3.5	11.4	()	23
18	Quincy.	do.	do.	184	()	2.6	15.2	()	3
23	Brookline.	do.	Olivine diabase.	187	()	2.7	14.7	()	3
219	Milton.	do.	Diabase.	187	()	1.8	22.8	()	3
230	Quincy.	do.	do.	()	()	1.6	25.6	()	3
369	Brookline.	do.	Altered diabase.	181	.09	2.1	18.9	()	29
843	Stoughton.	do.	Diabase.	187	.07	1.7	23.5	()	37
1044	Quincy.	do.	do.	193	.08	1.6	25.6	()	26
5909	Dover.	do.	Altered felsite.	178	.42	2.2	18.3	()	10
7090	Needham.	do.	do.	181	.12	4.1	9.8	()	33
17	Quincy.	do.	Hornblende granite.	165	()	3.9	10.2	()	6
3703	Weymouth.	do.	Altered granite.	165	.38	1.6	25.0	()	19
72	Quincy.	do.	Felsite.	()	()	2.0	19.9	()	3
92	North Weymouth.	do.	do.	()	()	2.8	14.5	()	3
196	Milton.	do.	Sandstone.	()	()	1.6	25.7	()	3
299	Quincy.	do.	do.	()	()	1.7	24.0	()	3
218	Milton.	do.	do.	()	()	1.9	21.0	()	3
367	Brookline.	do.	Syenite porphyry	()	()	4.7	8.5	()	3
368	do.	do.	Slate.	175	.52	1.8	22.9	()	5
718	Quincy.	do.	Rhyolite	178	.19	5.1	7.9	()	17
2475	Franklin.	do.	Chlorite schist.	181	.13	7.0	5.7	()	30
38356	Hyde Park.	do.	Serpentine gneiss.	168	.83	3.9	10.2	()	10
8616	North Stoughton.	do.	Altered rhyolite breccia.	168	.31	2.2	19.0	()	21
5	Duxbury.	do.	Altered diorite.	187	.08	3.0	18.5	()	30
320	Plymouth.	do.	Gneiss.	168	()	2.9	13.5	()	3
320	Hingham.	do.	Diabase.	()	()	3.0	13.8	()	3

1 Test not made.

² Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

MASSACHUSETTS—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Percent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
1863	Hingham.	Plymouth.	Altered diabase.	Pounds. 190	Pounds. .17	1.8	22.2	18.0	25	67
1887	do.	do.	do.	175	.36	2.2	18.3	18.0	19	43
3	Revere.	Suffolk.	Felsite.	165	(1)	3.0	13.2	(1)	(1)	(1)
40	Boston.	do.	do.	(1)	(1)	2.5	16.1	(1)	(1)	(1)
124	Revere.	do.	do.	(1)	(1)	2.6	15.2	(1)	(1)	(1)
1572	Everett.	do.	Augite diorite.	175	.95	(1)	(1)	18.6	22	21
1573	do.	do.	Altered rhyolite.	172	.91	(1)	(1)	17.7	23	27
1574	do.	do.	Altered rhyolite.	165	3.44	2.9	13.8	19.6	8	25
7506	Revere.	Worcester.	Hornblende granite.	187	(1)	3.2	12.6	(1)	(1)	(1)
63	Uxbridge.	do.	Granite.	(1)	(1)	4.8	8.3	(1)	(1)	(1)
242	Clinton.	do.	Gneissoid granite.	(1)	(1)	2.2	17.9	(1)	(1)	(1)
256	Fitchburg.	do.	do.	(1)	(1)	4.6	8.6	(1)	(1)	(1)
266	Worcester.	do.	do.	(1)	(1)	4.6	8.7	(1)	(1)	(1)
279	Clinton.	do.	do.	(1)	(1)	4.2	9.5	(1)	(1)	(1)
295	Fitchburg.	do.	do.	(1)	(1)	4.4	9.1	17.2	5	28
7522	do.	do.	do.	168	.28	3.1	9.3	17.7	6	28
7523	do.	do.	do.	165	.34	3.2	12.7	17.7	6	24
8394	Worcester.	do.	do.	162	.72	5.6	7.1	19.0	5	61
83	Sterling.	do.	Diabase.	(1)	(1)	2.1	19.3	(1)	(1)	(1)
88	Athol.	do.	Granite gneiss.	(1)	(1)	3.2	12.5	(1)	(1)	(1)
203	do.	do.	do.	(1)	(1)	3.2	12.5	(1)	(1)	(1)
245	do.	do.	do.	(1)	(1)	4.5	9.0	(1)	(1)	(1)
5378	Leominster.	do.	Gneiss.	175	.36	3.6	11.0	16.4	10	40
5988	West Auburn.	do.	Granite gneiss.	165	.49	3.0	13.2	18.0	13	14
7711	Grafton.	do.	Granite gneiss.	165	.45	5.2	12.0	13.5	8	22
114	West Auburn.	do.	Limestone.	(1)	(1)	3.5	12.0	(1)	(1)	(1)
227	Millville.	do.	Diorite.	(1)	(1)	2.7	14.8	(1)	(1)	(1)
243	Clinton.	do.	Hornblende schist.	(1)	(1)	8.2	4.9	(1)	(1)	(1)
244	do.	do.	Mica schist.	(1)	(1)	4.9	8.2	(1)	(1)	(1)
411	Webster.	do.	do.	178	.30	6.3	6.4	(1)	(1)	(1)
5401	Leominster.	do.	Biotite schist.	172	.36	3.6	11.2	16.7	6	34
5379	do.	do.	Sericite schist.	168	.92	3.9	10.2	17.2	8	63
247	Clinton.	do.	Felsite.	(1)	(1)	2.5	16.1	(1)	(1)	(1)
265	Sterling.	do.	Hornblende syenite.	(1)	(1)	2.3	17.1	(1)	(1)	(1)
5400	Leominster.	do.	Fieldstone.	(1)	(1)	4.5	8.9	(1)	(1)	30

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

MICHIGAN—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
2503	(1)	Lenawee	Quartzite	Pounds. 165	Pounds. .24	1.9	20.8	19.5	24	4
6476	Garfield Township	MacKinnac	Limestone	168	.44	4.6	8.8	15.3	5	11
7152	Negaunee	Marquette	Altered gabbro	187	.11	2.9	14.0	17.8	10	120
7153	do.	do.	do.	184	.17	2.7	15.0	17.3	12	102
1133	do.	do.	Hornblende schist	184	.14	4.7	8.5	18.0	30	104
2455	Marquette (near)	do.	do.	175	.33	4.1	9.8	16.3	20	143
3198	do.	do.	Epidote chlorite schist	181	.16	2.6	15.3	16.8	18	83
1635	do.	do.	Hornblende schist	190	.40	2.5	15.7	17.8	26	26
1636	(1)	do.	Chloritized basalt	184	.37	2.1	18.9	17.2	22	58
1637	(1)	do.	do.	184	.24	2.5	15.9	17.2	22	58
1676	Negaunee	do.	Ferruginous slate	175	.51	4.8	8.3	15.2	10	17
1678	do.	do.	Slate	175	.51	(2)	(2)	16.8	12	7
2456	do.	do.	Altered diabase	172	1.52	5.5	7.3	18.5	9	58
2645	Marquette (near)	do.	do.	165	1.81	4.5	8.9	16.0	13	129
2688	Negaunee	do.	do.	187	.17	3.4	11.7	16.8	12	151
2685	Marquette (near)	do.	do.	181	.17	4.0	10.3	17.4	10	41
3090	do.	do.	do.	184	.38	3.7	10.3	17.2	19	43
5690	do.	do.	do.	187	.14	1.5	26.7	18.3	33	37
5690	do.	do.	do.	184	.18	2.6	13.4	16.7	20	31
2826	do.	do.	do.	165	.07	3.3	12.1	(4)	(2)	4
1629	Ida	Monroe	Quartzite	162	3.46	6.0	6.6	13.3	7	34
3834	Monroe	do.	Dolomite	165	2.80	4.0	10.1	14.4	6	20
3835	do.	do.	do.	165	3.28	4.5	8.8	14.8	5	24
4955	Bedford	do.	do.	165	.29	4.1	9.8	14.9	10	18
6085	Kalamazoo	do.	do.	175	1.54	4.1	6.3	15.7	3	11
5003	Ida	do.	Dolomite	165	.26	6.2	6.5	18.4	13	16
9222	Roger's City	Presque Isle	Calcareous sandstone	162	1.86	5.4	7.4	(2)	(2)	28
9593	Caléite	do.	Limestone	165	.74	5.6	7.1	14.3	5	15
2806	Manistique	Schoolcraft	do.	168	.32	4.5	8.8	15.8	6	25
2807	do.	do.	do.	172	.27	4.2	9.4	14.3	6	26
2808	do.	do.	do.	175	1.00	2.7	14.9	16.7	12	27
2874	do.	do.	Slag	168	1.81	23.4	1.7	18.0	7	3
3254	Limekiln crossing	Wayne	Dolomite	156	3.77	4.8	8.3	12.6	4	14
8301	do.	do.	do.	162	.23	4.9	8.2	14.8	9	18
3255	Detroit	do.	Limestone	168	.87	5.4	7.4	13.3	4	17
4821	do.	do.	Blast furnace slag	159	1.01	9.3	4.3	11.3	2	88

MINNESOTA.

9532	Mankato.....	Blue Earth.....	Argillaceous-dolomite.....	159	3.22	4.7	8.5	16.7	14	51
1010	Carlton.....	do.....	Slate.....	175	.67	6.0	6.7	11.2	5	43
2442	do.....	do.....	do.....	172	.53	2.8	14.3	12.7	10	75
3764	Manterville.....	Dodge.....	Dolomite.....	150	8.24	11.5	3.5	2.0	3	41
1170	Courtland.....	Nicollet.....	Quartzite.....	165	.39	1.6	24.5	19.0	22	42
2340	do.....	do.....	do.....	165	.15	2.1	19.2	19.7	12	13
2410	Pipestone.....	Pipestone.....	Ferruginous sandstone.....	172	.40	4.6	8.8	14.5	16	11
7054	Sandstone.....	Pine.....	do.....	156	1.40	11.6	3.3	15.2	4	6
8943	do.....	do.....	Sandstone.....	156	1.23	13.8	2.9	14.8	4	55
2426	Redwood Falls.....	Redwood.....	Granite gneiss.....	165	.28	15.2	16.8	19.0	16	17
2427	do.....	do.....	Weathered granite.....	134	(²)	(²)	(²)	(²)	12	255
1911	St. Cloud.....	Sherburne.....	Grano-dolomite.....	168	.12	4.7	8.6	18.0	19	9
807	Duluth.....	St. Louis.....	Olivine gabbro.....	172	.50	5.2	7.8	16.8	18	134
5801	do.....	do.....	Altered gabbro.....	168	1.74	5.0	8.0	13.3	5	42
2909	Minnesota City.....	Winona.....	Dolomite.....	165	2.97	7.9	3.1	3.6	5	43
5524	Stockton.....	do.....	Argillaceous dolomite.....	165						

MISSISSIPPI.

2590	Kosciusko.....	Attala.....	Sandstone.....	162	0.90	6.3	6.3	19.2	14	5
5890	Houston.....	Chickasaw.....	Argillaceous limestone.....	150	6.28	12.2	3.3	6.7	5	49
6812	Woodland.....	do.....	Ferruginous sandstone.....	162	4.91	23.7	1.7	(²)	(²)	12
4532	Stonington.....	Jefferson.....	Sandstone, ferruginous.....	131	11.60	31.8	1.3	(²)	(²)	(²)
8240	(¹).....	Lauderdale.....	Opaline sandstone.....	139	.60	14.9	2.7	18.5	5	127
8241	(¹).....	do.....	Sandstone.....	133	1.91	6.2	6.5	19.3	10	9
1514	Columbus.....	Lowndes.....	Limestone.....	159	3.46	4.2	9.5	7.4	6	41
6080	do.....	do.....	Argillaceous limestone.....	162	2.40	5.3	7.6	10.0	6	22
5897	Holly Springs.....	Marshall.....	Ferruginous sandstone.....	181	1.72	28.1	1.4	15.4	3	27
6807	District No. 1.....	Neshoba.....	Argillaceous sandstone.....	119	14.00	10.1	4.0	11.6	5	394
5871	Macon.....	Noxubee.....	Limestone.....	165	1.57	4.5	8.9	13.7	10	21

MISSOURI.

1775	Kirksville.....	Adair.....	Limestone.....	165	1.25	4.9	8.1	16.5	8	31
1289	Columbia.....	Boone.....	do.....	165	.85	8.8	4.6	0	4	69
1290	do.....	do.....	do.....	162	1.06	6.6	6.1	7.7	5	36
6375	Rocheport.....	do.....	do.....	165	1.31	9.3	4.3	12.3	3	50
6376	Portland.....	Callaway.....	Argillaceous dolomite.....	133	3.78	8.7	4.6	(²)	(²)	50
4398	Cape Girardeau.....	Cape Girardeau.....	Limestone.....	168	.49	3.7	10.8	15.8	9	42
6377	Sweeney.....	Cooper.....	Argillaceous limestone.....	165	2.67	4.8	8.3	13.5	8	46
1027	Springfield.....	Greene.....	Chert.....	165	.94	5.4	7.5	(²)	(²)	106

² Test not made.¹ Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

MISSOURI—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Comminuting value.
6472	Kansas City.....	Jackson.....	Limestone.....	Pounds. 165	Pounds. 1.82	4.8	8.3	13.4	6	45
6473	do.....	do.....	do.....	162	1.82	6.3	6.3	15.2	4	25
7096	(1)	do.....	do.....	168	.67	7.2	5.6	14.1	2	16
7095	Independence.....	do.....	do.....	165	.90	5.3	7.5	12.0	2	67
7097	do.....	do.....	do.....	150	4.66	19.4	2.1	4.5	3	33
1862	Carthage.....	do.....	do.....	168	.22	6.0	6.6	7.3	8	67
6045	do.....	Jasper.....	do.....	165	.83	6.4	6.3	7.7	5	(2)
3203	do.....	do.....	Chert.....	162	.58	4.5	8.9	(2)	(2)	35
1521	Webb City.....	do.....	Limestone.....	165	.96	7.1	5.6	6.1	5	94
1521	Edina.....	Knox.....	do.....	165	1.38	4.5	8.8	13.7	6	27
5180	Lexington.....	Lafayette.....	do.....	168	1.35	3.4	11.7	16.6	14	37
1511	Macon.....	do.....	do.....	168	1.07	3.9	10.4	16.1	14	35
1513	do.....	do.....	do.....	175	.52	4.0	10.1	15.5	10	55
1080	Mine La Motte.....	Madison.....	do.....	(2)	(2)	4.6	8.8	(2)	(2)	(2)
1016	Neosho.....	Newton.....	Chert.....	125	11.10	6.9	5.8	19.6	21	38
1125	do.....	do.....	do.....	165	1.03	3.9	10.4	14.7	8	31
1634	Vider's post office.....	St. Louis.....	Limestone.....	168	.75	3.8	10.4	14.6	9	55
1081	St. Louis.....	do.....	do.....	168	.60	5.6	7.2	12.8	6	30
1596	do.....	do.....	do.....	168	.60	6.4	6.3	10.2	4	34
7284	Mincke.....	do.....	do.....	168	1.33	3.9	10.3	(2)	(2)	45
8221	St. Louis.....	do.....	do.....	168	.73	3.7	10.8	(2)	(2)	40
8216	do.....	do.....	do.....	168	.64	3.8	10.5	14.3	6	53
8217	do.....	do.....	do.....	168	.75	4.9	8.2	16.7	7	62
8215	do.....	do.....	do.....	165	.57	7.6	5.3	9.7	5	46
2114	Sedalia.....	Fedals.....	do.....	165	.57	4.1	9.7	6.9	4	31
2115	do.....	do.....	do.....	165	2.14	4.1	9.7	6.9	4	31

MONTANA.

2157	Anaconda.....	Deer Lodge.....	Limestone.....	165	0.74	7.5	5.3	13.1	3	76
1649	Bozeman.....	Gallatin.....	Sandstone.....	156	2.13	3.8	10.5	18.7	15	4
1651	do.....	do.....	Calcareous sandstone.....	162	1.77	3.4	11.6	16.5	15	200
8650	Billings.....	Yellowstone.....	do.....	165	1.05	3.7	10.8	17.3	10	81

NEBRASKA.

2940	Cedar Creek.....	Cass.....	Limestone.....	165	1.19	5.4	7.4	14.9	6	50
2941	do.....	do.....	do.....	165	.85	5.9	6.8	15.5	6	41
2942	do.....	do.....	do.....	165	1.61	4.7	8.6	13.2	6	59
2943	Nehawka.....	do.....	do.....	165	.83	4.9	8.2	14.7	5	30
2944	do.....	do.....	do.....	159	2.43	5.4	7.4	11.4	6	145
360	Blue Springs.....	Gage.....	Flint.....	159	1.33	5.8	6.9	(2)	(2)	(2)
3091	Wymore.....	do.....	Dolomitic chert.....	156	3.98	11.8	3.4	(2)	(2)	16
1361	Johnson Town.....	Nemaha.....	Limestone.....	150	5.30	3.7	10.7	16.2	5	32
1362	do.....	do.....	do.....	153	4.40	10.1	4.0	4.0	4	29
1509	Auburn.....	do.....	do.....	159	3.12	4.4	9.0	6.2	4	84
1510	do.....	do.....	do.....	153	4.38	5.1	7.8	11.0	7	111

NEW HAMPSHIRE.

370	Hanover.....	Grafton.....	Very coarse granite.....	165	0.21	3.2	12.6	(2)	(2)	(2)
371	do.....	do.....	Hornblende schist.....	193	.22	3.3	12.3	(2)	(2)	(2)
372	Lebanon.....	do.....	do.....	190	.38	4.0	9.9	(2)	(2)	(2)
373	do.....	do.....	Biotite schist.....	168	.47	5.9	6.7	(2)	(2)	(2)
2102	Haverhill.....	do.....	Quartzite schist.....	165	.89	2.3	17.2	18.2	10	33
2020	do.....	do.....	Porphyritic diorite.....	187	.71	1.8	21.7	18.0	12	25
2101	do.....	do.....	Diorite.....	184	.87	2.5	16.3	17.2	9	17
2182	Thornton.....	do.....	Altered diabase.....	181	.39	2.2	18.0	16.9	19	500+
4050	Manchester.....	Hillsborough.....	Quartz.....	165	.15	4.0	10.0	(2)	(2)	3
5545	Merrimack.....	do.....	Sandstone.....	168	.71	5.9	6.7	17.5	6	29
5751	Hanover.....	do.....	Biotite gneiss.....	168	.55	10.3	3.9	18.0	6	62
5750	do.....	do.....	Biotite schist.....	168	.19	2.8	14.3	17.2	23	39
5752	do.....	do.....	Biotite granite.....	165	.26	3.5	11.4	18.5	9	29
9009	Milford.....	do.....	do.....	165	.59	3.6	11.1	18.0	8	15
8872	do.....	do.....	Granite.....	165	.31	4.6	8.8	(2)	(2)	(2)
8873	do.....	Merrimack.....	do.....	165	.47	3.6	11.0	18.5	10	34
2053	Concord.....	do.....	do.....	165	(2)	3.8	10.5	(2)	7	(2)
9036	do.....	do.....	do.....	165	.63	3.9	10.0	18.0	8	(2)
9037	do.....	do.....	do.....	165	.52	4.1	9.7	17.7	7	(2)
9031	do.....	do.....	do.....	165	.43	4.0	10.0	18.7	10	7
2332	Portsmouth.....	Rockingham.....	Altered rhyolite.....	172	.14	2.7	14.8	18.8	11	25
1779	Farmington.....	Strafford.....	Granite.....	165	.29	3.7	10.8	17.3	12	19

¹ Exact locality not known.² Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.*

NEW JERSEY.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				<i>Pounds.</i>	<i>Pounds.</i>					
260	Great Notch.....	Essex.	Diabase.....	(1)	(1)	1.8	21.8	(1)	(1)	(1)
261	do.....	do.	do.....	(1)	(1)	2.2	18.6	(1)	(1)	(1)
986	Montclair.....	do.	Basalt.....	181	0.95	1.0	21.3	18.4	24	125
987	do.....	do.	do.....	184	.61	1.8	21.7	17.6	35	283
988	do.....	do.	do.....	187	.30	1.7	24.1	18.8	29	45
1718	Millburn.....	do.	do.....	184	.10	2.0	20.0	18.0	21	120
1721	West Orange.....	do.	Altered basalt.....	184	.10	1.8	22.0	18.5	21	113
1727	Verona.....	do.	Basalt.....	181	.50	2.3	17.7	17.3	17	500+
1753	West Orange.....	do.	Altered basalt.....	187	.10	1.8	22.7	17.8	24	238
1754	do.....	do.	Basalt.....	187	.10	1.4	27.8	17.3	28	60
1755	do.....	do.	do.....	184	.36	2.3	17.7	18.3	28	77
73	Guttenberg.....	Hudson.	do.....	(1)	(1)	1.3	30.4	(1)	(1)	(1)
1751	Secaucus.....	do.	Gabbroitic diabase.....	184	.12	2.8	14.2	18.3	27	92
1756	do.....	do.	do.....	187	.18	2.1	19.0	18.3	18	88
1773	Jersey City.....	do.	Olivine diabase.....	196	.13	2.5	16.1	18.3	19	31
251	Byram Station.....	Hunterdon.	Basalt.....	(1)	(1)	1.5	26.9	(1)	(1)	(1)
253	Lambertville.....	do.	Hornblende granite.....	(1)	(1)	2.8	14.2	(1)	(1)	(1)
387	do.....	do.	Altered gabbro.....	184	.14	2.8	14.3	(1)	(1)	(1)
903	do.....	do.	Gabbroitic diabase.....	(1)	(1)	(1)	(1)	17.1	23	(1)
2085	Whitehouse.....	do.	Altered diabase.....	181	1.08	1.8	21.7	17.5	18	385
2786	Whitehouse.....	do.	do.....	184	.47	2.6	15.6	18.3	27	45
2838	do.....	do.	Dolomite.....	178	.39	3.7	10.9	17.0	10	43
2842	Calton.....	do.	do.....	177	.37	3.3	12.2	16.3	13	15
1015	do.....	do.	do.....	177	.15	3.7	10.8	16.9	15	45
4026	Millford (near).....	do.	Calcareous sandstone.....	168	.52	(1)	(1)	17.6	17	25
5233	Clinton.....	do.	Siliceous limestone.....	175	.25	3.0	13.5	17.6	25	21
5848	Middle Valley.....	do.	Hornblende gneiss.....	187	.17	2.8	14.3	18.7	26	34
5946	High Bridge.....	do.	Augite diorite.....	190	.95	3.9	10.2	17.3	16	28
6035	Flemington (near).....	do.	Siliceous slate.....	162	.32	(1)	(1)	17.3	27	52
286	Hopewell.....	Mercer.	Diabase.....	(1)	(1)	2.5	16.3	(1)	(1)	(1)
5446	Pennington.....	do.	Altered diabase.....	184	.26	3.8	10.5	17.7	17	(1)
6008	do.....	do.	Gabbroitic diabase.....	187	.05	2.4	16.4	18.5	21	42
249	Bergen Hill.....	Middlesex.	Gabbro.....	(1)	(1)	2.7	15.0	(1)	(1)	(1)
250	Wilmington.....	Morris.	Basalt.....	(1)	(1)	2.0	19.0	(1)	(1)	(1)
303	Middle Valley.....	do.	Diabase.....	(1)	(1)	1.5	26.3	(1)	(1)	(1)
405	do.....	do.	do.....	187	.09	1.7	23.8	17.7	18	300+
1708	Millington.....	do.	do.....	187	.61	2.7	14.9	17.7	32	69
2002	Middle Valley.....	do.	Altered diabase.....	187	.19	2.5	15.7	18.7	19	16
2280	Herburna.....	do.	Quartz syenite.....	165	.21	3.2	12.6	18.8	12	

Locality	Rock	Specific Gravity	Compressive Strength (lb./sq. in.)	Tensile Strength (lb./sq. in.)	Modulus of Elasticity (lb./sq. in.)	Impact Value (ft.-lb.)	Hardness (Mohs)	Wear (cu. in./cu. ft.)	Soundness (%)	Notes
5571	Montville.....	do.	175	27	3.5	11.6	18.4	11	13	
7194	Wharton.....	do.	131	4.47	12.6	3.2	9.5	4	19	
478	Wanaque.....	Passaic	200	.33	3.6	11.1	(1)	(1)	25	
1713	Montclair Heights.....	Basalt	184	.28	2.1	19.0	18.8	24	302	
1716	Paterson.....	do.	181	.39	1.9	20.6	18.7	25	74	
1717	Albion Place.....	do.	184	.59	1.5	27.0	18.5	30	68	
1780	Mountain View.....	do.	184	.85	2.5	16.0	17.8	21	500+	
1731	Paterson.....	do.	184	.59	1.6	24.4	18.3	31	(1)	
248	Rocky Hill.....	Somerset	(1)	(1)	2.1	19.4	(1)	(1)	(1)	
252	Boundbrook.....	Basalt	187	.12	2.2	18.6	(1)	(1)	(1)	
357	Chimney Rock.....	do.	147	6.32	1.7	23.6	(1)	(1)	(1)	
637	Somerville.....	Basalt-tuff	150	5.69	9.3	14.7	4.3	(1)	(1)	
669	do.	do.	181	1.81	1.5	23.5	19.1	27	298	
1619	Boundbrook.....	do.	187	.41	2.0	20.0	(1)	(1)	23	
2995	North Plainfield.....	Diabase	(1)	(1)	1.6	24.4	(1)	(1)	(1)	
284	Mechanic Mountain.....	do.	187	.33	1.8	22.0	18.3	28	70	
1706	Warrenville.....	do.	178	.24	4.0	10.1	18.5	16	143	
1719	Bernardsville.....	do.	181	.57	1.8	22.2	18.6	33	124	
4395	Boundbrook.....	do.	187	.15	1.6	24.4	18.8	34	12	
4952	Belmeade (near).....	Diabase	(1)	(1)	2.4	16.5	(1)	(1)	(1)	
285	Rocky Hill.....	Unalite gabbro	(1)	(1)	4.1	9.7	(1)	(1)	(1)	
287	Bernardsville.....	Limestone	(1)	(1)	3.3	12.0	(1)	(1)	35	
2205	(?).....	Dolomite	178	.64	3.3	12.3	17.9	15	44	
3504	Hamberg.....	Altered syenite	184	.12	1.7	23.6	(1)	(1)	(1)	
350	New Providence.....	Diabase	187	.39	1.7	26.0	17.9	25	264	
6585	do.	do.	184	.45	1.5	23.3	18.6	30	174	
912	Springfield.....	Altered diabase	181	1.15	1.7	23.3	18.3	8	225	
1707	Summit.....	Basalt	184	.32	2.2	18.0	18.3	28	284	
6595	Springfield.....	do.	181	.97	1.08	22.7	18.1	34	381	
6586	Summit.....	do.	184	1.00	1.9	20.6	17.5	38	17	
3145	Washington.....	Altered diabase	178	.14	1.2	33.3	17.2	22	69	
7436	(?).....	Siliceous dolomite	187	.45	1.9	21.0	18.7	22		
1198	Albany.....	Albany	168	0.08	2.9	13.8	17.1	20	39	
4989	South Bethlehem.....	do.	168	1.19	4.8	8.4	16.1	10	10	
5673	Guiderland.....	do.	165	1.58	3.2	12.7	14.7	14	36	
6455	(?).....	Clinton	168	.33	4.7	8.6	18.2	9	11	
6457	(?).....	do.	168	.49	3.9	10.4	18.0	10	10	
6458	(?).....	do.	172	.51	3.4	11.7	18.0	13	22	
6929	Clinton Point.....	do.	175	.21	2.7	14.8	17.2	12	43	
385	Hudson.....	Columbia	168	.40	6.9	5.8	(1)	(1)	(1)	
340	do.	do.	168	.50	5.3	7.6	(1)	(1)	(1)	
195	Cortland.....	do.	(1)	(1)	5.4	7.5	(1)	(1)	(1)	
2500	Poughkeepsie.....	Dutchess	178	1.40	3.2	12.5	17.5	12	17	

NEW YORK.

1 Test not made.

2 Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.*

NEW YORK—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Compressive value.
5544	Canalot.	Dutchess.	Dolomite.	Pounds.	Pounds.	2.3	17.5	16.8	23	33
6764	North Hamburg.	do.	Siliceous dolomite.	175	.33	2.3	17.3	17.3	20	41
8011	(1)	do.	Dolomite.	178	.24	2.3	17.6	17.6	19	317
1327	Clinton Point.	do.	Dolomitic sandstone.	175	.29	5.0	8.0	17.5	19	35
2479	Poughkeepsie.	do.	Calcareous sandstone.	175	.21	(2)	(2)	17.5	14	31
2480	do.	do.	do.	172	.44	3.7	10.9	18.0	14	20
2559	do.	do.	do.	172	.32	4.6	17.2	15.8	14	20
2561	do.	do.	Blotite gneiss.	172	.21	3.3	12.0	18.3	13	28
4960	Stonew.	do.	Quartzite.	172	.83	2.7	14.8	(2)	(2)	3
2339	Akron.	do.	Dolomitic marble.	165	.16	2.3	17.5	16.7	7	20
5225	Buffalo.	do.	Cherty limestone.	175	.35	5.9	6.8	18.8	16	17
5872	(1)	do.	Limestone.	168	1.27	3.4	11.8	16.2	10	41
1783	Kessex.	do.	Cherty limestone.	165	.86	4.1	9.7	17.0	16	6
8577	Fulton.	do.	Gabbro.	228	.74	(2)	(2)	18.0	10	28
410	North Lory.	Genesee.	Blotite gneiss.	172	.19	3.7	10.8	17.0	(2)	52
732	do.	do.	Flint.	162	.06	7.2	5.5	(2)	(2)	100
733	do.	do.	Limestone.	162	.40	4.7	7.9	(2)	(2)	44
6755	Catskill.	Greene.	do.	162	.94	3.7	10.8	13.1	9	44
632	Little Falls.	Herkimer.	Calcareous sandstone.	168	.12	1.9	20.7	(2)	(2)	14
1768	do.	do.	Gneiss.	163	.23	6.1	6.5	17.3	18	14
1769	do.	do.	Pyroxene gneiss.	181	.33	9.1	4.4	15.7	12	16
1771	do.	do.	Gneiss.	162	.13	7.6	5.3	14.7	17	45
1770	do.	do.	Pyroxene quartzite.	187	.11	2.1	19.4	17.0	35	22
2512	Saunders.	do.	do.	168	.50	2.3	17.2	18.7	21	16
1853	Little Falls.	do.	Crystalline dolomite.	175	.40	5.2	7.7	12.2	7	59
2650	Elmira.	do.	Limestone.	147	6.29	7.4	5.4	6.3	3	43
192	Round Island.	Jefferson.	Gneiss.	(2)	(2)	1.7	23.0	(2)	(2)	18
1896	Clayton.	do.	Granite.	165	.11	2.5	16.1	18.8	14	9
7437	Alexandria Bay.	do.	do.	165	.21	3.8	10.4	19.0	14	(2)
8833	do.	do.	do.	165	(2)	(2)	(2)	19.3	11	(2)
8902	do.	do.	do.	(2)	(2)	(2)	(2)	(2)	(2)	(2)
356	Brookport.	Monroe.	Fossiliferous limestone.	168	.26	4.5	8.9	(2)	(2)	47
917	Honeoye Falls.	do.	Cherty limestone.	168	.20	3.6	11.0	(2)	(2)	29
937	do.	do.	Nodular limestone.	165	2.70	6.1	6.6	(2)	(2)	45
938	do.	do.	Dolomitic limestone.	168	.27	3.6	11.2	15.6	9	45
918	do.	do.	Dolomite.	159	3.26	4.1	9.8	15.1	16	19
1211	Amsterdam.	do.	Limestone.	168	.44	2.2	17.9	16.5	18	82
1512	Pattersonville.	Montgomery.	Dolomite.	175	1.27	2.6	15.2	15.8	15	43
1746	Amsterdam.	do.	Limestone.	168	.22	4.8	8.4	15.2	9	54

New York.	New York.	Phosphate rock.	181	2.32	11.9	3.4	(3)	(3)	(3)	21	37
do.	do.	Slag rock.	243	.37	4.3	17.5	(3)	17.3	9.1	(2)	
Lockport.	Niagara.	Medina sandstone.	175	.98	2.9	13.6	15.7	16.7	18	22	
55224	Niagara Falls.	Dolomite.	172	.39	2.6	13.5	16.2	15.7	10	88	
1296	Syracuse	Limestone	172	.31	3.3	12.0	16.2	16.2	7	41	
1297	do.	do.	168	1.18	4.6	8.7	9.7	10	7	41	
1919	Skaneateles.	do.	168	.57	3.8	10.6	16.5	16.5	7	41	
1920	do.	do.	168	.29	6.5	6.0	14.8	14.8	11	40	
7005	Schoeppl's Bridge.	Argillaceous limestone.	162	.29	6.0	168					
346	Geneva.	Siliceous limestone.	165	1.20	2.9	13.9	(2)	(2)	(2)	(2)	
347	do.	Limestone	172	.17	4.5	8.8	(2)	(2)	(2)	(2)	
400	Canandaigua.	do.	168	.16	4.6	8.8	(2)	(2)	(2)	(2)	
86804	Phelps.	do.	175	.67	3.2	12.3	16.0	16.0	6	62	
8833	Warwick Township.	Diorite.	190	.39	5.7	7.0	18.3	18.3	9	24	
6720	Cornwall.	Gneissoid granite.	168	.35	3.7	10.8	18.2	18.2	9	24	
6772	do.	Hornblende granite.	165	.29	6.8	5.9	18.4	18.4	6	17	
6769	do.	Granite.	165	.14	2.1	19.0	19.3	19.3	7	15	
6919	Cornwall Landing.	Siliceous dolomite.	178	.23	4.2	9.6	17.1	17.1	5	35	
8908	Morroe.	Dolomite.	178	.40	5.5	7.3	16.7	16.7	24	29	
791	Florida.	Dolomite sandstone.	175	.10	3.7	10.9	17.4	17.4	8	(3)	
3144	Highland Mills.	Ferruginous sandstone.	165	.47	2.5	16.3	18.8	18.8	11	15	
8309	Monroe.	Calcareous sandstone.	168	1.16	3.0	13.2	18.7	18.7	19	16	
8910	do.	Sandstone.	165	(2)	4.8	8.4	19.0	19.0	4	10	
44106	Albion.	Ferruginous sandstone.	156	.23	3.9	10.3	16.0	16.0	12	23	
2175	Oswego.	Pyroxene quartzite.	168	.34	7.0	5.7	17.2	17.2	10	10	
2176	do.	Quartzite.	165	.34	7.6	5.3	18.9	18.9	13	18	
2177	do.	Feldspathic quartzite.	159	1.53	3.2	12.6	14.8	14.8	21	18	
26249	Cooperstown.	Sandstone.	159	1.83	(2)	(2)	18.2	18.2	12	37	
8041	Garrison.	Granite.	165	.28	5.1	7.8	18.7	18.7	11	10	
2317	Hoosick Falls.	Limestone.	172	.17	3.2	12.7	16.8	16.8	12	47	
2318	do.	do.	175	.32	3.1	12.7	17.0	17.0	21	36	
2880	do.	do.	172	.28	2.8	14.4	18.9	18.9	20	24	
5608	Brainard.	Calcareous sandstone.	168	.18	2.1	19.2	17.9	17.9	14	72	
45	Tompkins Cove.	Feldspathic sandstone.	175	(2)	5.1	7.8	(2)	(2)	(2)	(2)	
do.	do.	Siliceous limestone.	168	.28	5.9	6.7	(2)	(2)	(2)	(2)	
do.	do.	Limestone.	175	(2)	6.3	6.3	(2)	(2)	(2)	(2)	
do.	do.	do.	175	(2)	2.7	14.9	(2)	(2)	(2)	(2)	
do.	do.	Dibase.	(2)	(2)	2.3	17.8	(2)	(2)	(2)	(2)	
49	Harvestaw.	do.	193	.51	3.0	13.2	(2)	(2)	27	500+	
95	Rockland Lake.	do.	184	.39	1.9	20.8	16.1	16.1	27	500+	
335	do.	do.	184	.39	1.9	20.8	16.1	16.1	27	500+	
1321	do.	do.	184	.68	2.7	15.0	18.2	18.2	17	217	
1361	do.	do.	184	.28	5.1	11.7	17.7	17.7	20	117	
2304	do.	do.	184	.	3.6	15.4	18.3	18.3	33	44	
Nyack.	do.	Gabbroitic diabase.	181	.49	2.4	16.8	18.1	18.1	21	21	
4401	Rockland Lake.	do.	184	.23	2.4	16.8	18.1	18.1	23	23	
4964	do.	do.	187	.16	2.5	15.8	18.5	18.5	9	182	
4996	Upper Nyack.	Diabase.	187	1.45	2.5	16.1	15.8	15.8	23	31	
5315	Suffern.	Altered diabase.	184	.79	1.6	25.0	18.3	18.3	23	24	
5588	Congers.	Gabbroitic diabase.	181	.71	2.2	18.1	18.2	18.2	23	142	
5580	West Nyack.	Altered diabase.	181	.	2.2	18.1	18.2	18.2	23	142	

Test not made.

Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

NEW YORK—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
6723	Haverstraw	Rockland.	Diabase.	Pounds. 184	Pounds. .82	2.3	17.4	17.8	18	66
6724	do.	do.	do.	184	.39	2.3	17.4	18.0	23	131
6725	do.	do.	Gabbroite diabase.	184	.56	2.6	15.6	18.1	17	309
7805	(¹)	do.	Diabase.	187	.35	2.4	16.4	18.0	18	89
8012	(¹)	do.	Gabbroite diabase.	184	.16	4.6	8.6	18.5	14	30
6774	Tompkins Cove.	do.	Siliceous dolomite.	178	.26	4.3	17.8	16.4	9	186
6775	do.	do.	Dolomite.	175	.41	4.9	8.2	12.7	7	70
8013	(¹)	do.	Siliceous dolomite.	175	.26	6.9	5.8	17.2	13	13
9162	Tompkins Cove.	do.	do.	175	.35	4.8	8.3	16.6	13	36
4328	Massena.	St. Lawrence.	do.	175	.44	4.3	9.4	16.5	16	22
4330	do.	do.	do.	175	.81	3.1	13.1	16.8	20	28
1524	Saratoga Springs.	do.	Hornblende gneiss.	190	.28	4.7	8.5	16.9	16	41
1525	do.	do.	Altered diabase.	175	.42	2.3	17.1	17.6	18	57
1689	do.	do.	Feldspathic sandstone.	108	.65	2.8	14.1	17.5	11	20
94	Stillwater.	Schenectady	Sandstone.	(²)	(²)	3.8	10.5	(²)	(²)	(²)
188	Hoves Cove.	Schoharie.	Limestone.	(²)	(²)	4.2	9.6	(²)	(²)	(²)
1538	Cobleskill.	do.	do.	168	.52	4.5	8.8	13.7	7	98
382	Deerpark.	Suffolk.	Sandy shale.	165	1.96	4.7	8.6	(²)	(²)	(²)
1697	Smithborough.	Tioga.	Feldspathic sandstone.	162	2.09	2.7	15.0	17.3	17	15
1100	West Camp.	Ulster.	Limestone.	168	.26	3.0	13.2	16.9	6	61
1693	Kingston.	do.	do.	172	.11	3.1	12.7	14.8	5	62
3822	Kingston (near).	do.	Siliceous limestone.	168	.45	4.8	8.4	15.1	7	48
5222	Kingston.	do.	Limestone.	168	.33	4.0	10.0	16.8	8	22
5223	do.	do.	do.	168	.23	5.3	7.6	16.7	7	31
5574	Roundout.	do.	do.	168	.39	5.0	7.9	16.4	10	65
2927	East Kingston.	do.	Calcareous sandstone.	168	.24	2.8	14.4	15.0	13	207
6363	Kingston.	do.	Feldspathic sandstone.	156	1.00	3.1	12.8	17.0	16	25
6634	Ulster.	do.	Calcareous sandstone.	168	.80	5.3	7.5	13.3	16	149
1257	Greenwich.	Washington.	Limestone.	178	.21	2.2	18.2	16.7	19	26
6732	Smiths Basin.	do.	Siliceous dolomite.	175	.23	2.7	14.0	18.3	14	34
983	Newark.	Wayne.	Dolomite limestone.	159	2.10	3.3	7.9	(²)	(²)	(²)
984	do.	do.	Limestone.	172	.42	4.9	8.1	22.2	41	41
941	Brier Cliff Manor.	Westchester.	Hornblende schist.	190	.26	2.5	16.2	17.2	22	38
2160	Corlandt.	do.	Diorite.	190	.56	3.0	13.2	16.7	10	106
2161	do.	do.	do.	184	.42	3.8	10.4	16.6	8	134
404	Bellona.	Yates.	Limestone.	168	.14	5.3	7.5	(⁴)	(³)	(³)
1118	Toney.	do.	do.	108	.22	4.3	9.2	17.3	9	40

NORTH CAROLINA.

822	How River.....	Alamance.....	Chlorite epidote schist.....	175	0.06	3.1	13.1	18.5	34	26
7771	Burlington.....	do.....	Altered gabbro.....	184	.40	3.5	11.4	16.7	9	26
9226	Wadesboro.....	Anson.....	Dialase.....	187	.06	1.0	20.4	18.4	27	19
4931	Cramberry.....	Avery.....	Pardotte.....	240	.40	3.5	11.4	16.7	9	29
469	Washington.....	Beaufort.....	Stuccous shell limestone.....	140	2.75	33.6	1.2	17.6	5	(2)
705	Asheville.....	Buncombe.....	Hornblende schist.....	200	.15	5.7	17.1	(2)	(2)	(2)
778	do.....	do.....	do.....	193	.37	3.6	11.0	(2)	(2)	28
627	do.....	do.....	Biotite schist.....	172	.09	3.4	11.8	(2)	(2)	16
628	do.....	do.....	Granite porphyry.....	108	.26	2.2	18.6	(2)	(2)	(2)
777	do.....	do.....	Diorite gneiss.....	184	.33	2.3	17.4	(2)	(2)	14
8135	do.....	do.....	Granite gneiss.....	168	.15	3.7	10.7	(2)	(2)	13
809	do.....	do.....	Biotite gneiss.....	178	.39	5.6	7.2	16.6	9	15
8133	Monford (near Asheville).....	do.....	Micro granite.....	165	.11	2.3	17.2	(2)	(2)	14
8134	Asheville.....	do.....	Granite.....	165	.31	2.8	14.3	18.4	11	12
4963	do.....	do.....	Aplitic granite.....	165	.24	2.2	18.0	18.7	7	12
535	Morgantown.....	do.....	Dolomite.....	(2)	(2)	4.0	10.0	17.3	14	18
434	Concord.....	Burke.....	Basalt.....	190	.15	2.0	20.3	(2)	(2)	11
436	do.....	Cabarrus.....	Micro granite.....	162	.33	1.8	21.7	(2)	(2)	34
6566	do.....	do.....	Angite syenite.....	165	.29	5.7	7.0	(2)	(2)	13
513	Concord (near).....	do.....	do.....	168	.24	5.0	8.0	18.3	11	27
812	Concord.....	do.....	Syenite.....	168	.28	2.8	14.4	(2)	(2)	35
4717	Hickory.....	do.....	Hornblende granite.....	172	.14	2.2	18.4	18.5	22	12
4723	do.....	Catawba.....	Granite gneiss.....	168	.24	6.9	5.8	18.3	4	4
839	Silver City (4 miles northwest of).....	do.....	do.....	172	.63	2.3	6.3	17.9	8	6
3382	Andrews.....	Chatham.....	Chlorite epidote schist.....	175	.08	2.3	17.7	17.5	(2)	21
3383	do.....	Cherokee.....	Quartzite.....	165	.31	4.9	8.2	19.3	15	61
7022	Regal.....	do.....	Marble.....	172	.16	6.0	6.7	14.1	3	21
6197	Murphy.....	do.....	do.....	172	.28	4.4	9.1	14.7	6	12
6198	do.....	do.....	Mica schist.....	171	.06	4.7	8.5	14.0	4	52
2576	Shelby.....	do.....	Serfite schist.....	175	.43	6.1	6.6	16.2	7	17
381	Newberne.....	Cleveland.....	Sandstone.....	162	.31	3.2	3.5	(2)	(2)	12
229	Thomasville (5 miles from).....	Craven.....	Biotite gneiss.....	175	.20	11.3	3.5	(2)	(2)	32
7775	Newson.....	Davidson.....	Fossiliferous limestone.....	137	1.99	34.2	1.2	18.3	20	17
8710	do.....	do.....	Altered andesite.....	181	.49	2.7	13.0	19.5	32	12
2988	Durham.....	do.....	Rhyolite.....	165	.23	2.7	14.8	19.3	33	9
813	Bethania Station.....	do.....	Altered rhyolite.....	175	.47	4.1	9.8	19.3	14	19
1403	Winston.....	do.....	Hornblende epidote schist.....	184	.42	(2)	(2)	17.3	39	50
1404	do.....	do.....	Olivine basalt.....	190	.04	3.0	13.4	18.3	19	1
7561	Winston-Salem (near).....	Forsythe.....	Granite gneiss.....	165	.88	1.9	20.4	18.5	19	8
8303	Franklin.....	do.....	Epitide quartzite.....	187	.82	3.9	10.3	18.0	15	15
8803	Gastonia.....	do.....	Granite.....	165	.49	5.7	7.0	17.4	5	13
8882	do.....	Franklin.....	Olivine diabase.....	184	.35	2.7	14.9	18.4	12	26
815	Jamestown.....	Gaston.....	Quartzite.....	175	.51	2.6	13.4	18.8	(2)	(2)
819	Greensboro.....	Guilford.....	Aplitic granite.....	175	.13	2.5	16.0	(2)	(2)	(2)
		do.....	Uratlic diabase.....	181	.11	2.1	19.1	18.1	27	(2)
		do.....	Diabase.....	187	.14	1.6	24.7	(2)	(2)	(2)

² Test not made.

Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

NORTH CAROLINA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Commenting value.
				Pounds.	Pounds.					
816	Jamestown.	Guilford.	Granite.	168	.15	3.4	11.7	18.0	(1)	10
817	Greensboro.	do.	do.	172	.11	2.6	15.2	(1)	(1)	11
818	do.	do.	Dolomitic sandstone.	178	.14	1.9	21.1	17.2	27	18
820	do.	do.	Gabbro.	133	.21	3.5	11.6	(1)	(1)	37
821	do.	do.	Diorite.	193	.09	2.9	13.6	(1)	(1)	21
822	do.	do.	do.	133	.06	2.3	17.7	18.4	24	20
823	do.	do.	Granite gneiss.	184	.06	3.2	12.4	(1)	(1)	12
810	Balfour.	Henderson.	do.	165	.11	3.2	12.4	(1)	(1)	10
2755	Hendersonville (2 miles northwest of)	do.	do.	165	.23	3.1	12.7	18.5	10	20
8576	Moore'sville.	Iredell.	Biotite granite.	168	.40	3.0	13.3	18.6	11	74
6795	Sylva.	Jackson.	Biotite gneiss.	187	.28	6.1	6.6	17.2	8	24
6794	do.	do.	do.	168	.33	4.3	9.3	18.4	7	24
6793	do.	do.	Biotite schist.	184	.60	6.4	6.2	15.1	7	7
6882	do.	Macon.	Biotite gneiss.	172	.42	5.4	7.4	18.0	6	59
6883	do.	do.	do.	172	.28	11.0	3.6	9.5	5	24
6884	do.	do.	Dolomitic marble.	172	.28	3.3	13.1	17.2	10	9
6977	Hewitt.	do.	do.	181	.21	6.0	6.6	15.2	(1)	21
504	Hot Springs.	Madison.	Dolomite.	178	.13	4.2	9.5	(1)	(1)	(1)
772	do.	do.	do.	178	.22	5.5	7.2	(1)	(1)	(1)
771	do.	do.	Quartzite.	165	.17	3.3	12.3	17.0	19	28
867	Marion.	do.	Biotite gneiss.	168	.20	2.3	17.6	19.0	13	20
2124	Old Fort (near).	do.	Serficite gneiss.	172	.10	3.8	10.6	19.0	13	20
2190	Old Fort.	do.	Gneiss.	168	.21	2.8	14.2	18.3	13	50
5373	(3).	do.	Granite gneiss.	168	.28	3.5	11.5	18.8	15	16
808	Marion.	do.	Dolomite.	175	.27	4.7	8.6	(1)	(1)	21
811	Charlotte.	Mecklenburg.	Granite.	168	.15	2.3	17.5	18.8	(1)	6
913	Yoe Cane.	Mitchell.	Micaceous eclogite.	196	.27	2.1	19.2	17.4	31	25
840	Carthage.	Moore.	Olivine diabase.	184	.28	2.8	14.5	17.9	16	62
841	do.	do.	Diabase.	178	.64	2.7	15.1	18.0	121	21
2708	Rocky Mountain.	Nash.	Granite.	165	.28	3.4	11.9	18.7	18	16
7352	(3).	do.	Biotite granite.	165	.29	5.0	8.0	19.5	8	28
7353	(3).	do.	Altered granite.	162	.30	4.9	8.2	18.8	4	(1)
402	Wilmington.	New Hanover.	Fossiliferous limestone.	150	.27	9.9	4.0	(1)	(1)	102
834	Chapel Hill (1½ miles east of)	Orange.	Olivine basalt.	187	.14	2.7	14.6	18.9	50	44
835	Hillsboro (1 mile southwest of)	do.	Altered diabase.	184	.08	4.1	29.6	17.5	8	28
2465	Lynn.	Folk.	Granite.	165	.67	4.1	9.9	17.8	10	18
2753	Tryon.	do.	Biotite granite.	165	.36	5.8	6.9	16.5	(1)	14
5430	Rockliff.	do.	Granite gneiss.	172	.33	6.6	6.1	17.8	(1)	33
514	Asheboro.	do.	Pelinite.	168	.02	1.9	21.3	(1)	(1)	17
826	Richmond.	Randolph.	Hyperserphic gabbro.	187	.47	3.2	16.4	18.8	14	16
4109	Rufin.	Rockingham.	Granite gneiss.	162	.04	4.3	9.2	18.8	12	

5556	Stacey.....	do.	do.	do.	165	20	2.4	16.5	19.3	14
5449	do.	do.	do.	do.	165	19	2.2	18.8	18.8	10
808	Granite Quarry Station	Rowan.....	do.	do.	165	12	2.2	20.8	(1)	(1)
1149	Salisbury.....	do.	do.	do.	165	31	2.6	15.1	(1)	20
2189	Granite Quarry.....	do.	do.	do.	165	19	2.3	17.2	19.0	19
2385	do.	do.	do.	do.	165	25	2.4	16.5	18.7	11
5496	Salisbury.....	do.	do.	do.	(1)	(1)	(1)	(1)	18.8	(1)
5719	do.	do.	do.	do.	(1)	(1)	(1)	(1)	19.4	(1)
6414	do.	do.	do.	do.	165	26	2.6	15.5	(1)	8
7440	do.	do.	do.	do.	(1)	(1)	3.2	12.4	19.0	(1)
5629	do.	do.	do.	Altered syncline porphyry	(1)	(1)	(1)	19.2	21	9
9618	do.	do.	do.	Granite	162	31	2.9	13.8	19.3	20
7560	Bear Poplar.....	do.	do.	Hypersthene gabbro	181	34	3.9	10.3	18.5	5
6071	Boslic.....	Rutherford.....	do.	Biotite gneiss	168	28	8.0	5.0	17.3	11
5866	New London.....	do.	do.	Epidosite.....	172	23	2.7	15.0	18.7	17
5867	do.	do.	do.	Seate soapstone	178	150	6.9	5.8	4.3	28
5868	do.	do.	do.	do.	159	252	9.8	4.1	(1)	100
764	Elkin.....	do.	do.	Hornblende schist.....	187	20	4.4	9.1	(1)	27
814	Mount Airy (1½ miles northeast)	do.	do.	Granite	165	23	4.3	9.3	(1)	28
5497	Mount Airy.....	do.	do.	do.	(1)	(1)	(1)	17.8	8	(1)
7433	do.	do.	do.	do.	165	33	6.0	6.7	19.7	20
8816	do.	do.	do.	do.	165	27	4.2	9.5	18.2	10
8205	Hewitts.....	do.	do.	Dolomite	178	34	3.9	10.3	19.5	39
1787	Lake Foxaway.....	do.	do.	Biotite gneiss	165	43	4.5	9.0	18.3	10
1788	do.	do.	do.	do.	162	96	6.3	6.4	12.7	15
1789	do.	do.	do.	Hornblende schist.....	187	126	7.7	5.7	9.8	28
6301	Monroe.....	do.	do.	Sandstone.....	172	40	2.7	13.0	12.5	11
1274	Henderson.....	do.	do.	Granite gneiss	165	31	3.8	10.4	17.4	18
6900	Middlebury.....	do.	do.	do.	165	19	4.5	8.9	18.3	14
8927	do.	do.	do.	do.	163	52	2.6	13.3	18.2	16
1275	Henderson.....	do.	do.	Granite	165	40	(1)	(1)	17.3	7
1276	do.	do.	do.	do.	165	33	3.9	10.4	17.5	16
1277	do.	do.	do.	Gneissoid granite.....	165	38	5.0	8.1	16.6	11
8419	Granita (near).....	do.	do.	Biotite granite	165	38	3.0	13.3	19.0	22
3807	Wise.....	Wake.....	do.	Pink granite	165	15	2.7	14.8	18.9	8
3808	do.	do.	do.	White granite	165	20	2.3	17.2	18.8	14
6901	do.	do.	do.	Biotite granite	165	24	4.3	9.2	18.6	7
6284	North Wilkesboro	do.	do.	Mica gneiss	175	15	3.9	10.3	10.3	10
431	Elm City (2 miles northeast of)	Wilson.....	do.	Gray granite	165	37	2.8	14.2	(1)	(1)
432	Wilson (3 miles south of)	do.	do.	Reddish granite	165	38	6.4	6.2	17.5	31
433	Wilson (4 miles southwest of)	do.	do.	do.	162	22	5.6	7.2	(1)	(1)
2178	do.	do.	do.	Granite	165	14	5.6	7.2	17.9	24
2179	do.	do.	do.	Biotite granite	162	97	9.8	4.1	17.5	30
2181	do.	do.	do.	do.	165	50	5.2	7.7	17.9	32
2184	do.	do.	do.	Granite	165	43	4.7	8.4	18.5	25
3044	do.	do.	do.	Biotite granite	165	49	10.0	4.0	18.2	26
9038	do.	do.	do.	Granite	165	41	4.6	8.7	19.0	13
5374	Yancey.....	do.	do.	Quartzite	165	30	3.1	13.0	19.3	8
7589	(2).....	do.	do.	Biotite schist.....	184	27	(1)	(1)	19.2	32
6589	(2).....	(2).....	(2).....	Feldspathic quartzite.....	168	11	2.3	17.2	19.2	27

¹ Test not made.² Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

OHIO.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
6093	Liman.....	Allen.....	Dolomite.....	Pounds. 165	Pounds. 2.24	4.0	10.0	15.5	11	18
9438	do.....	do.....	Argillaceous dolomite.	168	2.10	2.9	13.8	15.6	7	36
3186	Jefferson.....	Ashtabula.....	Sandstone.....	153	2.37	10.0	4.0	9.2	5	20
977	Urbana.....	Champaign.....	Calcareous sandstone.....	159	3.60	11.4	3.5	7.2	7	32
.....	do.....	do.....	do.....	159	3.90	32.8	1.2	0	5	20
4692	Springfield.....	Clark.....	Dolomite.....	168	1.59	6.8	5.9	11.3	4	(1)
4695	do.....	do.....	do.....	168	.60	6.7	6.0	14.0	9	(1)
4694	Osborne.....	do.....	Dolomite limestone.....	168	.31	6.2	6.4	9.3	4	(1)
5247	Melvin.....	Clinton.....	Dolomite.....	162	2.11	11.8	3.4	13.8	7	21
6718	Leetonia.....	Columbiana.....	Blast furnace slag.....	(1)	(1)	13.1	3.1	(1)	3	400
8597	do.....	do.....	do.....	(1)	(1)	11.3	11.3	16.2	(1)	83
1309	Coshocton.....	Coshocton.....	Limestone.....	168	1.10	3.5	9.8	(1)	19	71
765	Chagrin Falls.....	do.....	Sandstone.....	156	4.10	4.4	13.8	(1)	(1)	307
9459	Cleveland.....	Cuyahoga.....	Granite.....	165	.15	2.9	(1)	18.5	10	(1)
9282	do.....	do.....	do.....	(1)	(1)	(1)	(1)	18.8	8	(1)
9283	do.....	do.....	do.....	(1)	(1)	(1)	(1)	18.6	9	(1)
9284	do.....	do.....	do.....	(1)	(1)	(1)	(1)	18.8	11	(1)
9285	do.....	do.....	do.....	(1)	(1)	(1)	(1)	12.4	6	34
1570	Warrenville.....	do.....	Limestone.....	162	1.79	7.5	5.3	13.7	7	41
1570	do.....	do.....	do.....	165	1.75	4.3	9.3	13.7	6	65
1944	Sandusky.....	Erie.....	do.....	165	1.33	4.9	8.2	9.7	6	94
1989	do.....	do.....	do.....	168	1.30	3.5	11.4	14.0	7	58
1990	do.....	do.....	do.....	168	1.33	3.8	10.5	13.1	8	25
2979	do.....	do.....	do.....	165	1.46	4.4	9.0	10.4	8	17
4378	do.....	do.....	do.....	168	1.05	3.9	10.2	17.3	10	38
5554	do.....	do.....	do.....	168	1.85	5.6	7.2	13.9	7	41
5753	Castalia.....	do.....	Dolomite limestone.....	172	.50	5.5	7.3	13.7	7	27
6055	do.....	do.....	Limestone.....	172	.20	5.3	5.9	19.5	10	66
6056	Akron Junction.....	do.....	Cherty limestone.....	183	4.70	6.8	6.0	(1)	5	29
2895	Wilmer.....	do.....	Calcareous sandstone.....	159	3.25	6.7	6.0	(1)	(1)	59
663	Columbus.....	Franklin.....	Limestone.....	162	1.70	6.9	5.8	(1)	(1)	74
664	do.....	do.....	do.....	156	2.60	3.8	10.6	(1)	(1)	55
666	do.....	do.....	do.....	168	.69	3.8	10.5	15.9	6	105
2806	do.....	do.....	do.....	165	1.58	3.1	12.8	17.0	10	96
3077	do.....	do.....	do.....	165	1.45	3.1	10.1	16.0	10	61
3356	Marble Cliff.....	do.....	do.....	168	1.98	4.6	9.3	15.5	11	31
3706	Columbus.....	do.....	do.....	162	1.98	3.2	11.2	(1)	7	61
5505	Marble Cliff.....	do.....	do.....	162	1.22	7.2	5.0	(1)	6	31
5506	do.....	do.....	do.....	162	2.14	7.2	10.4	(1)	6	39
5861	Columbus.....	do.....	do.....	165	1.05	3.8	10.4	14.5	6	

Locality	Stratigraphic Unit	Sample No.	Grain Size (mm)	Color	Texture	Mineralogy	Chemical Analysis	Notes
5630	do.	162	3.1	12.9	16.5	11		
5631	Feruginous sandstone.	139	2.98	7.0	12.8	12		
5632	Calcareous sandstone.	165	7.79	5.1	(1)	(1)		
5633	Limestone.	165	1.62	7.2	8.3	5		
5634	do.	175	1.36	8.5	13.5	6		
5635	Sandstone.	168	1.28	4.7	15.3	8		
5636	Dolomite.	165	11.0	3.6	14.8	8		
5637	do.	139	1.39	7.1	12.7	8		
5638	do.	139	3.56	5.6	12.3	5		
5639	Limestone	168	2.27	7.2	17.2	5		
5640	Dolomite	168	2.42	10.6	16.3	10		
5641	do.	165	7.7	12.3	16.3	19		
5642	do.	165	3.3	13.3	(1)	(1)		
5643	do.	165	3.5	11.5	15.1	4		
5644	Argillaceous dolomite.	168	2.78	4.0	15.8	16		
5645	Chert limestone.	165	2.56	10.0	15.8	11		
5646	Argillaceous sandstone.	165	2.88	7.2	11.8	6		
5647	Limestone	156	5.14	6.0	6.6	6		
5648	do.	166	1.06	8.8	0	6		
5649	Calcareous sandstone.	153	3.95	8.8	11.3	6		
5650	Argillaceous limestone.	159	3.75	6.7	10.7	5		
5651	Blast furnace slag	178	64	9.3	8.3	4		
5652	do.	172	1.53	6.5	16.8	16		
5653	Chert.	156	1.97	3.4	11.7	7		
5654	Limestone	165	1.19	4.3	(1)	(1)		
5655	Dolomite	153	6.91	8.7	9.2	7		
5656	Dolomite limestone	175	83	4.6	18.1	7		
5657	do.	156	4.02	9.6	(1)	(1)		
5658	Argillaceous limestone	156	5.03	7.1	13.7	8		
5659	Blast furnace slag	143	4.10	9.5	9.5	6		
5660	do.	168	8.6	4.8	(1)	(1)		
5661	Smelter slag.	(1)	1.31	4.6	17.0	5		
5662	Blast furnace slag	165	2.52	2.3	18.2	9		
5663	Dolomite	165	8.3	3.8	13.2	4		
5664	do.	162	2.76	8.3	14.2	118		
5665	do.	172	1.50	5.0	15.7	17		
5666	do.	175	6.8	8.1	13.7	19		
5667	do.	175	4.5	9.8	17.7	17		
5668	do.	172	4.1	4.1	17.7	17		
5669	do.	172	1.74	12.9	(1)	(1)		
5670	Cherty dolomite.	172	4.5	3.1	16.9	27		
5671	Argillaceous dolomite.	168	1.23	8.9	18.8	12		
5672	Dolomite	168	2.78	4.9	11.3	24		
5673	do.	168	2.28	8.2	15.0	6		
5674	do.	172	2.05	5.8	15.0	15		
5675	do.	172	9.2	17.7	(1)	(1)		
5676	Limestone	165	2.26	5.0	13.0	5		
5677	Siliceous limestone.	168	1.09	9.6	15.7	12		
5678	Limestone.	168	4.4	9.1	(1)	(1)		
5679	Blast furnace slag	175	1.23	5.6	18.3	5		
5680	do.	137	4.50	4.9	14.3	86		
5681	do.	162	3.29	3.1	13.1	63		
5682	Limestone.	153	2.66	9.6	17.2	8		
5683	Sandstone.	172	2.8	7.9	16.0	25		
5684	Limestone.	168	2.70	5.3	11.9	58		
5685	do.	168	2.70	5.3	11.9	54		

Test not made.

Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916—Contd.

OHIO—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
3714	Piqua.....	Miami.	Limestone.....	Pounds. 168	Pounds. 1.15	6.0	6.7	12.1	5	18
5880	do.....	do.	Crystalline limestone.	172	.52	6.2	6.5	11.6	15	45
2015	Ludlow Falls.	do.	Dolomite.....	172	.77	3.8	10.6	14.7	11	179
5891	Covington.	do.	do.....	172	1.84	3.8	10.4	12.4	8	29
5862	Piqua.....	do.	Marble.....	165	.92	7.8	5.2	5.6	3	23
1179	Madison Township.	Montgomery.	Limestone.....	165	.74	10.2	3.9	11.2	7	101
1732	Dayton.	do.	do.....	175	.63	3.9	10.2	15.2	12	72
1763	do.....	do.	do.....	162	.51	8.7	4.6	12.0	9	58
3257	Centerville.	do.	do.....	165	.70	6.2	6.5	9.3	5	60
3369	do.....	do.	do.....	168	.96	7.4	5.4	14.8	6	46
1180	Butler Township.	do.	Dolomite.....	165	1.22	7.5	5.4	14.8	10	48
7126	Zanesville.	Muskingum.	Sandstone.....	153	2.10	4.2	9.5	18.3	1	(1)
8270	Gratiot.	do.	Siliceous limestone.	162	1.72	4.2	6.5	18.3	13	95
779	Oak Harbor.	Ottawa.	Dolomite.....	175	.21	6.1	5.0	(1)	(1)	31
778	do.....	do.	Limestone.....	165	.93	8.1	9.4	15.7	(1)	(1)
3541	White Rock.	do.	Dolomite.....	175	.67	4.2	9.4	15.7	11	12
5757	do.....	do.	do.....	172	1.40	5.8	6.8	15.5	10	18
6952	do.....	do.	do.....	172	1.03	5.9	6.8	14.7	5	24
6990	Freedom Township.	Portage.	Limestone.....	165	1.39	4.6	8.7	15.1	13	46
6992	Atwater.	do.	do.....	168	1.11	4.7	8.5	17.4	8	40
6790	Palmira Township.	do.	Ferruginous sandstone.	153	5.70	10.0	4.0	(1)	(1)	54
7118	do.....	do.	do.....	130	1.37	21.4	1.9	1.3	2	23
2893	New Paris.	Preble.	Limestone.....	175	.82	4.3	9.4	17.9	7	68
3181	New Paris (near).	do.	Dolomite.....	172	.98	3.6	11.0	15.3	13	29
5930	Lewisburg.	do.	Argillaceous dolomite.	159	5.55	7.2	5.6	2.3	4	139
5980	New Paris.	do.	Dolomite.....	175	.47	2.6	15.4	15.8	14	28
3183	Ross.	do.	Sandstone.....	165	3.69	(1)	(1)	15.8	11	16
4889	Bellevue.	Sandusky.	Limestone.....	165	.95	4.1	9.9	12.3	6	22
5090	do.....	do.	do.....	168	.97	6.3	6.4	14.8	10	35
5091	do.....	do.	do.....	172	1.46	4.2	9.5	16.4	14	32
1856	Seneca.	do.	Dolomite.....	165	1.29	6.9	5.8	13.8	6	75
2042	do.....	do.	do.....	172	.96	6.7	6.0	15.3	7	49
5092	do.....	do.	do.....	172	.55	10.8	3.7	12.4	5	54
7776	Fostoria.	do.	Argillaceous dolomite.	171	1.30	5.0	8.0	15.3	7	46
2477	Bloomville.	do.	Dolomite.....	168	1.43	7.8	5.1	11.2	18	18
2478	do.....	do.	Argillaceous limestone.	168	2.25	3.3	12.0	15.2	18	26
2332	Republic (near).	do.	Limestone.....	172	.37	4.3	9.3	12.8	9	32
5556	Bloomville.	do.	do.....	168	2.12	4.5	8.8	15.3	8	43
		do.	do.....	168	1.00	3.6	11.0	12.5	6	22

OKLAHOMA.

	do.	Stark	do.	do.	156	3.33	4.3	9.3	13.5	7	9
9281	do.	Stark	do.	do.	168	5.55	3.9	10.2	15.8	9	24
2663	North Industry	Summit	do.	Sandstone	153	4.33	5.2	7.8	13.8	14	26
2833	Twinsburg	Trumbull	do.	Blast furnace slag	162	80	3.1	13.0	(1)	8	21
828	Howland Township	Tuscarawas	do.	Limestone	(1)	(1)	16.5	2.4	11.4	5	300
6710	Canal Dover	Union	do.	Dolomite	165	1.31	6.1	6.4	13.2	10	53
4399	White Sulphur	Van Worth	do.	do.	172	1.76	5.3	7.5	16.3	13	16
5555	Middlepoint	Washburn	do.	do.	159	1.05	11.5	3.5	9.2	4	20
6116	Willshire	Warren	do.	do.	162	3.59	9.1	4.4	11.4	6	21
4307	Cold Springs	Wyandot	do.	do.	165	1.34	5.9	6.8	8.8	3	(1)
4691	Carey										
4352	Choctle	Atoka	Chert	Chert	162	0.65	2.7	14.9	19.2	25	21
5853	Stringtown (near)	do.	do.	do.	153	2.91	6.3	6.4	18.8	5	20
5982	Choctle	do.	Weathered chert	Weathered chert	159	1.72	7.4	5.4	(1)	(1)	29
6374A	do.	do.	Chert	Chert	162	52	4.5	8.9	(1)	(1)	61
6374B	do.	do.	do.	do.	168	73	(1)	(1)	16.0	7	78
9404	Stringtown	do.	Argillaceous limestone	Argillaceous limestone	162	1.90	4.3	9.3	18.8	(1)	55
2650	Watonga	Blaine	Gypsum	Gypsum	143	3.34	38.2	1.0	4.8	4	500+
3347	do.	do.	Dolomite	Dolomite	168	1.16	5.5	7.3	16.8	13	50
4366	Richards Spur	Comanche	Limestone	Limestone	168	20	4.0	10.0	16.6	6	36
4703	Fort Sill	do.	do.	do.	168	54	(1)	(1)	13.7	5	16
4704	do.	do.	do.	do.	162	1.12	(1)	(1)	14.8	6	18
5251	Richards Spur	do.	do.	do.	168	1.62	3.9	10.4	16.2	9	26
4705	Fort Sill	do.	Altered rhyolite	Altered rhyolite	162	1.14	(1)	(1)	18.7	15	11
4365	Cement	Grady	Siliceous limestone	Siliceous limestone	165	66	4.1	9.9	16.2	7	78
4368	Granite City	Greer	Granite porphyry	Granite porphyry	165	12	2.5	15.7	19.3	21	10
4389	do.	do.	Hornblende granite	Hornblende granite	165	20	3.8	6.3	18.7	8	10
4370	do.	do.	do.	do.	165	20	3.8	10.5	19.0	9	13
4356	Ravia	Johnston	Bituminous limestone	Bituminous limestone	135	2.69	4.0	10.0	3.2	6	500+
6034	(2)	do.	Limestone	Limestone	165	53	4.4	9.0	15.5	7	30
6028	do.	do.	do.	do.	162	81	5.7	7.0	14.7	10	48
7496	Wapanucka	do.	do.	do.	156	2.74	5.6	7.1	(1)	(1)	83
4353	Tishomingo	do.	Biotite granite	Biotite granite	165	66	6.0	6.7	19.2	8	17
4355	Ravia	do.	Granite	Granite	162	18	3.3	12.0	19.0	9	15
5300	do.	do.	Weathered granite	Weathered granite	162	39	4.2	9.6	(1)	(1)	14
4394	Tishomingo	do.	Dischase	Dischase	190	14	4.1	9.7	18.8	25	31
4347	Ponca City	Kay	Clay limestone	Clay limestone	143	5.06	(1)	(1)	0	3	17
4347	do.	do.	Limestone	Limestone	153	3.77	5.7	7.0	8.3	5	47
4348	Newkirk	do.	Clay limestone	Clay limestone	143	6.79	9.9	4.0	0.0	3	60
4349	Uncas	do.	Shell limestone	Shell limestone	150	5.29	3.3	4.3	0.0	3	54
5142	Ponca City	do.	Limestone	Limestone	156	2.31	(1)	(1)	13.2	7	32
5143	do.	do.	do.	do.	156	3.63	(1)	(1)	12.3	5	38
5144	do.	do.	do.	do.	150	3.50	(1)	(1)	11.0	5	38
5145	do.	do.	do.	do.	150	4.65	(1)	(1)	8.6	5	38
5325	do.	do.	do.	do.	156	3.20	6.1	6.5	8.6	5	22
4367	Cold Springs	Kiowa	Diorite	Diorite	178	24	2.8	14.3	18.8	22	25

2 Exact locality not known.

1 Test not made.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

OKLAHOMA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				<i>Pounds.</i>	<i>Pounds.</i>					
3872	Madill.....	Marshall.....	Limestone.....	102	2.54	4.9	8.2	13.0	5	27
6077	Garvin.....	McCurrian.....	do.....	156	1.98	10.0	4.0	.0	4	8
4359	Dougherty.....	Murray.....	Bituminous limestone.....	156	.86	4.2	9.6	(¹)	(¹)	500+
4362	Crusher.....	do.....	Limestone.....	168	.24	4.4	9.2	15.1	8	36
5376	do.....	do.....	do.....	172	.33	3.5	11.6	14.8	7	23
4383	Avant.....	Osage.....	do.....	162	.23	5.7	7.0	12.3	4	32
5425	Ripley.....	Payne.....	Dolomite.....	175	.59	4.6	8.7	14.6	7	44
4350	Hartshorne.....	Pittsburg.....	Limestone.....	168	.31	(¹)	(¹)	16.8	8	38
4351	do.....	do.....	do.....	165	1.14	4.4	9.1	16.6	13	132
4364	Ada.....	Pontotoc.....	Fossiliferous limestone.....	165	.41	9.0	4.4	8.2	3	42
8836	Fitzhugh.....	do.....	do.....	159	2.22	16.7	2.4	6.7	2	20
8837	do.....	do.....	do.....	168	.69	12.0	3.3	17.7	7	13
5693	Tuskahoma.....	Pushmataha.....	Calcareous chert.....	162	.45	5.8	6.9	19.4	6	40
3717	Tulsa.....	do.....	Sandstone.....	159	3.17	9.6	4.1	14.2	13	112
6468	Dewey.....	Washington.....	Limestone.....	165	1.37	5.0	8.0	17.3	5	42

OREGON.

				<i>Pounds.</i>	<i>Pounds.</i>					
2920	St. Helens.....	Columbia.....	Basalt.....	175	1.80	1.8	22.7	18.8	22	17
7357	Griffon Creek.....	Jackson.....	Altered basalt breccia.....	181	.38	1.8	22.7	18.5	24	33
980	Eugene (near).....	Lane.....	Basalt.....	168	2.30	5.9	6.8	7.9	7	(¹)
982	do.....	do.....	Olivine basalt.....	184	.72	2.8	14.3	10.7	6	225
7004	Salem.....	do.....	Volcanic breccia.....	172	3.23	(¹)	(¹)	17.0	4	175
1766	Troutdale.....	Marion.....	Basalt.....	175	.83	3.9	10.4	18.0	38	15
1135	Portland.....	Multnomah.....	do.....	168	2.32	3.7	10.8	16.0	19	24
1136	Portland (near).....	do.....	do.....	162	2.27	6.8	5.9	15.8	20	49
1137	do.....	do.....	do.....	172	2.01	3.8	10.6	16.4	26	99
1454	Newberg.....	do.....	do.....	172	1.64	(¹)	(¹)	18.4	30	5
7319	Pendleton.....	do.....	Basalt tuffa.....	150	5.82	31.4	1.3	(¹)	(¹)	400
2070	Hillsboro.....	Umatilla.....	Basalt.....	178	2.22	2.1	19.4	17.9	20	193
3758	do.....	Washington.....	Olivine basalt.....	168	1.89	4.3	9.3	17.2	12	6
5354	do.....	do.....	Basalt.....	165	1.26	4.2	9.4	17.9	15	6

	Adams.	Limestone.	172	0.20	4.9	8.2	14.2	9	64
1177	Bittinger.	do.	165	1.25	2.0	20.4	17.2	25	36
2349	Cumberland.	do.	175	.21	4.1	9.7	16.0	7	22
6069	Hanover (near).	do.	178	.21	3.5	11.2	17.7	9	24
7070	(?)	Siliceous limestone.	168	.81	3.7	10.8	12.2	7	48
1178	Bittinger.	Feldspathic sandstone.	162	.81	3.2	12.7	18.9	8	27
1950	Abbotstown.	Sandstone.	153	2.95	(1)	(1)	17.1	12	57
2245	Cumberland.	do.	168	1.55	(1)	(1)	11.1	12	27
1483	Littleton.	Slate.	165	2.10	(1)	(1)	11.1	7	101
1486	do.	do.	172	.43	3.9	10.2	17.7	16	42
1611	Oxford Township.	Dolomite.	165	.60	4.0	10.1	18.3	5	4
1612	Berwick Township.	Quartzite.	165	.22	2.0	19.8	19.6	42	13
1814	Manallen Township.	Rhyolite.	162	.35	1.9	21.1	19.5	34	22
1815	do.	do.	181	1.03	6.6	6.1	(1)	(1)	46
1949	Hanover (near).	Chlorite schist.	175	2.38	2.9	13.8	17.0	10	500+
2125	(?)	Altered basalt.	181	1.18	2.0	20.4	18.2	9	20
2171	Floradale.	do.	187	.91	(1)	(1)	18.6	24	19
2244	Cumberland.	Diabase.	190	.39	3.8	10.5	18.7	12	15
8705	Granite Station.	Hypersthene diabase.	193	.25	2.5	16.0	17.9	8	20
6881	do.	Gabbrotic diabase.	168	.32	4.7	8.5	12.4	5	42
5392	(?)	Marble.	168	.11	4.0	10.0	14.7	8	20
6064	Hanover (near).	do.	168	.37	5.8	6.9	13.3	3	21
6089	do.	do.	168	.37	5.1	7.9	11.0	6	46
7499	do.	do.	168	4.40	6.4	6.2	17.3	9	46
2447	Duquesne.	Slag.	208	2.36	4.9	8.1	(1)	(1)	500+
3168	Mumhall.	do.	168	.21	(1)	(1)	17.0	13	97
1072	Pittsburgh.	Siliceous limestone.	172	.29	4.2	9.5	16.4	7	94
2118	Oakdale.	Limestone.	165	.83	3.9	6.7	16.7	12	37
2180	Corapolis (near).	do.	172	.60	(1)	(1)	16.6	9	49
2152	Pittsburgh.	do.	168	.27	4.5	8.9	13.3	3	49
5546	do.	do.	172	.41	(1)	(1)	19.0	29	(1)
6086-1	do.	Siliceous slate.	181	.42	(1)	(1)	18.1	8	(1)
6086-2	do.	Pyroxene gneiss.	168	.26	3.0	8.0	(1)	(1)	55
1357	Ford City.	Limestone.	168	.58	4.0	10.0	16.4	17	30
1358	do.	do.	165	.21	4.8	8.3	15.5	8	83
2096	Kittanning.	do.	165	1.21	4.1	9.8	15.0	7	62
2159	Franklin.	do.	165	1.14	4.1	9.8	15.7	8	57
2296	Kittanning.	do.	172	.35	4.9	8.2	16.2	7	37
2551	Craigville (near).	do.	165	.46	4.7	8.5	15.5	7	42
2552	East Brady.	do.	165	1.04	(1)	(1)	16.4	9	48
2696	Kittanning.	do.	165	.79	4.8	8.3	16.4	6	25
3723	Templeton.	do.	168	.52	5.1	7.8	14.8	6	42
4671	Apollo.	do.	168	.23	5.1	6.3	15.8	9	109
2906	Freeport.	Siliceous limestone.	168	.58	2.9	13.6	16.6	6	9
2716	Beaver.	Limestone.	168	.72	6.7	6.0	14.7	7	35
2066	Bedford.	do.	168	.72	6.7	6.0	14.7	7	110
2752	Waterside.	do.	172	.31	3.5	11.4	16.7	10	61

¹ Test not made.² Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.*

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Compressive value.
3851	Hyndman.	Bedford	Limestone.	Pounds. 172	Pounds. .45	3.4	11.8	17.2	15	63
5602	do.	do.	Impure limestone.	168	.22	2.9	13.7	14.3	6	39
5603	do.	do.	Spurce limestone.	168	.22	4.1	9.7	16.5	10	45
2194	Bloomfield Township.	do.	Quartzite.	156	1.39	4.6	11.9	17.4	9	12
2331	South Woodbury Township.	do.	Dolomite.	178	.83	3.4	11.9	15.8	11	24
1702	(1).	Perks.	Quartzite.	162	.47	2.5	15.7	(2)	(2)	7
1947	Birdsboro.	do.	Quartzite.	184	.74	1.9	20.8	18.0	12	69
2248	Bally.	do.	Diabase.	187	.45	2.7	15.0	18.2	10	52
5573	Bechtelsville.	do.	Gabbroitic diabase.	184	.81	3.9	10.3	18.3	12	37
5585	Birdsboro.	do.	Diabase.	184	.14	2.0	20.0	18.0	26	33
5626	Birdsboro (near).	do.	do.	187	.40	2.4	16.8	18.8	17	66
7414	Douglaville.	do.	Altered diabase.	187	.41	2.8	14.1	18.5	19	104
8786	Trap Rock Station.	do.	Gabbroitic diabase.	184	.59	3.2	12.5	17.9	10	36
5632	Birdsboro (2½ miles south of).	do.	Altered diabase.	184	.34	2.0	19.8	18.2	21	59
1983	Seisholtzville.	do.	Granite.	168	.35	3.2	12.7	18.0	18	23
5361	Reading.	do.	Hornblende granite.	172	1.05	2.0	20.0	18.3	24	23
8243	Baro.	do.	Weathered granite.	162	.82	(2)	(2)	19.0	10	83
2053	do.	do.	Altered diorite.	209	.71	2.3	17.1	18.7	16	50
8242	do.	do.	do.	197	.61	2.4	16.5	19.0	12	30
2102	(1).	do.	Slate.	172	.54	1.6	24.4	18.4	40	35
3121	(1).	do.	Clay slate.	168	.33	2.0	19.6	18.8	56	29
2639	Monaca.	do.	Gabbro.	184	.67	2.4	16.4	18.6	19	72
2600	do.	do.	Altered gabbro.	181	.75	3.9	6.8	(2)	(2)	115
2601	do.	do.	Gabbro.	190	.37	2.2	18.2	18.2	13	14
3434	Birdsboro.	do.	do.	187	.47	1.5	26.7	18.6	9	31
3435	Birdsboro (near).	do.	do.	184	.67	1.8	21.7	18.6	23	15
2949	Birdsboro.	do.	Slag.	125	4.26	11.8	3.4	10.7	4	44
3122	(1).	do.	Argillaceous sandstone.	159	3.48	2.0	20.2	18.7	36	194
3167	Douglas Township.	do.	Sandstone.	175	.63	2.5	16.0	17.3	38	43
5569	(1).	do.	Ferruginous sandstone.	168	.43	1.6	24.7	19.2	35	34
5720	Little Oley.	do.	do.	156	2.34	1.8	21.7	18.2	35	36
3385	Reading.	do.	Dolomite.	168	.12	3.6	11.1	16.2	11	29
8985	do.	do.	Argillaceous dolomite.	168	.39	3.3	12.3	17.7	5	31
9615	do.	do.	Dolomite.	178	.42	5.7	7.0	19.3	(2)	19
7413	Douglasville.	do.	Altered basalt breccia.	168	1.12	1.4	29.4	19.3	34	27
7610	Lvons.	do.	Weathered chert.	156	2.66	5.4	7.4	(2)	(2)	0
2084	Altoona (near).	do.	Limestone.	168	.63	5.4	7.5	11.3	8	57
2384	do.	do.	do.	168	.39	3.2	12.5	14.2	7	27

2406	do.	do.	168	.32	2.8	14.5	16.7	11	55
2407	do.	do.	168	.91	4.3	9.3	15.3	6	49
2421	Carlame Township.	Siliceous limestone.	168	.46	3.6	11.2	16.7	22	45
2432	Allegheny Township.	Limestone (siliceous).	168	.35	4.9	8.9	13.7	5	40
2483	Holidaysburg.	Limestone.	172	.49	3.7	10.7	17.3	20	51
2484	do.	do.	172	.80	3.0	13.2	17.1	16	22
2839	(1)	do.	168	.10	3.2	12.5	16.5	11	47
8724	Juniata.	Crystalline limestone.	168	.40	6.0	6.8	13.7	4	(2)
8725	(1)	Argillaceous limestone.	168	.45	6.0	6.8	(2)	(2)	(2)
8722	(1)	Feldspathic sandstone.	165	.51	(2)	(2)	(2)	11	3
1601	Holidaysburg.	Sandstone.	162	.63	2.3	17.4	18.5	12	27
2482	do.	Dolomite.	172	.34	3.3	12.0	17.2	11	37
2492	Tyrone Township.	do.	172	.26	3.1	13.0	16.5	10	36
3745	Legan Township.	do.	178	.41	3.3	12.2	16.8	10	23
2068	Wells.	Siliceous limestone.	168	.63	3.5	11.3	15.9	14	39
2419	Wyalusing Township.	Limestone.	168	.64	4.3	9.4	15.2	7	50
2535	do.	do.	168	.39	3.7	10.8	16.3	4	54
3080	Camptown.	do.	168	.68	4.2	9.5	15.2	8	25
3119	Wysox Township.	Siliceous limestone.	168	.84	3.9	10.2	16.0	9	42
3120	do.	do.	168	.80	3.1	12.7	16.7	8	32
3123	do.	Limestone.	168	.26	5.3	7.6	11.3	7	35
3715	Shores Hill.	Siliceous limestone.	162	1.51	4.2	9.6	13.6	8	33
3716	do.	Limestone.	168	.22	6.7	6.0	16.0	10	40
3719	Sheshequin Township.	do.	168	.32	5.3	7.6	16.8	11	37
3719	do.	do.	168	.20	3.7	10.9	17.8	16	49
3802	Kone Township.	do.	168	.24	3.3	12.1	17.0	13	27
7730	East Smithfield.	do.	168	.40	6.8	3.9	13.7	10	35
2069	Wells.	Fossiliferous limestone.	168	.80	(2)	(2)	17.2	25	31
3697	do.	Feldspathic sandstone.	165	.89	2.9	13.8	17.3	9	54
2541	Wysox Township.	Calcareous sandstone.	163	.63	4.7	8.5	17.9	22	132
Wyalusing Township.	Fossiliferous dolomite.	do.	168	.12	1.2	34.5	(2)	(2)	(2)
Rock Hill.	Diabase.	do.	184	.33	2.0	19.8	18.5	16	27
5408	Lahaska.	Gabbroitic diabase.	184	.83	2.0	20.0	17.5	21	58
6339	(1)	do.	184	.33	2.0	20.0	17.5	(2)	30
8600	Rock Hill.	Hypersilene diabase.	190	.29	3.7	10.8	18.3	19	8
3200	Shelly.	Diabase.	187	.34	2.4	16.5	18.5	22	23
5386	New Hope.	do.	184	.33	2.2	17.9	18.5	(2)	(2)
855	(1)	do.	168	.10	3.0	13.2	13.2	27	30
979	Bensalem.	Granite gneiss.	178	.18	2.9	13.9	16.4	13	113
1000	do.	Hornblende schist.	172	.13	4.1	9.8	17.5	20	80
1088	Rushland.	Mica schist.	178	.49	2.3	17.3	17.0	10	69
1943	Philadelphia.	Siliceous limestone.	175	.32	4.2	9.6	16.0	22	38
7277	Rushland.	Impure limestone.	172	.39	2.5	13.9	17.5	11	18
6616	(1)	Siliceous limestone.	168	.34	2.9	15.9	18.3	47	18
1565	Bridge Valley.	Slate.	168	.53	4.2	9.5	17.3	26	48
1245	(1)	Siliceous slate.	165	1.01	2.8	14.1	17.5	63	17
1246	(1)	Argillaceous sandstone.	153	3.04	2.7	15.0	16.6	20	134
4929	Newton.	Sandstone.	168	.51	3.6	11.0	18.4	12	23
2064	Edison post office.	do.	168	.50	3.2	12.6	17.7	15	50
2323	Quakertown.	Clay shale.	187	.43	1.7	24.1	18.6	21	15
2742	Rock Hill.	Gabbro.	190	.22	1.9	20.8	18.8	6	50
2727	West Windfield.	do.	168	.23	3.7	10.8	16.1	6	50

* Test not made.

1 Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

PENNSYLVANIA—Continued.				Weight per cubic foot.	Absorp- tion per cubic foot.	Per cent of wear.	French coefficient of wear.	Hard- ness.	Tough- ness.	Comen- ting value.
Serial No.	Town or city.	County.	Name of material.							
2894	East Taylor Township	Cambria	Calcareous sandstone.	Pounds. 168	Pounds. .38	2.8	14.2	17.5	11	60
5221	Johnstown	do.	Limestone	168	.33	2.8	14.4	16.8	14	26
2267	East Mauch Chunk	Carbon	Feldspathic quartzite	168	.31	2.4	16.4	19.3	15	15
7424	(1)	do.	do.	165	.23	2.6	15.1	18.8	13	45
7371	(1)	do.	Slag	143	4.90	12.2	3.3	15.3	7	25
8625	Hazard	do.	Slag furnace slag	178	2.18	6.6	6.0	17.3	6	23
2622	Palmerston	do.	Slag	168	3.47	12.2	3.3	15.0	8	17
6766	Bellefonte	Center	Calcareous sandstone	165	.75	4.5	8.9	15.3	7	36
1163	do.	do.	Limestone	168	.31	5.8	6.9	16.3	11	27
2251	do.	do.	do.	168	.46	3.7	10.9	14.7	6	28
2431	Spring Township	do.	do.	168	.45	4.5	8.8	13.6	6	21
339	Cedar Hollow	do.	do.	178	.16	3.8	10.6	(9)	(9)	(4)
1076	East White Hall Township	Chester	Dolomite	178	.20	4.2	9.5	14.9	7	48
3355	Exton	do.	do.	178	.48	4.2	9.6	16.3	9	25
3757	Cedar Hollow	do.	do.	178	.17	4.5	9.0	16.3	8	17
964	Coatesville	do.	Marble	178	.16	3.8	10.5	15.9	9	77
2712	Avondale	do.	do.	172	.30	4.5	9.0	14.7	5	27
3540	Howellsville	do.	do.	175	.10	4.2	9.4	13.0	8	69
5344	Coatesville	do.	do.	172	.24	5.9	6.8	11.8	5	15
6110	Cedar Hollow	do.	Dolomite marble	175	.38	4.7	8.4	16.0	10	21
7427	(1)	do.	do.	178	.22	2.9	14.0	14.8	8	23
965	Coatesville	do.	Limestone	175	.22	4.7	8.5	15.4	9	21
1077	East White Hall Township	do.	Dolomite limestone	172	.31	3.9	10.3	15.7	7	18
2710	Avondale	do.	Crystalline limestone	172	.41	13.2	3.0	14.0	3	32
3349	West Grove (near)	do.	do.	172	.37	4.2	9.6	13.8	6	53
3746	Knickerbocker	do.	Limestone	172	.31	4.0	10.0	17.1	15	22
1172	St. Peters	do.	Gabbro	190	.46	1.3	30.8	18.7	17	12
1308	Spring City	do.	Feldspathic sandstone	156	1.74	3.8	10.6	18.1	15	207
1333	St. Peters	do.	do.	172	.27	5.6	7.2	18.0	27	69
1546	Coatesville	do.	do.	190	.23	3.1	15.0	16.0	8	38
2713	Avondale	do.	Hornblende gneiss	162	.42	5.6	7.1	17.7	7	49
3345	Glenmoore	do.	Hornblende gneiss	190	.20	3.4	11.7	18.3	15	26
6866	Dowington	do.	Biotite gneiss	165	.31	4.1	9.9	18.2	6	46
6949	Marcus Hook	do.	do.	172	.16	4.2	11.4	18.1	8	16
9668	Dorland	do.	Sericite gneiss	165	.17	3.5	11.6	18.7	13	9
1682	Glenmoore	do.	Altered diabase	193	.32	2.2	18.0	19.0	36	(3)
1683	do.	do.	do.	187	1.00	4.5	8.9	18.4	8	(4)
2043	do.	do.	Diabase	187	.83	2.3	17.5	19.0	32	16
1955	Aughton	do.	Quartzite schist	165	.47	3.0	13.2	18.7	7	12

3133	Malvern.....	do	Serfite schist.....	175	1.02	18.2	2.2	(1)	33
3134	West Grove (near).....	do	Mica schist.....	172	35	10.6	16.8	(1)	10
3135	Cornog.....	do	Hornblende schist.....	196	11	10.6	18.7	(1)	30
3136	Wawaset.....	do	Eclogite.....	196	28	13.4	18.7	(1)	14
3137	Glenmoore.....	do	Altered diabase porphyry.....	187	28	17	19.0	(1)	27
3138	do.....	do	do.....	187	55	2.1	18.7	(1)	29
3139	Adrian.....	do	Altered granite.....	108	17	7.8	18.5	(1)	23
3140	Auronde.....	do	Quartzite.....	165	12	5.7	21.7	(1)	26
3141	Winford.....	do	do.....	165	26	3.0	13.3	(1)	11
3142	Valley Forge.....	do	Feldspathic quartzite.....	168	34	3.5	11.5	(1)	3
3143	Cornog.....	do	Amphibolite.....	187	17	3.2	12.6	(1)	8
3144	Dowlingtown.....	do	Altered diorite.....	187	93	2.8	14.1	(1)	12
3145	Leeper.....	do	Limestone.....	168	42	4.4	9.0	(1)	8
3146	().....	do	do.....	168	67	4.4	9.1	(1)	9
3147	Fryburg.....	do	do.....	168	71	4.7	8.5	(1)	40
3148	Lock Haven.....	do	do.....	168	61	4.5	15.5	(1)	32
3149	do.....	do	do.....	168	1.38	6.5	8.9	(1)	8
3150	Salona.....	do	do.....	168	42	5.6	7.1	(1)	119
3151	Lamar Township.....	do	do.....	168	42	5.6	7.1	(1)	4
3152	Salona.....	do	Argillaceous limestone.....	168	21	5.0	15.0	(1)	5
3153	Lime Ridge.....	do	Limestone.....	168	34	9.3	15.9	(1)	10
3154	Berwick.....	do	Calcareous slate.....	168	33	3.6	15.3	(1)	32
3155	Espy.....	do	Argillaceous dolomite.....	172	57	10.0	16.3	(1)	116
3156	Catawissa.....	do	Feldspathic sandstone.....	175	77	4.0	4.0	(1)	16
3157	West Fairview.....	do	Calcareous dolomite.....	168	56	2.7	10.1	(1)	30
3158	do.....	do	Feldspathic sandstone.....	168	31	2.6	15.7	(1)	37
3159	do.....	do	do.....	168	21	4.1	17.2	(1)	65
3160	do.....	do	do.....	168	50	2.9	17.4	(1)	116
3161	do.....	do	Calcareous sandstone.....	172	22	4.2	13.7	(1)	39
3162	Bowmansdale.....	do	Limestone.....	168	28	4.1	17.0	(1)	29
3163	Lemoyne.....	do	do.....	172	42	3.4	17.2	(1)	66
3164	Mechanicsburg.....	do	do.....	172	24	3.3	11.9	(1)	46
3165	Dickinson Township.....	do	do.....	172	33	5.2	12.2	(1)	9
3166	Carlisle.....	do	Limestone.....	168	57	7.1	16.1	(1)	8
3167	Mechanicsburg (near).....	do	Siliceous marble.....	168	14	5.5	15.0	(1)	53
3168	Silver Spring Township.....	do	Diabase.....	187	56	1.6	7.3	(1)	16
3169	Steelton.....	do	Dolomite.....	147	29	4.2	23.6	(1)	19
3170	Harrisburg.....	do	do.....	172	24	4.2	18.7	(1)	16
3171	().....	do	do.....	175	24	2.9	15.2	(1)	19
3172	Paxtang.....	do	Siliceous dolomite.....	175	28	3.6	18.3	(1)	16
3173	Higspire.....	do	Limestone.....	172	21	3.2	17.9	(1)	20
3174	Hummelstown.....	do	do.....	168	59	3.9	18.0	(1)	43
3175	do.....	do	Dolomitic limestone.....	178	23	3.9	17.3	(1)	68
3176	().....	do	do.....	175	46	3.7	16.3	(1)	8
3177	do.....	do	Limestone.....	168	57	5.5	10.9	(1)	49
3178	do.....	do	do.....	168	27	5.4	17.7	(1)	38
3179	do.....	do	Diabase.....	168	27	5.4	14.2	(1)	55
3180	Londonderry Township.....	do	do.....	190	15	7.4	15.0	(1)	12
3181	Conewago (near).....	do	do.....	190	24	17.1	18.2	(1)	4
3182	Conewago.....	do	Gabbroitic diabase.....	193	24	4.1	17.1	(1)	20
3183	Harrisburg.....	do	Calcareous sandstone.....	168	43	2.1	9.7	(1)	17
3184	Susquehanna River (west of).....	do	Feldspathic sandstone.....	165	26	3.5	18.3	(1)	20
3185	do.....	do	do.....	168	11.3	3.5	15.2	(1)	62
3186	do.....	do	do.....	165	38	2.7	14.7	(1)	14

Test not made.

¹ Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.					
5903	Rockville.....	Dauphin.....	Sandstone.....	153	8.68	5.6	7.1	18.7	7	13
5905	do.....	do.....	Feldspathic sandstone.....	165	67	2.2	17.9	17.8	26	68
6104	Hummelstown.....	do.....	Calcareous sandstone.....	168	.53	4.2	9.5	16.0	19	19
5902	Rockville.....	do.....	Quartzite.....	168	.45	2.2	17.9	19.1	20	14
5901	do.....	do.....	do.....	165	.37	2.4	16.7	19.3	23	22
7182	do.....	do.....	Dolomitic marble.....	175	.45	3.0	13.2	17.3	9	68
254	Glen Mills.....	Delaware.....	Eclogite.....	(2) 187	(2)	2.8	14.5	(2)	(2)	(2)
398	do.....	do.....	do.....	187	.10	1.8	22.7	(2)	(3)	23
4012	do.....	do.....	do.....	193	.10	1.8	22.7	18.5	28	10
5827	Lenni.....	do.....	Hornblende gneiss.....	181	.19	2.7	11.8	18.3	10	23
7682	do.....	do.....	Biotite gneiss.....	171	.20	2.8	14.3	18.6	13	14
8421	do.....	do.....	do.....	175	.22	2.5	16.1	18.7	12	28
1780	Glen Mills.....	do.....	Schist.....	200	.26	2.7	14.7	18.7	27	213
7751	Lausdowne.....	do.....	Hornblende schist.....	187	.54	3.8	10.5	18.7	43	33
5970	Glen Mills.....	do.....	Pyroxene quartzite.....	198	.15	1.9	21.1	18.3	18	22
2800	do.....	do.....	do.....	190	.24	2.0	20.4	18.5	22	12
2626	do.....	do.....	Diorite.....	193	.34	2.2	17.9	17.0	12	24
1354	Kersey.....	Elk.....	Limestone.....	172	.11	3.8	10.7	(2)	(2)	51
5870	St. Marys (near).....	do.....	Argillaceous limestone.....	168	.49	5.0	8.0	16.0	5	41
5881	Dargachahonda.....	do.....	Feldspathic sandstone.....	156	2.95	5.0	8.0	16.3	7	38
1925	Dunbar.....	Fayette.....	Limestone.....	168	.26	2.3	17.1	18.3	14	60
1941	Union Town.....	do.....	do.....	168	.70	4.4	9.2	13.0	5	102
1956	Farmington post office.....	do.....	do.....	168	.52	4.0	10.0	13.7	8	109
1967	Humberstown post office.....	do.....	do.....	168	.41	2.6	15.4	16.0	9	220
2028	Dunbar.....	do.....	do.....	168	.34	2.3	17.7	17.0	9	108
2040	Somerfield (near).....	do.....	do.....	168	.80	5.5	17.2	14.3	(2)	90
2041	do.....	do.....	do.....	168	.65	3.1	13.1	15.9	10	67
2079	Mason town.....	do.....	do.....	168	2.42	3.9	10.4	16.5	9	76
2226	Somerfield (3 miles from).....	do.....	do.....	168	.46	2.6	15.4	16.2	9	105
2228	Uniontown (7 miles from).....	do.....	do.....	168	.72	5.2	7.6	13.5	5	53
2612	Connellys ville (3 miles from).....	do.....	do.....	168	.24	2.4	16.7	17.6	13	65
3130	Fayette City.....	do.....	do.....	168	.20	5.5	7.3	16.3	4	90
3161	Brownsville (near).....	do.....	do.....	168	.51	3.5	11.3	17.6	12	23
3789	Uniontown.....	do.....	Siliceous limestone.....	168	.15	2.9	13.7	17.3	11	57
3806	do.....	do.....	do.....	168	.32	3.4	11.9	17.8	11	37
2852	Evans.....	do.....	Limestone.....	168	2.16	3.1	13.0	15.5	17	29
2852	Dunbar.....	do.....	do.....	168	.34	3.6	11.2	16.6	7	43
2833	Dunbar Township.....	do.....	Siliceous limestone.....	168	.27	2.4	16.4	17.1	15	31
3692	Uniontown.....	do.....	Limestone.....	168	.23	3.5	11.6	15.7	7	14

6097	Bidwell.....	do.	168	90	13.3	15.7	74
6029	Connellsville.....	Siliceous limestone.	168	.06	13.9	16.3	124
9347	do.	Limestone.	168	.47	17.3	17.3	15
9402	Uniontown (near).	Siliceous limestone.	168	.37	11.4	17.2	119
9374	do.	do.	165	3.19	13.3	18.2	34
2080	Mason town.....	Sandstone.	156	10.1	3.9	(2)	500+
4025	Bluestone.....	Calcareous sandstone.	168	.20	15.6	18.0	46
5771	Indian Creek station.	do.	168	.28	3.3	12.0	17
2089	Waynesboro (near).	Siliceous limestone.	175	.77	11.1	17.5	66
2677	Richmond Furnace.	Limestone.	175	.21	16.4	17.3	48
3142	Mercesburg.....	do.	168	.33	9.3	15.8	76
2600	Guilford.....	Quartzite.	162	.40	4.3	19.2	14
3141	Montgomery Township.	Dolomite.	178	.52	12.6	17.9	9
2113	Brady Township.	Limestone.	168	.41	8.0	15.5	10
2119	Brady Township.	do.	168	.52	4.1	15.3	24
2126	Huntingdon.....	do.	175	.22	13.0	16.7	5
2211	Brady Township.	do.	168	.21	6.1	11.0	87
2212	do.	do.	172	.24	10.0	15.0	69
2215	do.	do.	168	.37	7.4	16.0	50
2243	Warriors Mark.....	Siliceous limestone.	175	.52	15.7	18.2	96
2275	Mount Uniontown.	Limestone.	168	.62	4.2	14.4	83
2337	Shirley Township.	do.	168	.36	9.8	15.2	92
2341	(1).....	do.	168	.57	10.8	15.8	14
2342	(1).....	do.	168	.24	9.0	17.3	6
2345	Mill Creek.....	do.	168	.94	8.3	15.2	6
2401	Union Furnace.....	do.	168	.23	10.6	16.2	31
5337	Huntingdon.....	do.	168	.42	8.3	15.6	7
7432	do.	Argillaceous limestone.	172	.52	(2)	16.0	28
2120	Brady Township.	Sandstone.	(2)	(2)	6.5	18.5	39
2121	do.	do.	(2)	(2)	6.2	16.7	112
2692	Huntingdon.....	Feldspathic sandstone.	168	.42	18.3	17.5	24
5604	Water Street.....	do.	168	.70	17.2	18.7	20
5726-1	Huntingdon.....	do.	163	.23	16.3	18.1	50
5726-2	do.	do.	163	.69	12.1	18.6	42
2127	do.	do.	163	.53	9.0	(2)	14
2142	Union Furnace (near).	Siliceous dolomite.	178	.16	11.3	16.1	57
2334	(1).....	Dolomite.	168	.06	11.3	16.1	93
2335	(1).....	Limestone.	150	.36	14.7	16.8	29
5495	Scranton.....	Argillaceous dolomite.	172	.31	2.1	16.8	75
1888	Lackawanna.....	Sandstone.	165	.34	9.1	16.3	47
2047	Dunmore.....	do.	162	.88	20.0	17.7	25
2317	Glenburne.....	Ferruginous sandstone.	168	1.22	16.1	18.3	420
1222	West Donegal.....	Gabbro.	190	.34	9.9	18.3	15
1534	Eden Township.....	Diabase.	187	.24	16.8	18.3	34
1688	Bart Township.....	do.	187	.22	23.8	18.5	7
1847	Lancaster.....	do.	190	.35	10.9	17.6	61
2026	Cornwall (near).	Olivine diabase.	193	.28	17.6	18.3	39
2945	Lancaster.....	Diabase.	187	.30	20.8	18.3	63
5326	Elizabethtown.....	do.	193	.32	22.5	18.7	51
1569	Strasburg Township.	Dolomite.	178	.45	21.7	17.9	29
					8.0	14.3	18
							4

2 Test not made.

1 Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Commenting value.
1590	Refton post office.	Lancaster.	Dolomite.	Pounds. 178	Pounds. 24	3.9	10.2	11.8	9	23
1614	do.	do.	do.	178	1.14	4.7	8.4	12.7	6	45
6700	Rockville.	do.	Argillaceous dolomite.	178	.35	4.5	8.8	16.0	4	83
6283	Maytown.	do.	Limestone.	165	.33	6.0	6.7	15.8	5	46
6567	Salisbury.	do.	Siliceous limestone.	165	.37	3.7	10.7	14.3	9	67
7044	Millway.	do.	Limestone.	172	.18	3.9	10.4	16.5	8	12
7047	Redville.	do.	do.	178	.16	4.3	9.4	16.9	10	11
7048	Littitz.	do.	do.	165	.17	5.0	8.0	12.7	4	21
7909	Rheims (West Donegal Township).	do.	do.	174	.52	4.9	8.2	16.7	16	25
5548	Quarryville.	do.	Marble.	165	.20	5.2	7.8	14.5	5	24
6113	Gap.	do.	Dolomitic marble.	181	.22	4.7	5.3	12.7	4	18
6663	do.	do.	do.	181	.23	4.7	5.3	12.7	4	36
6670	do.	do.	do.	178	.30	4.8	8.3	13.6	6	41
7091	Littitz.	do.	do.	178	.30	4.8	8.3	13.6	6	36
6508	Salisbury.	do.	do.	178	.30	4.8	8.3	13.6	6	41
8139	Lancaster.	do.	Marble.	181	.28	4.2	9.5	11.5	5	69
2460	Ellwood City (near).	do.	Calcareous schist.	172	.40	15.2	2.6	(1)	(1)	40
2686	Chewtown.	do.	do.	168	.64	4.5	8.9	15.5	5	78
2717	Wayne Township.	do.	Limestone.	168	.39	3.9	9.1	15.8	8	19
4322	Rock Point (near).	do.	do.	168	.45	3.9	10.2	16.5	9	88
5557	Walford.	do.	do.	168	.48	5.1	7.9	15.6	7	38
2374	Sheridan.	do.	do.	168	.25	4.9	8.2	16.5	7	26
6632	Cornwall.	do.	do.	172	.12	3.6	11.2	16.5	6	39
6593	South Lebanon Township.	do.	Dolomitic limestone.	178	.50	4.1	9.7	13.5	8	133
6682	Lebanon.	do.	Limestone.	168	.31	4.1	9.8	13.3	6	131
6887	do.	do.	Argillaceous limestone.	172	.20	3.4	10.5	12.9	9	48
7540	do.	do.	Siliceous limestone.	172	.20	3.8	10.5	16.1	9	50
7540	do.	do.	do.	169	.20	4.3	9.3	15.8	3	44
6532	Annville.	do.	Argillaceous limestone.	172	.17	3.2	12.5	17.0	7	42
6612	Lebanon.	do.	Carbonaceous dolomite.	175	.83	2.9	13.6	17.0	7	65
1207	Vera Cruz.	do.	Dolomite.	175	.46	3.7	10.9	17.6	20	70
1692	Allenstown.	do.	Gneiss.	172	.46	(1)	(1)	18.6	14	16
6327	Calassiqua.	do.	Dolomite.	175	.07	6.9	5.8	18.6	20	16
2662	Vera Cruz.	do.	Argillaceous dolomite.	172	.17	2.4	16.7	(1)	(1)	26
697	Wilkes-Barre.	do.	Syenite.	168	.46	2.4	11.6	18.3	16	19
1074	do.	do.	Sandstone.	168	.32	2.8	14.2	(1)	(1)	202
1114	Conyngham.	do.	Feldspathic sandstone.	165	.37	1.8	22.9	18.6	37	34
1396	Hazleton.	do.	do.	165	1.60	3.3	12.1	17.0	10	55
1698	do.	do.	Sandstone.	168	1.12	3.7	10.9	13.6	13	283
			do.			3.7	10.9	13.7	13	41

1874	White Haven.	do.	do.	165	.32	1.0	40.8	18.5	23
2903	Wilkes-Barre.	do.	Feldspathic sandstone.	168	.44	2.3	17.7	18.8	28
2577	Lehigh Tannery.	do.	do.	168	.11	2.0	20.4	18.8	82
6305	Daryea Borough.	do.	Calcareous sandstone.	168	.46	2.4	16.4	18.5	37
7680	Pittston (near).	do.	do.	165	.55	2.0	13.3	16.3	123
7681	Pittston.	do.	Feldspathic sandstone.	168	.81	1.7	23.0	18.3	100
8406	Calcareous sandstone.	do.	Calcareous sandstone.	168	.35	2.9	13.8	18.6	25
1075	Feldspathic sandstone.	do.	Feldspathic sandstone.	165	.42	2.2	13.4	19.2	7
1252	Slate.	do.	Slate.	172	.49	(1)	(1)	18.0	17
1278	Feldspathic quartzite.	do.	Feldspathic quartzite.	168	.18	1.8	22.6	18.0	25
7679	do.	do.	do.	168	.15	2.1	18.8	18.6	13
914	do.	do.	do.	165	.40	1.9	18.7	18.7	16
1663	Lycorning.	do.	Sandstone.	162	2.00	2.9	13.6	16.4	22
3783	Coganhouse Township.	do.	Calcareous sandstone.	165	1.09	4.8	13.0	13.0	33
4055	Platt Township.	do.	Sandstone.	162	.75	3.3	12.3	17.7	81
4086	Williamsport.	do.	Feldspathic sandstone.	162	2.12	(1)	(1)	13.7	50
4087	do.	do.	do.	162	2.46	(1)	(1)	12.3	20
4735	do.	do.	do.	162	2.13	(1)	(1)	12.3	9
5721	Larryville.	do.	do.	162	1.10	4.6	8.7	15.2	8
7415	Hughesville.	do.	Argillaceous sandstone.	168	.80	3.3	12.1	12.3	81
1103	Picture Rocks.	do.	Feldspathic sandstone.	162	1.72	2.6	15.5	19.2	10
1139	Williamsport.	do.	Shale.	172	.87	(1)	(1)	13.9	77
1161	do.	do.	Limestone.	168	.36	7.4	5.4	14.6	43
1164	do.	do.	do.	168	.24	5.8	6.8	16.4	116
1279	Porter Township.	do.	do.	168	.58	4.6	8.8	16.2	8
1872	Montgomery (near).	do.	do.	172	.78	4.9	8.2	8.7	60
2751	Jersey Shore.	do.	do.	172	.38	4.1	9.8	17.3	23
3868	do.	do.	do.	168	(1)	5.1	7.8	14.3	9
6153	Williamsport.	do.	Argillaceous limestone.	168	.40	4.8	8.3	17.3	10
6154	Porter Township.	do.	do.	165	.58	3.8	10.6	18.0	8
6155	do.	do.	do.	168	.56	4.2	9.4	17.3	16
6156	do.	do.	do.	172	1.26	5.4	7.4	12.5	33
6157	do.	do.	Limestone.	168	.44	4.6	8.6	16.0	24
6158	do.	do.	do.	178	.43	3.0	13.5	16.5	42
6691	Lower Fairfield.	do.	do.	168	.65	3.2	12.8	14.7	11
6880	Muncy Township.	do.	do.	168	.18	4.7	8.5	16.2	7
7453	do.	do.	Siliceous limestone.	172	.22	7.4	6.7	15.7	32
7322	do.	do.	Limestone.	168	.47	6.0	5.4	13.0	8
1121	Loyalsock Township.	do.	Carbonaceous limestone.	168	1.47	4.1	9.8	16.8	95
1122	Norberry.	do.	Diabase.	190	.25	(1)	(1)	18.7	92
7177	do.	do.	do.	190	.19	(1)	(1)	18.7	139
7175	Montourville.	do.	Calcareous chert.	165	.31	4.9	8.2	18.7	79
6813	Linden.	do.	Dolomite.	175	.51	5.4	7.4	13.7	31
2224	Sharpville.	do.	Blast-furnace slag.	136	4.32	19.1	2.1	15.3	54
2531	Nagmoy.	do.	Limestone.	168	.38	4.9	8.1	14.5	40
4396	Reedville.	do.	do.	165	.83	5.5	7.2	13.0	35
3224	Milroy.	do.	Siliceous limestone.	172	.42	3.0	13.3	17.0	17
8653	Lewistown.	do.	Limestone.	168	.29	4.1	9.7	16.8	31
5438	do.	do.	Argillaceous limestone.	168	.35	2.3	17.4	18.3	25
(?)	do.	do.	Sandstone.	165	.32	4.1	9.8	17.4	56

* Exact locality not known.

1 Test not made.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.					
1359	Tobyhanna.....	Monroe.....	Feldspathic sandstone.....	168	.25	3.7	10.8	18.4	19	30
1816	Smithfield.....	do.....	Calcareous slate.....	168	.33	3.9	10.3	15.0	14	60
365	Hathor.....	Montgomery.....	Ferruginous sandstone.....	169	.83	4.0	10.0	(1)	(1)	(1)
2322	Bridgeport.....	do.....	Feldspathic sandstone.....	159	1.32	3.1	12.7	10.4	14	253
2684	Green Lane.....	do.....	Calcareous sandstone.....	168	1.85	2.0	20.4	18.7	23	22
5132	Salford.....	do.....	Argillaceous sandstone.....	172	1.22	2.2	17.9	15.8	6	23
6885	Phoenixville (near).....	do.....	Feldspathic sandstone.....	181	1.34	2.0	10.6	18.8	44	52
7920	Linfeld.....	do.....	Ferruginous sandstone.....	156	2.83	3.0	13.2	18.5	9	131
1037	Green Lane.....	do.....	Slate.....	172	.68	2.6	12.2	17.2	17	179
1835	Princeton Township.....	do.....	do.....	168	.21	2.5	15.9	16.3	6	211
2039	Hendricks Station.....	do.....	Calcareous slate.....	165	1.21	2.2	17.9	16.3	8	83
2049	Green Lane.....	do.....	Indurated slate.....	168	.75	1.7	23.5	18.9	40	23
2172	do.....	do.....	Slate.....	175	.59	2.6	15.5	13.4	10	59
2624	Ambler.....	do.....	do.....	175	.73	4.5	8.8	16.2	6	96
2683	Green Lane.....	do.....	do.....	172	.21	2.1	19.0	18.6	38	20
5080	Sunneytown.....	do.....	do.....	172	.21	2.6	15.4	18.7	24	20
5197	Green Lane.....	do.....	Siliceous slate.....	172	.57	2.9	13.6	18.9	52	34
6459	Pottstown.....	do.....	do.....	172	.76	2.1	19.4	18.5	13	85
6460	do.....	do.....	do.....	172	.75	2.1	18.9	18.3	13	61
6639	Lower Gwynedd.....	do.....	Slate.....	168	1.21	2.7	15.0	13.5	17	65
7069	Upper Salford Township.....	do.....	Siliceous slate.....	171	1.37	4.4	9.0	18.2	11	31
8728	Green Lane.....	do.....	Micaceous slate.....	172	.42	2.0	19.5	17.5	17	29
6638	White Marsh Township.....	do.....	Feldspathic quartzite.....	162	.74	3.3	12.0	18.9	19	2
1316	Port Kennedy.....	do.....	Diabase.....	181	.26	2.8	14.5	(1)	(1)	186
2558	Green Lane.....	do.....	do.....	193	.31	2.7	14.9	17.1	8	17
2682	do.....	do.....	Altered diabase.....	181	.28	1.6	25.0	18.5	40	48
2760	do.....	do.....	Diabase.....	187	.42	1.4	28.6	18.5	33	45
1315	Port Kennedy.....	do.....	do.....	175	.22	4.2	9.5	14.7	11	13
2021	Ivory Rock (Plymouth Township).....	do.....	Dolomite.....	182	.82	4.1	9.9	14.7	8	57
2092	Green Lane.....	do.....	do.....	193	.31	2.5	15.8	19.2	12	15
2261	Paper Mills Station.....	do.....	Pyroxene granulite.....	190	.16	2.7	14.6	17.5	14	32
8050	Bryn Athyn.....	do.....	Applite granite.....	165	.22	4.6	8.7	19.0	6	17
8689	Pencoyd.....	do.....	Granite.....	175	.32	(1)	(1)	18.3	12	13
2274	Conshohocken (near).....	do.....	Limestone.....	178	.53	4.2	9.6	16.0	8	21
3706	Pottstown.....	do.....	Siliceous limestone.....	168	.80	3.0	13.4	17.2	14	30
8114	Norristown.....	do.....	do.....	175	.60	3.4	11.6	17.4	10	46
4601	Bethayres.....	do.....	Gneiss.....	165	.32	4.8	8.3	18.7	17	59
7553	Huntingdon Valley.....	do.....	Granite gneiss.....	168	.16	5.1	7.8	18.8	20	9

8418	do	do	165	34	19.3	19
8782	Penoyd	do	165	32	15.7	15
8783	Port Kennedy	do	168	12	18.2	8
6692	Port Kennedy (near)	Dolomite marble	168	12	14.8	25
6719	Norristown	do	178	26	6.3	3
7163	do	do	178	22	9.0	4
(3)	do	do	178	32	15.9	6
8008	Plymouth Meeting	do	178	21	5.5	33
8787	do	do	178	84	10.0	3
8788	Plymouth Township	do	178	22	12.7	6
8212	do	do	178	22	11.1	33
8213	do	do	178	22	13.8	34
7967	Conshohocken	do	178	29	11.8	9
8211	Portstown	do	178	29	17.0	14
8211	Port Washington	do	162	39	10.1	2
6665	do	Schistose quartzite	168	36	19.3	29
6862	(2)	Siliceous slate	165	19	18.1	56
6926	West Moreland Township	Quartzite schist	165	19	14.5	19
9448	Bryn Athyn	Eclogite	184	19	18.8	10
1879	Danville	do	184	19	15.4	19
352	Along Delaware River	do	184	13	12.1	15
1508	Montour	Chert	125	4.28	19.3	16
730	Easton	Diorite	181	30	6.7	46
1223	Redington	Altered diorite	181	30	14.3	(1)
2014	Nazareth	Dolomite	181	30	21.3	(1)
2186	Bath	do	181	30	17.8	15
3322	Siegfried	Siliceous dolomite	175	10	7.3	(1)
3323	do	Dolomite	175	26	16.9	26
1032	Easton	do	175	27	17.9	27
2240	Nazareth	do	175	26	11.2	13
4599	Lehigh Gap	do	175	26	19.2	51
8333	Easton	Siliceous dolomite	175	30	17.3	11
8494	do	Dolomite	175	23	17.7	39
1105	De Warts	do	175	23	14.5	10
1162	Turboysville	Limestone	178	21	15.4	78
1165	De Warts	Argillaceous limestone	178	21	11.3	39
1998	Watsonstown	Slate	172	25	9.5	9
8081	do	Blast-furnaces slag	172	25	5.1	28
(3)	do	do	178	37	10.8	28
2357	McEwensville	do	181	33	17.6	11
2307	Sunbury (near)	Limestone	165	40	12.9	10
1394	Dalmatia Post Office	Sandstone	165	49	10.6	26
6092	Shamokin	Feldspathic sandstone	168	49	15.6	93
6079	Dalmatia	do	168	49	17.0	98
1003	Fort Hunter	do	172	36	6.5	79
2013	Marysville	do	172	32	8.7	79
2225	do	do	168	82	12.2	50
2339	do	do	168	82	14.7	28
3016	do	Siliceous limestone	139	2.01	6.7	24
3379	do	Limestone	168	30	4.0	30
13425	do	Sandstone	165	49	7.2	50
3379	do	Feldspathic sandstone	165	31	23.3	59
3426	Philadelphia	do	165	31	13.5	45
4623	do	do	165	50	19.0	33
4624	do	do	165	50	17.9	21
4624	do	Indurated sandstone	165	49	15.9	174
4624	do	Sandstone	165	78	18.0	15
4624	do	Feldspathic sandstone	165	78	22.2	97
4624	do	do	162	98	30.8	76
4624	do	do	162	34	18.2	11
4624	do	do	165	20	20.2	80
4624	do	do	165	34	19.0	60
4624	do	do	162	93	23.5	32
4624	do	do	165	2.1	18.7	32
4624	do	do	165	2.5	16.1	28
4624	do	do	165	2.5	18.9	28
4623	Philadelphia	do	165	40	15.5	67
4624	do	Dolomite	178	40	17.6	20
4624	do	do	168	24	6.3	13
4624	do	do	172	5.1	7.9	(1)
4626	do	Marble	172	5.0	15.5	(1)
			5.0	8.0	13.5	11

Test not made.

² Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916*—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.	(¹)	(¹)			(¹)
5633	Philadelphia.	Philadelphia.	Argillaceous sandstone.	181	21	3.8	10.5	15.8	15	15
6396	Frankford.	do.	Hornblende gneiss.	168	91	5.2	7.8	16.8	6	3.8
2932	Greentown.	Pike	Feldspathic sandstone.	165	74	3.2	12.7	17.7	9	36
2933	do.	do.	do.	159	3.16	6.5	6.2	17.7	8	28
4392	Portage Township.	Potter	Sandstone.	168	61	5.4	7.4	11.7	78	78
2210	Sittler.	Schuylkill.	Calcareous shale.	168	75	2.3	17.7	15.0	8	201
2299	Ringtown.	do.	Feldspathic sandstone.	168	42	2.4	16.5	17.7	15	57
6630	Ancheys Station.	do.	do.	168	50	2.4	16.7	17.8	32	64
6657	Summit Station.	do.	Sandstone.	168	80	6.7	6.0	17.9	9	97
6721	Roeders Station.	do.	do.	162	75	6.4	6.2	18.0	6	26
7179	do.	do.	do.	162	77	2.7	14.9	15.0	11	96
7310	do.	do.	Feldspathic sandstone.	168	41	2.2	18.6	19.3	20	14
4814	Port Clinton.	do.	Quartzite.	162	41	4.0	10.0	12.3	28	69
6556	Roeders Station.	do.	Slate.	172	64	3.4	11.8	15.7	14	105
2009	Somersfield.	Somerset.	Limestone.	168	53	4.3	9.3	14.0	6	65
2036	do.	do.	do.	168	27	3.5	11.5	16.9	15	193
2052	Paint Township.	do.	Impure limestone.	178	1.05	4.4	9.1	17.3	10	12
8925	Boswell.	do.	Limestone.	172	39	4.9	8.1	17.0	11	15
8926	do.	do.	Argillaceous limestone.	168	58	2.5	16.0	18.2	14	16
3243	McSpedden.	do.	Siliceous sandstone.	165	1.36	7.0	5.7	15.7	8	28
5246	Cooley Township.	Sullivan.	Conglomeratic sandstone.	165	1.42	5.0	8.1	13.0	11	25
3829	Brooklyn.	Susquehanna.	Sandstone.	165	1.47	5.1	7.8	12.3	10	28
3830	do.	do.	do.	165	1.81	3.6	8.7	11.7	8	53
4065	do.	do.	do.	165	10.5	3.8	10.5	13.9	6	127
6659	Susquehanna.	do.	Limestone.	168	30	3.0	8.0	12.5	5	54
1516	Mansfield.	Tioga.	Siliceous limestone.	168	36	3.0	8.0	12.5	5	35
2425	Wellsboro.	do.	Limestone.	165	1.15	4.7	8.5	16.7	12	35
1883	do.	do.	Sandstone.	165	1.64	3.0	13.2	12.0	13	108
2827	Puncheon Township.	do.	Calcareous sandstone.	172	40	4.2	9.6	16.3	13	94
3961	Delmar.	do.	do.	168	78	3.3	12.1	16.3	7	39
3732	Wellsboro.	do.	Argillaceous sandstone.	168	47	5.4	7.4	17.5	25	28
3784	Richmond Township.	do.	Sandstone.	165	38	3.5	11.4	19.0	21	10
3834	Charleston Township.	do.	Calcareous sandstone.	168	86	3.6	11.0	16.3	26	10
3945	do.	do.	Sandstone.	159	2.81	4.3	9.2	6.0	19	51
4077	do.	do.	Calcareous sandstone.	168	43	2.5	15.9	16.5	19	64
1644	Lewisburg.	Union.	Limestone.	168	1.23	4.5	9.0	14.7	5	89
2134	do.	do.	do.	168	81	3.9	10.4	15.7	4	78
2788	do.	do.	do.	168	73	4.9	8.2	14.8	5	23

5852	Mifflinburg.....	do.	Argillaceous limestone	168	.19	5.5	7.2	14.8	8	27
5853	do.	do.	Limestone	168	.39	5.3	7.5	15.6	6	21
2536	Windfield.....	do.	Slag	168	.47	3.4	11.6	17.7	12	21
6761	Allenwood.....	do.	Clay shale	168	1.73	11.8	3.4	0	3	54
3262	Franklin (near).....	Venango	Argillaceous sandstone	150	4.69	3.3	8.8	(¹)	7	33
1185	Warren.....	do.	Feldspathic sandstone	159	2.73	2.73	(¹)	(¹)	3	58
2604	do.	do.	do.	159	2.60	3.6	11.2	5.8	8	58
2613	Washington.....	Washington	Argillaceous limestone	168	.73	2.8	14.1	16.5	12	35
2614	do.	do.	Dolomitic limestone	175	.95	2.6	15.2	16.8	14	35
3707	Monongahela.....	do.	Limestone	172	.24	4.0	10.0	15.8	12	45
3708	do.	do.	do.	162	3.19	3.3	12.0	16.3	16	54
2370	Buckenhams.....	Wayne	Feldspathic sandstone	165	1.50	3.3	12.0	14.0	8	58
2911	Steele Station (near).....	do.	Ferruginous sandstone	168	1.30	3.8	10.4	12.5	10	55
5566A	Buckenhams.....	do.	Feldspathic sandstone	168	.56	2.7	14.6	17.4	9	29
5566B	do.	do.	Conglomeratic sandstone	156	3.22	11.0	3.6	0	4	49
5830	Prompton.....	do.	do.	175	1.21	6.7	5.9	15.3	7	23
2481	Greensburg.....	do.	Feldspathic sandstone	168	.32	3.4	11.9	17.8	12	43
2533	North Huntingdon.....	Westmoreland	Limestone	168	1.01	3.7	10.8	16.9	10	43
2750	McKeesport (near).....	do.	do.	165	1.01	4.9	8.2	16.7	8	50
2879	Mount Pleasant.....	do.	do.	172	.96	3.2	12.3	17.0	13	44
4877	Sewickley Township.....	do.	do.	168	.57	4.2	9.5	16.9	8	30
4878	do.	do.	Siliceous limestone	168	1.24	3.8	10.5	14.1	12	16
5605	Blairsville-Intersection.....	do.	Limestone	172	.36	4.5	8.9	14.3	11	11
7900	(²).....	do.	Siliceous limestone	168	.41	2.1	19.2	17.2	19	19
8911	Ligonier.....	do.	do.	168	.33	2.3	17.5	16.7	8	64
1123	West Donegal.....	do.	do.	168	.16	2.6	15.3	17.3	8	53
1258	Saltsburg.....	do.	Diabase	187	.26	(¹)	(¹)	18.2	39	43
2055	Loyalhanna Township.....	do.	Calcareous sandstone	165	1.64	3.6	11.0	9.9	11	33
1873	Nicholson.....	do.	Feldspathic sandstone	159	2.91	2.7	14.8	13.3	9	224
3191	Seranton.....	Wyoming	do.	168	1.49	3.8	10.6	16.0	10	28
5388	Black Walnut.....	Lackawanna	Sandstone	162	.66	3.7	10.9	19.0	9	21
1239	Marsh Run Township.....	Wyoming	do.	165	1.33	4.8	8.4	14.6	12	23
2100	(²).....	York	Gabbro	184	.34	2.2	18.5	17.5	14	21
3410	York Haven.....	do.	do.	187	.91	3.2	12.4	17.7	12	16
3466	York.....	do.	do.	190	.34	2.6	15.6	18.3	15	12
1694	Carroll Township.....	do.	Diabase	190	.10	2.0	19.8	(¹)	(¹)	15
1695	Warrington Township.....	do.	do.	187	.35	1.8	21.7	18.3	22	64
2387	Dillsburg (near).....	do.	do.	193	.07	2.5	15.9	18.5	16	40
7458	York.....	do.	do.	187	.41	2.2	17.9	19.1	26	34
1691	do.	do.	do.	187	.39	3.9	10.8	18.7	25	22
1695	do.	do.	Micaceous sandstone	172	.33	3.6	11.2	13.9	8	14
1948	Hanover.....	do.	Indurated sandstone	175	.53	2.4	16.4	18.7	9	9
2936	Dillsburg (near).....	do.	Sandstone	143	4.62	12.8	3.1	(¹)	13	13
2938	do.	do.	Feldspathic sandstone	150	4.32	3.0	11.0	16.6	10	86
1866	Hanover.....	do.	Ferruginous sandstone	165	4.46	13.4	3.0	14.7	6	500+
7330	York.....	do.	Quartzite	169	.20	3.5	15.9	19.3	7	19
9606	do.	do.	do.	159	.94	3.6	11.1	18.7	9	11
2135	Wellsville Borough.....	do.	Epidoite	162	.68	4.1	9.8	19.3	9	11
2562	Washington Township.....	do.	Hematite	178	.67	2.8	14.3	17.8	22	22
2762	Spring Forge.....	do.	Limestone	178	.37	3.2	12.5	17.6	11	21

2 Exact locality not known.

Test not made.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Comenting value.
2043	York	York	Limestone	Pounds. 172	Pounds. .32	4.5	8.9	14.0	5	53
4706	York (near)	do.	do.	168	.19	5.8	6.8	8.8	6	24
5780	do.	do.	do.	168	.48	4.3	9.3	14.3	3	36
5781	West York	do.	Argillaceous limestone	175	.20	2.8	14.2	16.2	28	35
5782	Tellam	do.	Crystalline limestone	172	.18	3.1	13.1	17.7	7	41
5783	York	do.	do.	172	.19	3.1	12.9	14.8	9	18
5784	do.	do.	do.	168	.44	4.8	8.3	14.8	7	36
7049	do.	do.	Limestone	178	.22	3.9	10.3	17.1	6	36
7050	do.	do.	do.	172	.15	6.1	7.0	15.6	4	20
7051	do.	do.	do.	175	.30	6.1	6.5	15.6	5	60
4097	Glen Rock	do.	Crystalline limestone	181	.37	6.8	5.9	12.3	6	31
4106	Farm Grove	do.	Chlorite epidote schist	193	.43	2.8	14.3	18.4	16	23
5778	Emigsville	do.	Hornblende chlorite schist	175	.15	4.6	8.6	14.3	7	39
5779	Wrightsville	do.	Dolomite marble	175	.14	2.6	15.3	17.1	13	39
7428	York	do.	do.	178	.19	3.4	11.8	15.3	9	20
7457	Hanover	do.	Siliceous marble	168	.49	4.3	9.3	15.8	7	70
9067	York	do.	Dolomite marble	178	.16	8.2	4.9	14.2	5	44
7790	Hanover	do.	Siliceous dolomite	178	.46	4.0	10.0	17.7	12	28
4708	Blue Mountain	(1)	Serpentine	165	.19	4.7	8.5	15.0	11	83
7431	(1)	(1)	Carbonaceous limestone	168	.31	5.0	7.9	16.3	5	54

RHODE ISLAND.

886	Bristol	Bristol	Chlorite quartzite	172	0.45	4.7	8.5	18.9	10	22
889	do.	do.	Gneissoid granite	168	.28	2.8	14.3	18.0	10	53
890	Warren	do.	Chlorite sandstone	168	.38	2.7	15.0	15.3	24	12
891	East Greenwich	Kent	Blotite gneiss	168	.15	2.6	15.1	18.8	20	59
1818	Warwick	do.	Mica schist	165	.74	3.8	10.6	17.5	6	9
1821	do.	do.	Mica quartzite	172	.59	3.9	10.4	18.7	4	27
302	Middletown	Newport	Quartzite	(2)	(2)	3.1	12.8	(2)	(2)	(2)
896	do.	do.	do.	175	.27	2.8	14.4	19.2	15	12
1019	Newport	do.	Granite	162	.59	3.0	13.5	18.7	15	53
1020	Portsmouth	do.	Arkotic gneiss	181	.25	4.2	9.6	15.4	10	33
1817	Jamestown	do.	Metamorphic sandstone	168	.59	4.8	18.3	18.3	16	17
1822	Portsmouth	do.	Feldspathic sandstone	168	.59	2.4	10.8	16.7	15	15
14	Cumberland	Providence	Peridotite	225	(2)	4.2	9.4	(2)	(2)	(2)

1022	do.	Altered peridotite.	221	27	4.3	9.3	15.0	12	30
42	do.	Quartzite.	(4)	(2)	4.4	9.1	(2)	(2)	(2)
888	North Providence.	Mica quartzite.	172	.40	2.6	13.5	16.5	21	25
894	Cranston.	Feldspathic quartzite.	172	.06	3.2	12.5	17.6	21	33
1018	Cumberland.	Quartzite breccia.	162	.69	2.9	14.0	(2)	(2)	13
5589	do.	Quartzite.	162	.47	4.4	9.0	19.3	16	5
659	Providence.	Augite diorite.	187	.18	1.9	20.6	(2)	(2)	23
887	Cranston.	Granite.	175	.19	3.4	11.9	19.1	10	39
893	Johnston.	Gneissoid granite.	165	.25	2.2	18.2	18.5	12	12
895	Smithfield.	Granite.	162	.19	3.7	10.8	(2)	(2)	18
1017	Cumberland.	Hornblende granite.	175	.26	1.6	25.6	17.9	12	18
9242	Smithfield.	Gneissoid granite.	165	.45	3.0	13.3	18.3	6	7
892	East Providence.	Indurated sandstone.	168	.31	3.0	13.4	19.1	7	11
897	Johnston.	Amphibolite.	193	.17	2.8	14.2	19.0	9	11
6827	do.	do.	187	.38	1.8	21.7	18.6	26	13
1819	do.	Hornblende schist.	184	.75	3.0	13.2	18.3	10	32
1820	East Providence.	Chlorite gneiss.	175	.46	4.6	8.6	15.7	8	16
5023	Cranston.	Sericite gneiss.	165	.31	4.6	8.6	17.8	9	27
1021	Westerly.	Granite.	165	.65	2.4	16.6	17.7	12	25
1213	South Kingston.	do.	162	.43	5.2	7.7	15.8	4	11
1259	Westerly.	do.	165	.31	2.8	14.1	18.1	11	15
1260	do.	do.	165	.52	2.2	18.5	18.2	9	22
8867	do.	do.	165	(2)	4.0	10.0	(2)	6	(2)
8878	do.	do.	165	(2)	2.9	13.8	(2)	12	(2)
8869	do.	do.	165	(2)	3.5	11.6	(2)	11	(2)

SOUTH CAROLINA.

783	Abbeville.	Chert.	162	1.19	22.1	1.8	(2)	(2)	11
3451	do.	do.	165	.35	9.1	4.4	(2)	(2)	6
6490	do.	Muscovite granite.	165	.57	4.5	8.8	17.2	9	14
6491	do.	Altered muscovite granite.	159	.22	18.2	2.2	0.0	3	24
6493	do.	Gneissoid granite.	165	.32	3.8	10.5	18.0	6	22
6492	do.	Granite gneiss.	175	.64	13.2	3.0	14.1	6	32
2545	Belton.	Ferruginous sandstone.	200	5.09	10.3	3.9	(2)	(2)	49
8389	Williamston.	Granite.	165	.60	5.3	7.5	18.3	6	26
1758	Gaffney.	Limestone.	172	.11	5.7	7.0	8.7	8	44
2386	Blair.	Granite.	165	.28	3.2	12.7	18.9	9	19
5568	Rhon.	do.	168	.18	2.6	15.2	18.3	14	12
5586-1	do.	Biotite granite.	(2)	(2)	(2)	(2)	18.5	11	(2)
3893	Greenville.	Granite.	165	.22	5.0	8.1	18.2	9	4
4725	(1)	Gneissoid granite.	172	.33	5.1	7.9	(2)	(2)	15
3759	Lancaster.	Altered rhyolite.	163	.16	2.1	12.8	18.9	10	13
1449	Batesburg.	Gneissoid granite.	162	.51	2.4	16.7	18.8	21	16
2024	(1)	Marble.	168	.81	5.5	7.3	7.1	5	79
3323	Beverly.	Granite gneiss.	172	.28	5.5	7.2	17.7	6	21
4008	do.	Granite.	168	.47	3.5	11.4	17.8	13	18
374	Columbia.	do.	163	.17	2.9	13.9	(2)	(2)	(2)

1 Exact locality not known.

2 Test not made.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

SOUTH CAROLINA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
375	Pacolet.....		Granite.....	Pounds.	Pounds.	1.9	20.9	(1)	(1)	(1)
1003	Spartanburg.....	Spartanburg.	do.....	165	.17	2.1	19.2	18.2	10	20
1737	Pacolet.....	do.	do.....	172	.48	4.1	9.8	17.7	15	14
1079	Spartanburg.....	do.	Syenite.....	165	.33	2.4	16.9	18.4	10	20
2110	do.....	do.	Biottite gneiss.....	168	.40	3.8	10.6	15.6	7	28
1217	Union.....	Union.	Granite.....	168	.27	5.6	7.1	17.2	9	20

SOUTH DAKOTA.

2106	Lead.....	Lawrence.	Altered diorite.....	168	0.28	2.2	17.9	17.3	15	67
2107	do.....	do.	Granite porphyry.....	162	.73	3.9	14.0	17.5	10	85
2108	do.....	do.	Altered rhyolite.....	147	4.56	3.8	10.4	15.8	16	500+
3372	do.....	do.	Limestone.....	168	.21	5.6	7.2	15.6	5	61
3373	do.....	do.	Sandstone.....	162	.44	3.2	12.5	19.0	10	0
3374	do.....	do.	Dolomite.....	172	1.01	7.7	16.3	(1)	9	22
3375	do.....	do.	Weathered chert.....	150	4.08	2.2	12.4	(1)	(1)	500+
449	Rowena.....	Minnehaha.	Quartzite.....	165	.15	2.8	14.2	14.4	4	35
5582	Rapid City.....	Pennington.	Marble.....	168	1.14	4.2	10.0	16.8	24	24
5584	do.....	do.	Dolomite.....	162	1.84	4.2	9.6	16.8	4	24
5672	do.....	do.	Feldspathic quartzite.....	168	.21	2.4	16.7	19.0	25	24

TENNESSEE.

2104	Clinton.....	Anderson.	Feldspathic limestone.....	165	0.84	2.7	14.9	16.5	11	76
2367	Camden.....	Benton.	Chert.....	140	2.63	(1)	(1)	19.2	9	36
4333	Elizabethton.....	Carier.	Argillaceous limestone.....	172	.23	3.3	12.1	17.7	18	31
5597	Quarry.....	do.	Limestone.....	168	.34	4.4	8.1	16.9	9	64
9223	Watauga Point.....	do.	Dolomite.....	178	.26	4.1	8.8	(1)	9	17
1325	Cumberland Gap.....	Claborn.	Limestone.....	172	.24	3.9	10.2	15.8	10	76
1326	do.....	do.	do.....	168	.31	3.8	10.4	(1)	(1)	39
376	Nashville.....	Davidson.	do.....	168	.15	5.0	8.0	(1)	(1)	(1)
377	do.....	do.	do.....	168	.20	5.2	7.7	(1)	(1)	(1)
378	do.....	do.	do.....	168	1.87	5.8	6.7	(1)	(1)	(1)
379	do.....	do.	do.....	153	3.08	15.1	2.6	(1)	(1)	(1)
6557	do.....	do.	do.....	168	.90	3.5	11.3	10.4	6	80

9667	do.	do.	168	39	4.5	8.9	15.5	8	41
9668	do.	do.	168	2.19	7.3	3.5	9.0	4	34
9669	do.	do.	172	.36	4.5	8.9	16.0	6	25
1407	Perryville	do.	139	.95	4.2	9.5	13.8	7	41
8109	Dickson	do.	165	(1)	5.6	7.1	14.5	5	65
8110	do.	Crystalline limestone.	162	1.04	6.4	6.2	13.1	4	78
8111	do.	Argillaceous limestone.	156	3.10	5.1	7.9	16.3	3	72
8112	do.	do.	139	.25	7.3	5.5	17.1	5	48
8113	do.	do.	153	6.50	8.5	4.7	18.0	4	36
448	Chatanooga	Dolomite limestone.	168	1.27	2.8	14.2	(1)	(1)	(1)
503	do.	Limestone.	168	1.10	4.0	10.0	(1)	(1)	(1)
8865	do.	do.	172	.28	(1)	11.1	15.5	4	29
8384	Paris (10 miles north of)	Sandstone.	(1)	(1)	11.5	3.5	18.8	10	10
336	Hickman	Ferruginous sandstone.	168	4.75	6.8	5.9	(1)	(1)	(1)
337	do.	Siliceous limestone.	175	2.54	7.8	5.2	(1)	(1)	(1)
361	do.	do.	175	2.29	7.8	5.1	(1)	(1)	(1)
359	do.	Limestone.	193	3.29	7.9	9.2	(1)	(1)	(1)
338	do.	Schist.	156	1.72	4.4	(1)	(1)	(1)	(1)
8386	Stewart	Limestone.	156	2.60	(1)	(1)	13.0	4	42
6739	Bay Springs	Argillaceous limestone.	153	3.50	4.0	9.9	(1)	6	27
5502	Straw Plains	Limestone.	172	.11	4.5	8.9	11.2	10	20
5504	do.	do.	172	.42	2.7	14.6	(1)	8	15
5503	do.	Dolomite.	178	.27	4.5	8.9	(1)	17	21
1684	Lenoir City	Limestone.	172	.30	(1)	(1)	9.3	11	37
1205	Madison	Ferruginous sandstone.	178	2.82	4.4	9.1	(1)	3	84
7553	Montgomery	Limestone.	168	1.12	5.0	8.0	15.6	6	171
7554	do.	do.	165	.74	4.6	8.7	14.9	5	46
7555	do.	do.	165	.50	4.1	9.9	16.0	7	65
7884	do.	Argillaceous limestone.	168	.76	4.1	13.9	14.9	5	41
7901	do.	Limestone.	165	.90	2.9	10.6	15.8	6	40
7902	do.	do.	168	.30	3.8	11.1	16.9	8	35
7903	Porters Quarry	Cherty limestone.	172	.20	3.6	9.1	15.6	9	42
7904	Corbin Quarry	Argillaceous limestone.	168	.43	4.4	4.8	16.8	6	62
8151	Clarksville	Limestone.	168	.60	8.3	7.6	(1)	(1)	309
5886	Copper Hill	Copper slag.	212	.69	5.2	7.0	(1)	(1)	11
4047	Oliver Springs	Chert.	162	.74	20.0	12.8	15.4	13	57
6826	Harriman	Siliceous dolomite.	178	.27	2.9	8.9	15.3	7	48
9008	do.	Dolomite.	165	.85	5.5	4.6	(1)	(1)	58
9653	do.	Argillaceous limestone.	173	.22	8.8	(1)	(1)	23	65
1240	Huntsville	Sandstone.	153	2.21	(1)	(1)	18.4	9	40
3429	Sullivan	Dolomite.	175	.82	(1)	(1)	17.6	8	24
3431	do.	do.	175	.97	(1)	(1)	16.3	15	22
3432	do.	do.	178	.60	(1)	(1)	16.8	10	20
7008	do.	Siliceous dolomite.	175	.20	2.6	15.4	(1)	5	18
3430	do.	Dolomite limestone.	175	.46	(1)	6.9	17.7	5	41
5440	Burl.	Limestone.	168	.40	5.8	(1)	18.7	5	41
8007	Bristol	Feldspathic sandstone.	139	1.63	(1)	8.7	15.8	5	26
7357	Franklin	Limestone.	168	.05	4.6	7.4	(1)	3	13
6200	Wilson.	do.	168	.44	5.4	7.4	14.7		

¹ Test not made.² Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916—Contd.

TEXAS.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
1199	San Antonio.....	Bexar.....	Limestone.....	Pounds. 153	Pounds. 4.89	(1)	(1)	0	4	42
1202	do.....	do.....	do.....	143	8.29	(1)	(1)	0	3	21
1229	do.....	do.....	do.....	159	2.19	5.2	7.8	7.1	3	42
1500	Sand Pitt Station.	Burleson.....	Sandstone.....	140	3.50	4.2	8.3	16.7	14	13
7609	New Braunfels.....	Comal.....	Limestone.....	165	1.12	4.8	8.3	16.7	6	13
2084	El Paso.....	El Paso.....	Syenite.....	159	1.58	14.4	2.8	18.2	11	200
3727	do.....	do.....	do.....	159	1.40	4.1	9.9	18.1	13	150
2155	do.....	do.....	do.....	159	1.68	2.5	15.7	18.2	9	257
7297	Dublin.....	Erath.....	Syenite porphyry.....	168	1.64	6.7	6.0	14.6	4	61
1479	Denison.....	Grayson.....	Fossiliferous limestone.....	159	2.77	5.2	7.7	12.8	8	107
1480	do.....	do.....	do.....	162	1.94	4.4	9.2	15.4	9	81
3414	Denison (near).....	do.....	do.....	162	2.20	(1)	(1)	15.9	11	23
3412	do.....	do.....	Ferruginous limestone.....	153	5.65	(1)	(1)	12.3	5	101
3413	do.....	do.....	do.....	159	2.71	(1)	(1)	15.6	8	74
5642	Denison.....	do.....	Argillaceous limestone.....	162	2.12	5.7	7.0	13.7	8	44
5852	do.....	do.....	do.....	159	2.87	7.1	6.0	14.6	6	41
5851	do.....	do.....	do.....	159	3.63	7.8	8.3	19.3	5	41
5709	Sherman.....	do.....	do.....	162	1.61	4.8	5.3	10.3	8	83
5938	do.....	do.....	Altered granite.....	134	11.96	7.5	2.7	2.7	3	82
1958	Marshall.....	do.....	Argillaceous limestone.....	153	5.52	22.9	1.7	176	3	176
2685	Hillsboro.....	Harrison.....	Ferruginous sandstone.....	143	8.60	9.5	4.2	(1)	(1)	39
3869	Jacksboro.....	Hill.....	Limestone.....	165	1.94	5.0	8.0	14.3	5	32
4412	Bridgeport.....	Jack.....	do.....	168	.34	3.5	7.3	14.8	9	30
5395	Stewarton.....	do.....	do.....	168	.82	4.9	8.2	14.8	9	32
7331	Jacksboro.....	do.....	do.....	165	1.63	5.2	7.7	13.5	4	33
7332	do.....	do.....	do.....	165	1.27	3.8	10.6	14.1	6	118
6314	Terrell.....	do.....	Siliceous limestone.....	153	4.11	12.0	3.3	(1)	(1)	202
7015	do.....	Kaufman.....	do.....	162	1.63	9.0	4.4	14.5	7	125
7016	Elmo Quarry.....	do.....	do.....	156	2.92	11.7	3.4	5.0	4	103
3147	Paris.....	do.....	Sandstone.....	143	7.25	11.3	3.5	0	4	34
5532	do.....	Lamar.....	Chert conglomerate.....	159	4.9	4.9	8.1	19.4	10	4
7224	Teuacana.....	do.....	Argillaceous limestone.....	159	2.28	7.6	5.2	7.8	4	152
8591	Springfield.....	Limestone.....	Limestone.....	162	1.45	4.5	8.9	15.0	7	68
8885	Teuacana.....	do.....	Fossiliferous limestone.....	156	.27	8.2	4.9	4.0	4	35
6625	Marshall.....	do.....	Iron conglomerate.....	(1)	26.0	(1)	1.5	(1)	(1)	152
5955	Richland.....	Marshall.....	Crystalline limestone.....	165	1.33	6.2	6.5	15.6	9	47
7070	Corleane.....	Navarro.....	Limestone.....	168	.60	5.5	7.3	14.1	6	21

7209	Richland.....	do.	108	1.02	3.8	10.5	13.3	6	104
5432	Marneal.....	Nolan.....	159	1.67	6.2	6.5	13.3	4	16
4131	Mineral Wells.....	Palo Pinto.....	165	1.22	5.5	7.3	13.5	6	69
6579	Strawn.....	do.	168	.37	4.2	9.5	13.5	6	44
6396	Smith.....	do.	162	.33	4.2	9.5	18.8	6	5
6398	do.	Sandstone.....	165	.77	4.3	15.3	15.3	6	165
6397	do.	Calcareous sandstone.....	172	3.31	26.8	1.5	(1)	(1)	11
5455	Abilene.....	Ferruginous conglomerate.....	165	3.31	26.8	1.5	14.2	7	21
7763	Austin (near).....	Limestone.....	165	1.50	4.0	23.5	18.7	24	16
5235	do.	Nephelitic basalt.....	199	.21	1.7	(1)	15.7	5	62
8237	do.	do.	(1)	(1)	(1)	(1)	15.3	5	36
8238	do.	do.	(1)	(1)	(1)	(1)	16.0	4	35
8234	do.	do.	(1)	(1)	(1)	(1)	14.7	5	59
8236	do.	do.	(1)	(1)	(1)	(1)	16.2	14	33
8239	do.	Siliceous dolomite.....	(1)	(1)	(1)	(1)	18.7	22	78
7129	Knippa.....	Rhyolite.....	193	.39	1.8	23.2	17.5	15	67
1439	Grayville Quarry.....	Nephelitic basalt.....	143	2.67	5.0	7.9	16.7	12	93
2706	Round Rock.....	Sandstone.....	156	3.20	10.7	3.8	0	4	46
2707	do.	Limestone.....	159	2.64	7.1	5.6	13.2	4	4
2708	do.	do.	153	5.06	23.8	1.7	5.3	3	10
6000	Bridgeport.....	do.	165	1.03	6.8	5.9	12.2	6	66
6667	do.	do.	168	.60	6.4	6.2	13.8	5	47
6684	do.	do.	168	.36	6.1	6.6	14.6	6	27
7242	Chico.....	do.	168	.37	4.3	9.3	14.1	4	61
6683	do.	do.	168	.26	(1)	(1)	13.6	6	26

UTAH.

8191	(2).....	Morgan.....	165	0.41	7.2	5.6	(1)	(1)	(1)
1995	Salt Lake City.....	Salt Lake.....	168	.77	2.9	13.7	16.8	12	451
1997	do.	do.	159	2.31	3.1	17.9	17.9	20	44
3271	(2).....	do.	165	.90	4.1	9.8	16.9	11	34
4121	Salt Lake City.....	do.	206	.69	4.7	8.4	(1)	(1)	5
4122	Sandy City.....	do.	218	.52	5.6	7.2	6.9	(1)	20
3332	Provo.....	do.	168	1.15	5.8	7.2	17.4	6	21
3333	do.	Chert.....	162	1.08	29.2	1.4	(1)	(1)	4
3334	do.	Serpentine schist.....	175	.16	6.2	6.4	16.2	7	19
3337	do.	Siliceous limestone.....	162	2.36	3.6	11.0	18.2	20	59
3338	do.	Limestone.....	165	.45	3.0	13.2	(1)	(1)	10
3339	do.	Sandstone.....	168	.10	2.3	17.5	19.0	17	28
4744	do.	Bituminous sandstone.....	140	1.34	5.2	7.8	5.6	6	500+

¹ Test not made.² Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

VERMONT.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.					
1946	Middlebury.....	Addison.....	Limestone.....	172	0.62	3.8	10.5	15.4	6	77
1220	North Pownal.....	Bennington.....	Marble.....	168	.36	5.8	7.0	8.9	6	71
1256	do.....	do.....	Limestone.....	172	.30	3.2	12.5	12.6	5	32
2889	Bennington.....	do.....	do.....	168	.41	5.0	8.0	(1)	(1)	53
2884	do.....	do.....	Dolomite.....	178	.35	4.2	9.4	15.0	8	41
2885	do.....	do.....	do.....	178	.33	3.6	11.2	16.6	6	30
2886	do.....	do.....	do.....	178	.34	4.1	9.8	14.5	7	13
2887	do.....	do.....	do.....	175	.98	4.1	9.9	16.9	8	23
2888	do.....	do.....	Quartzite.....	165	.35	2.3	17.2	(1)	(1)	4
7109	do.....	do.....	do.....	165	.29	6.8	5.9	19.2	4	4
6685	Hardwick.....	Caledonia.....	Granite.....	165	.39	4.2	9.5	17.5	6	35
3329	Berlington.....	Chittenden.....	Red dolomitic marble.....	175	.25	3.2	12.3	17.3	23	41
3330	do.....	do.....	Dolomitic marble.....	175	.25	2.5	16.0	16.6	18	31
8369	do.....	do.....	Dolomite.....	175	.42	4.4	9.1	17.2	15	10
8370	do.....	do.....	do.....	178	.42	3.4	11.7	18.0	11	23
1678	St. Albans.....	Franklin.....	Argillaceous dolomite.....	168	.31	2.8	14.3	19.5	17	4
1681	do.....	do.....	Feldspathic sandstone.....	165	.26	2.3	17.4	19.3	12	3
1680	do.....	do.....	Dolomite.....	178	.42	4.2	9.6	16.3	9	9
1726	Swartron.....	do.....	Limestone.....	172	.26	5.7	7.0	(1)	(1)	26
1679	Isle La Motte.....	Grand Isle.....	do.....	168	.69	4.0	10.1	17.3	9	18
2372	Barre.....	Orleans.....	Biotite hornblende schist.....	181	.09	2.8	14.4	18.5	18	54
2373	do.....	do.....	Biotite granite.....	165	.28	8.1	3.0	17.7	5	39
726	Wallingford.....	Rutland.....	Amphibolite.....	193	.25	4.7	15	(1)	(1)	15
5543	East Wallingford.....	do.....	Altered diabase.....	184	.96	2.6	13.3	17.2	15	111
9550	Rutland.....	do.....	Siliceous dolomite.....	175	.28	3.0	13.2	18.3	10	31
6955	(?).....	do.....	Quartzite.....	165	.15	2.3	17.1	19.2	12	2
1646	Barre.....	Washington.....	Granite.....	165	.65	3.1	12.8	18.7	27	15
3192	do.....	do.....	Biotite granite.....	165	.29	4.9	8.2	18.8	9	9
8853	do.....	do.....	Granite.....	165	.44	3.0	13.3	(1)	7	(1)
6677	Bellevue Falls.....	Windham.....	Biotite schist.....	178	.19	2.9	13.9	14.4	16	50
4092	Harford.....	Windsor.....	Altered diabase.....	181	.41	2.8	14.1	16.9	10	150
4123	Woodstock.....	do.....	Hornblende schist.....	187	.06	4.3	9.4	17.2	7	21

VIRGINIA.

[illegible]

1 Test not made.

2 Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Continued.

VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Compressing value.
412	Alexandria.	Alexandria.	Mica schist.	Pounds. 175	Pounds. .37	4.3	9.3	(¹)	(¹) 6	(¹)
1310	Chain Bridge.	do.	do.	175	.30	4.8	8.4	(¹)	(¹)	31
1320	(²)	do.	do.	175	.24	4.2	9.6	(¹)	(¹)	29
1440	(²)	do.	do.	165	.12	3.7	10.8	(¹)	(¹)	0
1441	(²)	do.	do.	172	.27	2.6	15.6	18.0	30	40
5952	Roslyn.	do.	Granite.	172	.26	2.9	13.6	17.8	11	22
1657	(²)	do.	Altered granite.	172	.35	4.7	8.5	(¹)	(¹)	28
5953	Covington (near).	do.	Granite gneiss.	172	.35	4.7	8.5	(¹)	(¹)	22
9483	Clifton Forge.	Alleghany	Crystalline limestone.	165	.64	4.2	9.5	14.1	6	43
1899	(²)	do.	Feldspathic sandstone.	168	1.04	(¹)	(¹)	15.8	20	74
1900	Amherst (1 mile south of).	Amherst	Quartzite.	165	.05	4.3	9.3	(¹)	(¹)	2
1901	Sweet Briar Station (near).	do.	Micaceous hornblende schist.	187	.15	5.7	7.1	(¹)	5	53
1902	Sweet Briar Station.	do.	do.	187	.23	3.3	12.1	14.0	10	37
1976	Mellor Station.	do.	Hornblende schist.	190	.44	6.8	6.4	15.7	10	21
1984	(²)	do.	do.	190	.44	6.8	6.4	15.7	10	37
2208	Lynchburg Road.	do.	do.	193	.37	2.7	13.0	17.0	12	12
2221	(²)	do.	Mica schist.	165	.82	4.4	9.0	14.9	7	12
2679	(²)	do.	Hornblende schist.	190	.33	5.5	7.2	16.2	8	22
2351	(²)	do.	do.	193	.30	4.2	9.5	17.7	9	13
3098	(²)	do.	do.	184	.88	12.8	3.1	16.2	6	21
4102	Monroe.	do.	do.	193	.21	3.0	12.7	17.9	8	13
4419	do.	do.	do.	193	.26	3.1	12.7	16.3	10	13
4861	Amherst Courthouse.	do.	do.	193	.23	5.9	6.8	14.2	9	20
4862	do.	do.	Mica schist.	168	.21	8.2	4.9	18.3	10	18
1972	Amherst Depot.	do.	Hornblende biotite schist.	187	.25	6.2	6.5	16.0	7	10
1977	Monroe.	do.	Epidoste.	190	.61	7.4	5.4	19.3	23	14
1978	Amherst Depot (near).	do.	do.	206	1.10	(¹)	(¹)	10.7	10	44
1978	Monroe.	do.	Biotite gneiss.	172	.48	4.7	8.5	16.5	9	58
1982	(²)	do.	do.	172	.68	(¹)	(¹)	16.7	7	38
3381	James River.	do.	Diorite gneiss.	184	1.19	5.7	7.0	9.0	6	52
3521	(²)	do.	Hornblende gneiss.	187	.59	16.4	2.4	12.3	5	23
4203	Monroe.	do.	Biotite gneiss.	172	.28	9.2	4.3	17.0	6	18
4204	do.	do.	do.	168	.55	7.2	5.6	18.2	5	29
4389	do.	do.	do.	172	.60	7.4	5.4	17.8	5	25
4860	Amherst Courthouse.	do.	Gneiss.	190	.63	7.5	7.5	15.7	7	20
4863	do.	do.	Biotite gneiss.	172	.33	5.3	7.6	14.6	8	14
4937	do.	do.	do.	175	.25	5.3	7.5	17.6	11	13
6536	do.	do.	Granite gneiss.	168	.44	6.6	6.0	16.8	12	8
6823	Amherst Courthouse (near).	do.	Biotite gneiss.	175	.73	8.7	4.6	9.2	3	43
2223	(²)	do.	Amphibolite.	181	.69	7.9	5.1	13.7	5	56
		do.		187	1.04	10.3	3.9	13.5	7	75

3019	(?)	do	Altered diabase	190	.21	1.8	22.0	18.6	24
6824	(?)	do	Altered diorite	190	.88	17.9	10.9	17.9	48
7051	Clifford	do	Gneissoid granite	190	.20	5.3	7.5	17.7	4
7891	Madison Heights	do	Altered biotite granite	175	1.30	4.7	8.4	18.0	40
2057	Appomattox	do	Sandstone	102	1.07	(1)	(1)	16.5	9
5926	Augusta	do	Quartzite	175	1.27	4.6	8.6	(1)	(1)
1904	Stanton (near)	do	Dolomite limestone	165	1.19	4.5	8.9	13.0	8
2087	Stanton (1 mile north of)	do	Limestone	168	1.98	3.4	11.8	13.5	11
2680	Craigsville	do	do	168	.32	3.8	10.6	17.7	26
2681	do	do	do	168	.27	4.6	8.8	13.7	32
2899	Fordwick (near)	do	do	172	.41	(1)	(1)	16.0	48
2899	Fordwick (near)	do	do	168	.22	5.4	7.4	15.4	5
5384	Waynesboro	do	do	178	.08	5.1	7.8	13.3	23
5476	Stanton	do	do	168	.08	5.1	7.8	13.3	6
2899	Fordwick (near)	do	Chert	165	.43	3.9	10.3	19.5	18
2899	Fordwick (near)	do	Dolomite	172	.68	4.7	8.5	13.5	11
2899	do	do	Dolomite	178	.14	3.2	12.7	13.2	13
2899	do	do	do	175	.66	3.1	12.8	16.5	16
2899	do	do	do	175	.90	3.7	10.8	16.8	23
2899	do	do	Chlorite schist	187	.37	2.9	13.7	16.8	44
2899	do	do	Sandstone	168	2.29	4.7	8.5	16.1	34
2899	do	do	do	162	1.08	7.9	5.1	19.0	186
2899	do	do	Slate	168	.65	12.4	3.2	6.3	6
2899	do	do	Calcareous slate	172	.42	4.6	8.8	11.8	29
2899	Bedford	do	Altered diabase	181	.39	3.8	10.6	13.2	32
2899	do	do	Biotite gneiss	162	1.16	8.8	3.6	10.8	20
2899	do	do	do	175	.40	11.1	3.6	15.8	76
2899	Bedford City	do	Granite gneiss	172	.38	4.4	9.1	17.8	29
2899	Albert	do	do	175	1.26	5.2	7.7	18.8	4
2899	Lynchburg	do	Hornblende epidote schist	184	.79	8.6	4.7	12.3	23
2899	do	do	Biotite schist	193	.38	9.4	4.2	12.3	44
2899	Lynchburg (near)	do	Biotite schist	187	.46	7.3	5.5	16.7	24
2899	Holcomb Rock	do	Smelter slag	178	1.50	10.2	3.9	(1)	28
2899	Gala	do	Quartzite	162	.71	2.0	20.2	(1)	7
2899	do	do	Pink quartzite	165	.19	3.2	12.3	(1)	4
2899	Campbell	do	Granite	165	.51	7.5	5.3	16.5	28
2899	do	do	do	162	.29	3.7	10.8	18.7	8
2899	Alta Vista	do	Quartzite	165	.20	2.6	15.5	19.0	10
2899	Lynchburg	do	Limestone	168	.51	5.7	7.0	14.3	56
2899	do	do	do	168	.15	4.2	9.5	17.1	4
2899	Lynchburg (near)	do	Hornblende schist	190	.49	4.4	9.0	15.2	8
2899	do	do	Quartz schist	168	.18	3.9	10.3	(1)	(1)
2899	do	do	Biotite schist	168	.17	3.3	12.0	18.3	21
2899	Alta Vista	do	Quartz mica schist	168	.41	3.3	12.0	17.7	18
2899	do	do	Muscovite schist	172	.40	4.6	8.8	14.3	42
2899	do	do	Gneiss	172	.19	2.3	17.1	18.0	21
2899	do	do	Serpentine gneiss	168	.37	3.3	12.0	18.7	6
2899	do	do	Calcareous sandstone	172	2.81	4.2	9.4	13.6	22
2899	Charlotte	do	Altered diorite	162	.59	18.8	14.5	18.8	21
2899	do	do	Hornblende granite	162	1.61	4.0	9.9	18.6	62

Exact locality not known.

Test not made.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.			(¹)	(¹)	
1393	Norfolk.....	Chesterfield	Granite.....	165	.44	2.5	16.1	(¹)	(¹)	88
1774	Richmond (near).....	do.	do.	165	.31	3.2	12.3	17.5	11	33
3239	(?).....	do.	do.	165	.23	2.1	19.0	18.6	13	20
7586	Berryville.....	Clark	Argillaceous limestone.....	172	.16	2.5	16.0	17.4	(¹)	30
492	Craig.....	do.	Dolomitic limestone.....	168	.31	4.1	9.7	(¹)	(¹)	22
2281	Stevensburg (near).....	Culpeper.	Metamorphic sandstone.....	172	1.07	2.2	18.0	19.3	10	25
2282	Mount Run Mill (near).....	do.	do.	168	1.38	2.3	17.7	19.1	14	98
2283	Kellyville (near).....	do.	do.	172	.67	2.6	15.6	18.8	60	57
2284	Brandy Station.....	do.	do.	159	2.77	2.4	16.7	18.3	30	344
2325	Culpeper (near).....	do.	Ferruginous sandstone.....	159	3.04	2.3	17.2	16.8	19	130
3862	(?).....	do.	Argillaceous sandstone.....	175	.33	3.1	12.9	17.8	24	27
4992	(?).....	do.	Indurated argillaceous sandstone.....	168	.64	4.6	8.6	16.3	32	27
6258	(?).....	do.	Argillaceous sandstone.....	153	4.62	4.7	8.5	14.7	12	47
7063	Culpeper (near).....	do.	do.	162	2.51	2.8	14.5	16.6	24	235
2326	do.	do.	Amphibolite.....	181	1.65	2.1	19.4	17.8	11	92
7515	do.	do.	do.	187	.22	4.6	8.7	17.5	18	112
8321	Culpeper.....	do.	do.	193	.11	2.3	17.2	17.7	9	26
8433	Culpeper (7 miles from).....	do.	do.	193	.16	1.5	26.6	18.5	16	36
8619	Griffinsburg.....	do.	do.	196	.40	2.8	14.1	18.3	6	22
3520	Culpeper (near).....	do.	Altered diabase.....	184	.85	3.3	12.0	18.4	24	49
3731	Stevensburg Township.....	do.	Hyperssthene diabase.....	190	.07	3.7	10.8	18.0	11	20
3867	(?).....	do.	Slate.....	175	.32	2.8	14.3	16.8	32	20
4816	Brandy Station (near).....	do.	do.	175	.42	(¹)	(¹)	16.8	26	30
4817	Carco Mill (near).....	do.	do.	175	.32	2.8	14.4	17.3	24	14
4089	Brandy Station.....	do.	Chert.....	181	.27	(¹)	(¹)	18.9	17	12
5878	Buena.....	do.	Gabbro.....	193	.41	(¹)	(¹)	18.2	14	12
5879	do.	do.	Altered basalt.....	187	.32	3.0	13.3	18.2	47	41
7168	Culpeper (3 miles northeast of).....	do.	Altered basalt breccia.....	178	1.97	2.8	14.5	18.5	20	31
6543	(?).....	do.	do.	187	.17	4.0	10.1	11.8	5	85
6544	(?).....	do.	Biotite schist.....	175	.16	3.8	10.5	15.2	9	72
8320	Culpeper (9 miles from).....	do.	do.	168	.37	5.9	8.6	14.9	9	50
6545	(?).....	do.	Sericite schist.....	171	.60	6.8	6.8	18.5	4	73
8318	Boston (near).....	do.	Mica gneiss.....	168	.63	8.9	4.5	13.1	7	51
8319	Hazel River Bridge (near).....	do.	Micaceous quartzite.....	165	.39	4.6	8.7	18.7	11	22
8432	Griffinsburg.....	do.	Biotite gneiss.....	165	.25	2.9	14.0	18.2	5	34
8618	do.	do.	Granite gneiss.....	165	.43	4.7	8.4	18.0	5	27
8618	do.	do.	do.	165	.23	4.1	9.8	18.5	6	26
6796	(?).....	Dinwiddie.	Granite.....	165	.46	(¹)	(¹)	18.8	5	(¹)

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916—Contd.

VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.					
5678	Eggleston (near).	Giles.	Dolomite.....	178	.44	4.4	9.2	16.0	24	27
5678	Pembroke.....	do.	Dolomite marble.....	178	.27	3.1	12.8	14.7	11	15
1317	Bosobel.....	Goochland.	Granite gneiss.....	165	.30	4.0	9.9	18.6	(1)	61
1857	Penitentiary Farm.	do.	Gneiss.....	168	.30	3.1	13.1	17.6	9	20
1858	(2).....	do.	Biotite gneiss.....	162	.58	6.7	5.9	18.0	8	56
1859	(2).....	do.	Granite gneiss.....	165	.26	4.0	10.0	18.2	9	110
3240	(2).....	do.	do.....	165	.21	3.5	11.4	19.0	12	12
5924	Bosobel.....	do.	do.....	162	.28	4.5	9.0	19.3	8	50
8712	(2).....	do.	Granite.....	162	.52	4.8	8.3	18.7	15	38
1778	Emporia.....	Greensville.	do.....	168	.19	2.5	15.7	18.7	10	25
3468	Emporia (near).	do.	Granite gneiss.....	181	.38	3.5	11.4	17.8	9	39
3036	Virginia.....	do.	Altered andesite.....	172	.15	3.3	12.2	(1)	19	19
3172	do.	Halifax.	Epidote chlorite schist.....	168	.18	3.7	10.9	(1)	15	15
1878	Verdow Station (near).	do.	Granite.....	168	.44	2.8	14.3	19.0	19	22
1823	Richmond.....	Hanover.	do.....	165	.54	4.1	9.7	17.8	8	16
3033	do.	do.	Biotite granite.....	165	.21	3.1	13.0	18.8	11	16
8747	do.	do.	Granite.....	162	.67	4.4	9.1	19.0	7	10
8942	do.	do.	Aplite granite.....	163	.53	2.3	17.4	18.2	8	30
3266	(2).....	do.	Hornblende epidote schist.....	180	.76	2.6	16.1	18.0	9	50
2863-1	(2).....	do.	Limestone.....	198	.48	4.9	10.0	16.5	10	49
2864-2	(2).....	Lee.	do.....	168	.07	3.7	8.3	16.0	6	25
1011	Paconian Springs.	do.	Gneiss.....	168	.43	3.6	11.2	18.0	14	52
1012	do.	Louden.	Epidote.....	172	.45	3.6	11.0	18.0	14	83
1322	Mount Weather.	do.	Hornblende schist.....	187	1.87	2.9	14.0	13.1	13	71
3817	Paconian Springs.	do.	do.....	187	.75	3.4	11.7	19.0	26	19
1991	Belmont Park.	do.	Gabbroitic diabase.....	187	.92	2.8	14.4	18.5	16	57
1690	Belmont Park (near).	do.	Diabase.....	187	.35	3.1	12.8	18.2	14	17
9047	Belmont Park.	do.	do.....	187	.43	2.6	15.5	18.3	13	22
3493	Broad Run.....	do.	Gabbro.....	187	.21	2.8	14.4	18.6	19	26
7832	(2).....	do.	Cherty limestone.....	168	.47	5.3	7.5	13.2	6	46
4926	(2).....	do.	Quartzite.....	165	.17	3.5	11.3	19.3	21	2
871	Mineral.....	Louisa.	Chlorite gneiss.....	187	.16	8.1	4.9	(1)	87	6
3265	do.	do.	Epidote quartzite.....	168	.76	2.7	14.9	18.2	10	17
5716	Kenbridge.....	Lunenburg.	Gneissoid granite.....	162	.15	3.1	12.8	19.1	8	18
3150	Chase City.....	do.	Sericite schist.....	168	.73	8.5	4.7	12.4	10	15
3149	do.	Mecklenburg.	Epidote schist.....	184	.57	3.5	11.5	14.5	12	16
3176	do.	do.	Biotite schist.....	168	.85	4.2	9.5	16.3	9	17
7819	do.	do.	Mica schist.....	165	1.01	3.3	12.3	10.2	9	17
3174	Clarksville.....	do.	Syenite.....	153	2.88	3.5	11.5	18.3	11	43

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
7025	Dublin (near).	Pulaski.	Argillaceous limestone.	Pounds. 175	Pounds. 20	3.1	12.7	18.0	22	11
8341	Pulaski.	do.	do.	165	1.86	5.7	7.1	18.3	9	37
6541	(1).	do.	Carbonaceous dolomite.	175	.54	8.2	7.6	17.0	11	32
8340	Pulaski.	do.	Dolomite.	175	.58	5.2	7.7	17.0	6	46
8342	do.	do.	do.	175	.88	4.4	9.1	17.0	8	49
8343	do.	do.	Siliceous dolomite.	168	1.18	13.3	3.0	17.0	5	47
8405	do.	do.	Dolomite.	178	.46	4.0	10.0	17.0	10	23
7452	Fint Hill.	Rappahannock.	Hornblende epidote schist.	187	.96	4.5	8.8	13.8	9	99
1623	Roanoke.	Roanoke.	Dolomite.	175	.54	3.4	11.7	16.3	13	87
1624	do.	do.	do.	178	.55	3.4	11.7	16.6	14	22
1630	do.	do.	do.	181	.47	6.1	6.6	17.6	7	44
3357	Lithia.	do.	Limestone.	168	.85	3.2	12.5	16.8	5	33
5461	Roanoke.	do.	Dolomitic limestone.	178	.14	3.9	10.3	18.3	11	33
3450	do.	do.	Quartzite.	162	.58	4.8	8.3	19.4	4	4
4848	Lexington.	Rockbridge.	Limestone.	168	.16	6.5	6.2	15.0	7	15
4849	do.	do.	do.	168	.21	4.7	8.4	(2)	(2)	12
4850	do.	do.	do.	168	.16	4.7	8.5	14.5	5	10
4858	do.	do.	Argillaceous limestone.	168	.12	4.7	8.4	16.3	9	11
4859	do.	do.	do.	168	.13	4.2	9.6	17.3	16	10
5920	Greenlee.	do.	Dolomite marble.	178	.33	4.4	9.2	16.8	13	22
4000	Bluffs.	Rockingham.	Limestone.	168	.35	4.1	9.7	15.8	7	49
5382	Bluff Water Station.	do.	do.	168	.16	3.5	11.3	15.5	11	29
5385	do.	do.	do.	172	.79	3.8	10.5	16.4	13	34
6380	(1).	do.	do.	168	.24	6.1	6.6	14.3	7	62
5700	Harrisonburg.	do.	Cherty limestone.	156	2.07	3.4	11.9	19.2	16	9
6534	(1).	do.	Feldspathic sandstone.	165	.54	2.4	16.5	18.7	14	61
6578	(1).	do.	Calcareous sandstone.	165	.08	3.7	10.8	18.6	19	20
6379	(1).	do.	Dolomite.	175	.05	1.8	22.2	16.8	7	38
8140	Mount Crawford.	do.	do.	177	.41	2.5	16.0	17.8	24	45
3259	Castlewood.	Russell.	do.	175	.40	2.4	16.9	16.7	13	35
3911	Blackford.	do.	do.	178	.35	5.0	7.9	16.3	4	11
3260	Castlewood.	do.	Limestone.	172	.17	3.2	12.7	14.0	5	57
4669	Honaker.	do.	Argillaceous limestone.	178	.09	4.2	10.1	15.7	19	19
4670	do.	do.	Limestone.	172	.13	4.9	9.6	15.3	24	24
5375	St. Paul.	do.	do.	168	.33	3.7	10.9	17.1	(2)	11
3008	Strasburg.	Shenandoah.	do.	168	.19	5.1	7.8	15.5	4	25
3009	do.	do.	do.	168	.39	5.6	7.1	15.2	4	18
3511	do.	do.	do.	168	.13	5.3	7.5	16.0	5	34
3512	do.	do.	do.	175	.22	4.2	9.6	16.0	22	30
5820	(1).	do.	Calcareous sandstone.	168	.61	2.7	15.1	15.3	15	84

5832	North Holston.....	Smth.....	168	24	4.0	10.0	16.3	15	31
6942	do.....	Carbonaceous limestone.	175	.88	4.0	10.0	16.0	16	41
7064	Marion.....	Argillaceous limestone.	168	.15	5.1	7.8	16.0	18	21
5833	North Holston.....	Feldspathic sandstone.	168	.67	3.1	13.0	17.3	13	56
5885	do.....	Sandstone.	162	.87	4.3	9.3	17.5	10	17
750	Fredricksburg.....	Oolitic limestone.	175	1.46	5.5	7.3	(2)	(2)	(2)
3794	Courthouse District.....	Gneiss.	165	.16	12.9	3.1	18.2	4	19
3795	do.....	do.	165	.42	3.9	10.2	18.3	10	17
3277	do.....	Dolomite.	178	.26	3.4	11.8	17.1	19	54
5854	Tazewell.....	Ferruginous sandstone.	165	.96	2.7	15.0	18.7	19	54
6393	do.....	Feldspathic sandstone.	162	1.42	2.4	16.4	16.9	6	34
6701	do.....	Ferruginous sandstone.	181	1.99	4.2	9.5	15.6	5	35
7217	Burkes Garden.....	Dolomitic sandstone.	175	.63	3.4	11.8	15.6	8	46
1728	Meadowview.....	Limestone.	172	.59	3.5	11.4	16.3	9	52
1729	do.....	Dolomitic limestone.	175	.50	3.6	11.1	16.3	14	52
6272	Bristol.....	Argillaceous limestone.	175	.52	3.7	10.8	17.4	3	30
6274	do.....	Limestone.	172	.34	4.4	9.1	17.6	8	57
6524	do.....	Siliceous limestone.	168	.63	4.9	8.2	16.3	9	82
6571	do.....	Limestone.	168	.15	4.6	8.7	14.8	8	63
7537	Wallace.....	do.	175	.10	2.9	13.6	15.3	9	58
7538	do.....	Dolomitic limestone.	175	.18	2.8	14.1	18.6	11	72
7726	Meadowview.....	Argillaceous limestone.	175	.21	4.0	10.0	17.8	8	37
8227	Wallace.....	do.	153	.38	3.4	11.6	17.5	14	34
1023	Meadowview.....	do.	172	.62	2.9	13.7	18.3	16	63
5821	Danascus.....	Chert.	175	.56	5.3	7.6	15.3	11	31
5823	do.....	Ferruginous sandstone.	165	.74	3.6	11.3	18.8	(2)	32
5824	do.....	Dolomite.	172	1.20	4.1	9.8	16.3	11	42
6250	Bristol.....	do.	175	.44	5.1	7.9	17.2	3	18
6251	do.....	Cherty dolomite.	175	.28	5.3	6.2	17.3	5	36
6273	do.....	Dolomite.	178	.31	3.6	11.2	17.0	9	37
6525	do.....	do.	178	.53	2.2	7.7	15.2	7	48
5822	do.....	Travertine.	168	.07	3.9	6.8	12.9	4	24
5120	Big Stone Gap.....	Limestone.	165	1.28	4.8	8.3	13.9	6	30
6048	do.....	do.	168	.58	4.1	10.0	10.7	7	36
6049	do.....	do.	168	.27	3.5	11.1	13.7	7	32
8344	do.....	Siliceous limestone.	165	.14	3.9	10.6	18.3	13	66
6050	Big Stone Gap.....	Dolomite.	172	1.21	3.8	10.6	13.7	12	51
8345	do.....	Feldspathic sandstone.	162	1.62	9.3	4.3	13.0	6	39
8399	Big Stone Gap.....	Sandstone.	162	.61	3.9	10.2	18.8	7	20
8578	do.....	Feldspathic sandstone.	162	1.75	5.1	7.8	12.7	7	106
8398	do.....	Blast furnace slag.	162	1.45	11.0	3.6	15.0	6	3
5745	Ivanhoe.....	Dolomitic marble.	178	.16	5.3	7.6	13.8	10	22
6910	Speedwell.....	Dolomite.	178	.28	5.5	7.3	16.1	9	16
8818	do.....	do.	178	.49	4.0	10.0	16.2	10	20
8819	do.....	Argillaceous limestone.	178	.23	3.7	10.8	17.8	14	14
9259	do.....	Sericite schist.	168	.24	8.9	15.8	18.5	8	26
4034	do.....	Diabase.	187	.35	2.1	19.2	18.5	21	31

2 Test not made.

1 Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, and Cuba, complete to January 1, 1916—Contd.
WASHINGTON.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
4539	Lind.....	Adams.	Basalt.....	Pounds. 184	Pounds. .24	2.2	18.4	18.3	14	25
4561	Asotin.....	Asotin.	do.....	184	.12	2.3	17.2	18.0	20	34
4562	Zindel.....	do.	Dolomite marble.	168	.14	7.5	5.3	(1)	(1)	16
4709	Hoquiam.....	Chehalis.	Basalt.....	178	.37	2.2	18.5	18.2	27	41
4478	Vulcan.....	Chelan.	do.....	178	.15	2.0	20.0	18.0	17	19
4558	Columbia River Station.	do.	do.....	178	.18	(1)	(1)	19.0	20	10
4589	Cashmere.....	do.	Feldspathic sandstone.	162	.73	6.4	6.3	(1)	(1)	67
4524	Wenatchee.....	do.	Biotite gneiss.	168	.21	5.2	7.8	(1)	(1)	28
4580	Leavenworth.....	do.	Granodiorite.	172	.40	7.0	10.0	17.0	4	15
2018	Fishers Landing.....	Clarke.	Olivine basalt.	175	1.33	2.5	10.0	17.8	15	8
2910	do.....	do.	do.....	168	1.88	2.0	13.7	17.8	13	4
4451	Vancouver.....	do.	Basalt.....	175	.66	3.0	13.2	19.3	13	13
4454	Yacolt.....	do.	Altered basalt.	175	.27	2.5	13.8	16.8	15	120
4466	Fisher.....	do.	Basalt.....	178	.30	2.9	13.8	18.0	23	19
4488	Dayton.....	Columbia.	do.....	178	.36	2.8	14.3	18.2	16	6
4500	do.....	do.	do.....	178	.96	2.3	17.4	17.7	21	3
2550	Kelso (3 miles from)	Cowlitz.	Angite andesite.	181	.17	3.2	12.6	18.8	21	176
4432	Castle Rock.....	do.	Basalt.....	178	.42	5.2	7.7	17.4	11	117
4436	Ladu (2 miles northwest of)	do.	do.....	187	.29	2.4	16.5	18.8	13	13
4442	Kalama (3 miles north of)	do.	do.....	175	.27	3.2	12.5	16.8	15	15
4444	Stella (3 mile east of)	do.	do.....	168	1.77	2.5	16.1	8.5	14	7
4468	Carrollton (1½ miles northeast of)	do.	do.....	178	.10	3.3	12.1	17.3	6	52
4496	Stella.....	do.	do.....	181	.27	(1)	(1)	18.3	22	7
4510	Kalama.....	do.	do.....	175	.20	3.3	12.2	16.7	10	68
4520	do.....	do.	do.....	175	.14	3.3	12.0	15.4	10	62
4549	Stella.....	do.	do.....	181	.23	2.8	14.1	17.2	16	17
4559	Ladu.....	do.	do.....	184	.11	1.9	20.6	18.0	22	68
4564	do.....	do.	do.....	181	.12	3.8	10.4	18.0	10	148
4564	Kelso.....	do.	Altered basalt.	175	.83	3.9	10.1	14.3	16	9
4452	Kelso (1 mile south of)	do.	Basalt.....	178	.16	2.9	14.0	17.6	17	39
4553	Kahlotus.....	Franklin.	Altered andesite.	165	1.66	3.0	13.8	18.5	17	39
4429	Danville (½ mile southwest of)	Ferry.	Altered hornblende andesite.	168	.14	3.0	13.3	18.3	13	500+
4450	Keller.....	do.	do.....	165	.64	3.1	12.9	17.9	18	140
4481	Cerulew.....	do.	Altered andesite.	165	.27	6.5	6.2	(1)	(1)	79
4518	Republic.....	do.	Andesite.....	165	.30	6.6	6.1	17.0	5	40
4433	Cerulew.....	do.	Limestone.....	172	.14	8.9	4.5	14.3	4	13
4509	Republic.....	do.	Crystalline limestone.	168	.34	6.3	9	(1)	(1)	19
4518	Cerulew.....	do.	Limestone.....	178	.54	4.4	6.4	18.1	8	11
4506	do.....	do.	Biotite granite.	168	.23	5.3	7.5	18.5	6	6
4542	Laurel.....	do.	Granite.....	162	.29	6.7	6.0	(1)	(1)	500+
4516	Danville.....	do.	Serpentine.....	168	.32					

Curlow.....	do.....	Augite diorite.....	175	.25	3.6	11.1	17.5	10	38
Keller.....	do.....	Granodiorite.....	168	.35	3.9	10.2	17.9	12	11
Republic.....	do.....	Vitreous basalt.....	159	.13	5.1	7.8	(1)	(1)	13
Grant.....	do.....	Basalt.....	181	.31	2.7	14.8	18.0	13	12
Bacon.....	do.....	do.....	175	.52	2.7	14.8	18.1	17	11
Coulee City.....	do.....	do.....	184	.30	2.1	18.7	18.3	21	7
do.....	do.....	do.....	178	.20	2.1	19.4	18.5	22	50
do.....	do.....	do.....	184	.14	2.5	16.3	(1)	(1)	32
Ephraia.....	do.....	Altered basalt.....	181	.34	4.5	8.9	12.0	6	500+
Duckabush.....	do.....	do.....	181	.15	3.4	11.9	18.0	21	121
Brincone.....	do.....	Basalt.....	181	.17	2.9	13.9	(1)	(1)	500+
Quinn.....	do.....	Altered basalt.....	178	.29	3.8	10.6	(1)	(1)	20
Port Ludlow.....	do.....	Quartzite.....	168	.58	2.2	18.2	(1)	(1)	(1)
Seattle.....	do.....	Basalt.....	184	1.80	2.0	19.8	(1)	(1)	500+
do.....	do.....	do.....	159	4.56	3.0	11.6	16.4	13	200
do.....	do.....	Altered basalt.....	168	3.04	3.7	10.7	16.6	9	500+
Franklin.....	do.....	Basalt.....	159	5.45	3.0	13.4	15.8	14	500+
Seattle (near).....	do.....	Altered basalt.....	165	.36	2.8	14.2	16.8	18	72
Quarry.....	do.....	do.....	168	1.73	5.0	8.1	8.8	9	500+
Enumclaw.....	do.....	do.....	168	1.04	3.6	11.0	(1)	(1)	232
Seattle.....	do.....	Chlorite schist.....	168	1.04	3.6	11.0	(1)	(1)	500+
Earlington.....	do.....	Altered andesite.....	156	3.07	2.9	8.9	17.5	23	19
North Bend.....	do.....	do.....	172	.22	2.9	13.6	17.0	11	198
Vezzie.....	do.....	Diabase.....	172	.55	3.2	12.4	(1)	(1)	14
Scenic.....	do.....	Granodiorite.....	172	.19	(1)	(1)	18.8	7	10
Hallford.....	do.....	do.....	168	.17	4.1	9.7	18.1	9	9
Molson.....	do.....	Dolomitic marble.....	178	.25	(1)	(1)	16.3	5	11
Port Orchard.....	do.....	Basalt.....	181	2.50	3.3	12.2	15.6	9	500+
2144.....	do.....	Diabase.....	181	.15	3.3	12.2	17.3	16	82
Charleston.....	do.....	Basalt.....	181	.30	2.1	19.0	18.8	20	35
Kittitas.....	do.....	do.....	175	.64	2.1	18.9	18.0	23	2
Kiona.....	do.....	do.....	178	.17	2.2	18.2	18.4	11	40
Indio.....	do.....	do.....	178	.42	2.3	17.4	18.4	27	3
Prosser.....	do.....	do.....	178	.80	1.7	24.1	17.7	32	3
Konatz.....	do.....	do.....	178	.42	2.3	17.4	18.4	27	3
Roza.....	do.....	Altered syenite.....	159	1.28	1.6	25.6	(1)	(1)	10
Easton.....	do.....	Basalt.....	175	.43	3.4	11.8	17.2	13	42
Klickitat.....	do.....	do.....	184	.12	(1)	(1)	17.7	19	44
do.....	do.....	do.....	175	.29	2.6	15.4	18.7	40	13
White Salmon.....	do.....	do.....	184	.12	2.6	15.6	18.0	18	15
Clats.....	do.....	Olivine basalt.....	178	1.78	2.8	14.4	17.9	14	112
Chehalis.....	Lewis.....	Basalt.....	178	.27	2.3	17.5	15.3	17	14
Meskill.....	do.....	do.....	178	.73	2.1	19.4	18.9	21	17
Govan.....	do.....	do.....	181	.73	2.1	19.4	18.9	21	21
Almira.....	do.....	do.....	181	.61	1.9	20.8	18.2	20	21
Sprague.....	do.....	do.....	184	.20	2.2	17.9	17.0	20	21
4443.....	do.....	do.....	181	.45	3.1	13.1	18.3	20	28
Davenport.....	do.....	do.....	178	.35	3.2	12.7	13.3	8	14
do.....	do.....	do.....	175	1.09	3.4	11.8	(1)	(1)	29
4528.....	do.....	do.....	181	.48	2.9	14.0	18.2	24	37
Wilbur.....	do.....	do.....	175	.35	3.2	12.7	13.3	8	14
4538.....	do.....	do.....	181	.79	1.7	23.0	18.3	20	28
Almira.....	do.....	do.....	181	.79	1.7	23.0	18.3	20	28
Wilbur.....	do.....	do.....	181	.79	1.7	23.0	18.3	20	28
4576.....	do.....	do.....	181	.79	1.7	23.0	18.3	20	28
Wilbur.....	do.....	do.....	181	.79	1.7	23.0	18.3	20	28
Lilliwhau.....	do.....	Andesite breccia.....	156	2.62	4.1	9.8	13.1	9	500+
Mason.....	do.....	Altered basalt.....	178	.67	4.2	9.4	13.8	7	500+
4483.....	do.....	do.....	178	.50	8.3	(1)	(1)	(1)	500+
Honolulu.....	do.....	do.....	178	.50	8.3	(1)	(1)	(1)	500+
Okanagan.....	do.....	Marble.....	175	.50	8.3	(1)	(1)	(1)	500+
4481.....	do.....	do.....	175	.50	8.3	(1)	(1)	(1)	500+

¹ Test not made.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

WASHINGTON—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.					
4502	Oroville	Okanogan	Altered hornblende andesite.	165	.88	2.5	16.2	19.1	18	23
4527	Nighthawk	do.	Diorite.	184	.24	4.0	10.0	(¹)	(¹)	24
4073	South Bend	Pacific	Basaltic andesite.	162	4.90	5.9	6.7	15.4	11	500+
4417	do.	do.	Altered basalt.	175	1.29	4.3	9.3	13.2	11	500+
4431	South Bend	do.	Basalt.	181	.57	2.9	13.6	16.6	6	252
4525	do.	do.	Altered basalt.	178	.35	4.0	9.9	13.7	8	177
4511	Holcomb	do.	Basalt tuff.	143	4.87	3.1	9.8	17.5	10	500+
4543	South Bend	do.	Basalt.	175	1.68	4.7	10.8	17.5	10	2
4546	do.	do.	do.	178	.65	3.9	10.3	13.7	8	145
4784	Hivaco	do.	Altered basalt.	150	.83	4.8	8.3	12.3	10	72
4793	do.	do.	Basalt.	159	2.13	5.1	7.9	11.0	10	141
4497	Raymond	do.	Micaceous sandstone.	159	2.40	4.9	8.2	4.4	6	39
2123	Takoma	Pierce	Altered diabase.	172	1.70	4.0	10.1	17.7	19	96
4439	Elbe	do.	Augite andesite.	165	.36	4.1	9.8	18.4	9	26
4469	La Grande	do.	Altered andesite.	168	.11	2.2	18.2	19.2	35	20
4534	Elbe	do.	Basaltic andesite.	165	.18	6.6	6.0	(¹)	(¹)	27
4575	Olney	do.	Altered andesite.	153	.36	3.7	10.8	17.7	18	33
6319	Electron	do.	Diorite.	168	.78	2.3	17.4	18.5	20	164
4426	Richardson	do.	Altered andesite.	181	.27	2.5	16.0	18.3	24	102
4505	Olney	San Juan	do.	184	.07	4.2	9.5	17.3	19	48
4470	Friday Harbor	do.	Limestone.	172	.17	2.8	14.3	18.0	19	141
4568	Wadron Island	do.	Feldspathic sandstone.	162	.66	3.1	12.9	13.2	8	21
2141	Deception Pass	Skagit	do.	108	.81	2.5	15.9	18.5	13	73
4438	Clear Lake	do.	Altered diabase.	184	.15	2.1	18.9	18.9	20	37
4460	Grassmere	do.	do.	184	.22	3.4	11.9	19.2	20	27
4471	Rockport	do.	Altered andesite.	184	.11	10.6	3.8	18.3	18	26
4782	Berlington	do.	Slate.	172	.21	(¹)	(¹)	11.3	6	12
4787	do.	do.	Altered basalt.	187	.02	2.9	13.9	18.7	30	11
4474	Cooks	Skamania	Basalt.	175	.98	2.3	17.4	18.2	33	178
8332	Willard	do.	Olivine basalt.	168	.91	7.7	5.2	(¹)	(¹)	8
2145	Whidbey Island	Snohomish	Sandstone.	172	2.53	(¹)	(¹)	9.5	7	500+
3188	Everett	do.	Altered peridotite.	172	1.02	5.3	7.6	13.3	9	61
3189	do.	do.	Altered gabbro.	172	.76	5.2	7.7	16.2	10	88
3190	do.	do.	do.	178	.89	3.6	11.0	17.2	13	60
4458	Granite Falls	do.	Altered diorite.	168	.42	2.7	14.6	18.7	17	17
4499	do.	do.	Diorite.	168	.43	3.2	12.7	18.3	17	16
4778	Index	do.	Granodiorite.	168	.23	3.1	12.9	17.6	9	13
4464	Monte Cristo	do.	Altered andesite.	172	.12	2.3	17.7	18.3	12	22
4794	Monroe	do.	do.	165	.74	4.3	9.3	15.0	8	72
4485	Granite Falls	do.	Serpentine.	165	.33	8.0	5.0	(¹)	(¹)	179

	Spokane.	Marshall.	4445	178	.62	2.2	17.9	18.5	30	8
4445	Marshall.	Marshall.	4445	178	.62	2.2	17.9	18.5	30	8
4446	do.	do.	4446	175	.90	3.0	13.4	17.9	(1)	4
4492	Marshall.	Marshall.	4492	175	.53	(1)	(1)	17.9	24	4
4495	Spokane.	do.	4495	184	.63	(1)	(1)	17.2	(1)	9
4526	Medical Lake.	do.	4526	184	.19	3.0	13.3	(1)	(1)	5
4536	Marshall.	do.	4536	181	.30	(1)	(1)	18.0	12	16
4544	Cheney.	do.	4544	181	.20	(1)	(1)	17.7	10	500+
4545	Hillyard.	do.	4545	181	.20	2.5	15.8	18.8	24	15
4446	do.	do.	4446	168	.29	4.0	10.1	18.8	24	24
4447	Milan.	do.	4447	168	.61	3.2	12.4	(1)	7	47
4487	Morse.	do.	4487	168	.31	13.8	2.0	(1)	(1)	66
4513	Medical Lake.	do.	4513	165	.28	4.3	9.3	18.3	8	10
4521	do.	do.	4521	165	.28	3.0	13.5	18.3	11	13
4567	Colbert.	do.	4567	162	.59	10.4	3.0	18.3	9	22
4427	Bossburg.	do.	4427	140	5.42	7.0	5.3	13.1	(1)	97
4463	Newport.	do.	4463	168	.75	3.0	13.3	18.7	19	25
4441	do.	do.	4441	165	.63	2.0	20.4	18.7	8	95
4453	Elk.	do.	4453	165	.23	4.2	9.5	18.7	6	15
4461	Ruby.	do.	4461	168	.29	3.4	11.9	18.8	8	21
4467	Scio.	do.	4467	168	.53	6.1	18.0	18.0	4	11
4519	Arden.	do.	4519	168	.38	5.3	7.5	18.1	18	28
4557	Audy.	do.	4557	168	.20	3.0	13.5	18.7	7	10
4570	Scio.	do.	4570	165	.26	6.2	6.4	19.0	6	52
4448	Bossburg.	do.	4448	165	.39	5.4	7.4	14.7	3	16
4462	Barstow.	do.	4462	168	2.19	5.4	7.4	12.0	7	19
4540	Williams.	do.	4540	175	.68	5.6	7.2	17.1	5	15
4541	Chemelah.	do.	4541	172	.31	4.8	8.3	12.0	11	36
4572	Springdale.	do.	4572	175	.34	3.8	10.5	14.8	(1)	9
4785	Northport.	do.	4785	168	.12	4.9	8.2	12.4	6	10
4490	Kettle Falls.	do.	4490	172	.45	2.9	13.6	16.1	12	38
4475	Adity.	do.	4475	165	.09	2.8	14.3	(1)	(1)	19
4522	Myers Falls.	do.	4522	165	.29	4.0	10.1	(1)	(1)	2
4476	Valley.	do.	4476	175	.58	2.6	15.4	17.3	12	2
4477	Wayside.	do.	4477	175	.23	1.5	26.7	18.2	35	2
4532	Dart.	do.	4532	175	.65	2.0	20.4	17.7	19	7
4535	Springdale.	do.	4535	175	.77	2.4	17.0	(1)	(1)	23
4482	Wolff.	do.	4482	168	.51	2.6	15.4	18.7	8	14
4493	Leon Lake.	do.	4493	172	.38	3.9	10.2	18.7	8	21
4523	Camden.	do.	4523	172	.26	5.0	8.0	18.2	(1)	8
4533	Valley.	do.	4533	172	.45	12.0	3.3	(1)	(1)	33
4501	Blue Creek.	do.	4501	159	.03	8.8	4.5	(1)	(1)	35
4515	Myers Falls.	do.	4515	172	.11	2.8	14.3	16.9	23	22
4571	Blue Creek.	do.	4571	190	.12	2.7	14.8	18.3	17	13
4465	Marcus.	do.	4465	175	.38	5.6	7.1	(1)	(1)	106
4467	Turnwater.	do.	4467	184	.20	2.3	17.5	17.7	20	30
4517	Gate.	do.	4517	175	.57	4.1	9.7	11.2	5	500+
4554	Oakville.	do.	4554	181	.11	3.6	11.1	11.0	5	500+
4553	Olympia.	do.	4553	190	.10	2.5	15.9	18.7	14	33
4547	Gate.	do.	4547	172	.15	5.9	6.8	13.3	8	33
4508	Cathlamet.	do.	4508	168	.47	2.9	13.8	17.4	9	44

* Exact locality not known.

† Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.*

WASHINGTON—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Commenting value.
4514	Stamokawa.	Wahkiakum.	Basalt.	Pounds. 175.	Pounds. .41	2.2	17.9	18.4	23	12
4550	Cathlamet.	do.	do.	181	.22	1.9	21.3	17.7	24	13
4552	do.	do.	do.	175	.30	3.1	13.0	17.8	11	10
4472	Tonolow.	Walla Walla.	do.	172	.42	3.2	12.5	18.0	6	111
4500	Dixie.	do.	do.	181	.39	2.7	12.7	17.2	6	25
1023	Saur Creek.	Whatecom.	Altered diabase.	168	.53	3.2	12.8	17.6	17	208
1024	Coal Creek.	do.	do.	190	2.73	4.9	8.2	12.8	4	75
1028	Bellingham.	do.	Feldspathic quartzite.	175	.19	2.5	16.0	18.2	23	200
4770	Deming.	do.	Feldspathic sandstone.	153	2.81	8.2	4.9	8.3	5	133
4777	Cinkamiff.	do.	do.	156	2.03	8.2	4.8	(1)	(1)	97
4781	Wickersham.	do.	do.	162	.93	15.9	2.5	9.2	5	7
4774	do.	do.	Sericitic schist.	168	.47	23.3	1.7	(1)	(1)	7
4775	Kendall.	do.	Marble.	172	.20	4.9	8.2	12.3	7	22
1272	Colfax.	Whitman.	Basalt.	181	1.11	2.0	20.0	17.8	22	9
1735	Pullman.	do.	do.	184	.92	2.5	16.3	17.7	10	16
4456	Winona.	do.	do.	181	.15	2.5	16.2	19.0	25	31
4491	Rosalia.	do.	do.	175	.29	2.7	14.7	17.6	26	11
4503	Pullman.	do.	Altered basalt.	181	.15	2.3	17.2	(1)	(1)	13
4520	Palouse.	do.	Basalt.	184	.11	2.3	17.7	18.2	22	32
4404	Steptoe Butte.	do.	Quartzite.	165	.40	5.2	7.7	18.7	9	3
4428	North Yakima.	Yakima.	Basalt.	181	.34	2.5	16.3	18.0	19	13
4512	do.	do.	do.	181	.08	3.0	13.2	17.5	16	7
4582	(?)	(?)	Basalt.	178	.27	2.2	17.9	(1)	(1)	21
4583	(?)	(?)	do.	172	.35	2.2	18.2	17.7	22	7
4584	(?)	(?)	do.	181	.26	3.6	11.1	14	14	120
4585	(?)	(?)	do.	181	.24	2.5	16.0	18.5	25	13
4788	(?)	(?)	do.	175	.07	2.7	14.6	17.7	25	3
4786	(?)	(?)	Granodiorite.	175	.09	3.5	11.6	17.8	11	7
4791	(?)	(?)	Altered andesite.	178	.20	3.9	10.3	17.2	21	9
4792	(?)	(?)	Augite andesite.	175	.11	2.0	20.2	19.2	38	13

WEST VIRGINIA.										
3030	Phillippi.	Barbour.	Sandstone.	156	1.41	6.6	6.0	16.1	8	12
3073	Nicholow.	do.	do.	189	.84	4.2	9.4	18.8	9	3
3106	Phillippi.	do.	do.	156	3.38	4.8	8.3	6.4	5	68
3108	do.	do.	Limestone.	172	1.34	3.6	11.0	16.8	17	41
2488	N Martinsburg.	Berkeley.	do.	168	.26	4.8	8.3	16.7	4	52

2006	do.	do.	168	11	4.1	9.8	15.7	8
2007	do.	do.	168	20	3.5	9.6	16.4	4
3074	do.	do.	172	12	3.5	11.4	16.4	10
5365	Berkeley	do.	168	21	4.6	8.6	16.0	7
5393	Marlinsburg	Siliceous limestone.	168	33	2.8	11.4	15.8	10
8154	do.	do.	168	37	2.8	14.3	17.2	31
8153	do.	do.	178	55	4.1	9.8	15.7	17
8504	do.	do.	168	35	5.4	7.4	13.7	3
(?)	do.	do.	168	70	3.6	11.2	17.2	93
8586	Martinsburg	Siliceous dolomite.	178	37	2.6	11.8	16.8	17
7369	Peytona	Dolomite.	178	26	3.4	11.8	16.8	39
3105	Boone	Sandstone.	159	1.99	3.4	11.8	16.8	13
3102	Gassaway	do.	156	4.65	3.5	11.6	12.7	70
4645	Sutton	do.	168	56	3.07	17.9	2.2	42
1707	Wellsburg	Feldspathic sandstone.	168	3.07	17.9	2.2	17.8	13
1177	Cabell	Limestone.	162	2.32	9.5	4.2	(?)	5
do.	do.	Sandstone.	162	2.32	9.5	4.2	(?)	6
2417	Huntington	Feldspathic sandstone.	159	3.43	7.4	5.4	14.7	23
do.	do.	Calcareous sandstone.	162	1.41	4.9	8.2	15.7	30
2418	do.	Weathered sandstone.	156	3.18	28.4	1.4	12.2	2
2485	do.	do.	147	2.60	41.7	1.0	(?)	62
2021	do.	do.	165	.99	3.3	12.1	14.2	28
3029	do.	do.	165	1.40	4.4	9.2	15.2	8
1884	do.	do.	165	1.14	5.4	7.4	11.0	9
1885	do.	do.	165	1.48	3.0	(?)	16.7	9
3034	Big Bend	Calcareous sandstone.	168	41	13.5	11.3	(?)	78
3033	Doddridge	Sandstone.	168	3.25	7.1	5.6	(?)	80
3022	Avlon	Cherty limestone.	168	26	4.1	9.8	15.8	31
3069	Organ Cave	Limestone.	168	16	3.7	10.7	16.8	45
5917	Renick	Crystalline limestone.	172	1.03	5.5	7.3	(?)	38
5918	Frazar	do.	168	1.03	5.5	7.3	(?)	14
5919	Snowflake.	do.	159	1.09	2.5	15.7	18.0	9
3026	Avlon	Sandstone.	168	.32	3.5	11.4	16.8	54
3427	Ridgely	Limestone.	168	.30	3.5	11.4	16.8	10
3428	do.	do.	168	.25	2.1	13.4	17.9	68
7417	Green Spring.	Siliceous limestone.	165	.25	3.3	11.5	19.5	4
7418	Lost Creek	Quartzite.	153	5.22	6.8	3.8	9.5	69
3027	Clarksville	Sandstone.	172	.87	3.5	11.4	16.5	85
5948	do.	Argillaceous limestone.	156	3.54	9.6	4.2	4.5	4
3000	Union District	Sandstone.	156	3.60	5.0	8.0	6.4	29
Ripley (near)	do.	do.	156	4.02	6.4	6.4	8.0	36
3031	do.	do.	168	.30	4.5	9.0	11.8	4
3103	Silverton.	Limestone.	172	.63	4.2	9.6	14.7	5
Engles	Jefferson.	do.	175	.74	4.4	9.1	14.3	7
2490	Kearneysville	Dolomitic limestone.	168	.22	3.9	10.2	14.3	6
2579	Millsville	Limestone.	168	.72	4.0	10.1	15.8	10
2589	Kearneysville	do.	175	.82	2.9	13.8	17.5	29
3025	Middleway	do.	168	.29	4.1	9.7	16.8	35
3032	Summit	Dolomitic limestone.	175	.19	3.7	10.9	16.6	9
5741	Charlestown	Dolomite.	178	.29	3.7	10.9	16.6	28
2634	Millsville	Limestone.	168	.54	4.9	8.2	16.4	31
2965	St. Albans	Feldspathic sandstone.	159	3.37	6.6	6.1	15.8	50
2969	Kendalia	do.	156	3.94	8.8	4.6	0.0	56
3070	Tornado.	Sandstone.	156	3.94	8.8	4.6	0.0	56

Test not made.

² Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

WEST VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.					
3072	(1) Spring Hill.	Kanawha	Sandstone	139	2.52	11.0	3.6	14.6	4	34
6109	do.	do.	do.	139	1.96	14.6	2.7	12.1	4	25
3023	Blakeley	do.	Siliceous slate	162	1.88	4.8	8.3	19.7	30	19
3104	Weston.	Lewis	Sandstone.	165	2.30	4.1	9.8	9.9	7	51
3288	Camden.	do.	Limestone.	168	1.40	(2)	(2)	16.7	15	32
2972	Chapmansville.	Logan	Feldspathic sandstone.	159	2.56	6.4	6.3	13.2	5	40
3237	Kitchen.	do.	Sandstone.	159	2.83	2.6	15.2	8.3	8	52
4760	Farmont.	Marion	Sandstone.	165	2.44	4.5	8.9	12.0	14	39
7833	do.	do.	Argillaceous sandstone.	156	2.39	4.8	8.3	5.4	8	44
7493	do.	do.	Ferruginous sandstone.	(2)	(2)	3.4	11.8	17.5	10	49
7494	do.	do.	Argillaceous limestone.	168	.47	7.8	5.1	11.8	5	59
7785	do.	do.	Feldspathic limestone.	168	.50	4.3	9.3	16.8	7	26
7834	do.	do.	Argillaceous limestone.	171	.29	3.4	11.8	16.2	11	24
8854	do.	do.	do.	153	4.52	8.3	4.8	0.0	5	70
2967	Union District.	Mason	Feldspathic sandstone.	150	5.30	(2)	(2)	0.0	6	77
2976	Point Pleasant.	do.	do.	165	.82	3.0	13.5	15.5	8	72
2088	North Fork.	McDowell	Sandstone.	156	2.37	4.3	9.4	14.9	10	149
2974	Elkhorn.	do.	Ferruginous sandstone.	162	2.16	4.2	9.4	16.8	9	98
3056	Berwind.	do.	Sandstone.	162	1.61	3.3	12.2	16.0	8	208
4622	Gary.	do.	Feldspathic sandstone.	165	3.53	4.2	9.6	15.0	8	61
2905	Welch.	do.	do.	165	1.60	4.3	9.2	(2)	(2)	108
2970	Bluefield.	Mercer	Limestone.	168	.51	3.3	12.0	16.8	11	58
7740	do.	do.	do.	168	.19	7.3	5.5	(2)	(2)	75
7735	Princeton (near).	do.	Argillaceous limestone.	162	1.35	(2)	(2)	13.2	7	45
7764	do.	do.	Feldspathic sandstone.	168	.38	5.8	6.9	13.4	15	76
8746	do.	do.	Calcareous sandstone.	165	1.21	3.7	11.1	17.0	11	22
3350	Keyser.	Mineral	Limestone.	168	.35	4.0	10.0	16.2	17	43
2472	Patterson Creek Station.	do.	do.	168	.22	4.1	9.8	18.8	13	40
3351	do.	do.	do.	165	.19	2.3	17.1	18.8	23	81
767	do.	do.	do.	168	.50	5.6	7.1	(2)	(2)	37
3065	Morgantown.	Monongalia	do.	168	1.33	3.6	11.2	17.2	12	21
3071	Randall.	do.	do.	168	.46	4.7	8.6	17.1	11	29
5610	Morgantown.	do.	Siliceous limestone.	168	.23	4.9	8.2	16.1	10	76
5612	Sturgeson.	do.	Limestone.	168	.55	4.4	9.1	16.0	6	32
5613	do.	do.	Argillaceous limestone.	168	.74	4.3	9.3	14.2	4	16
5615	do.	do.	Impure limestone.	168	.48	3.8	10.5	16.0	10	32
5616	do.	do.	Argillaceous limestone.	168	.37	3.8	10.5	15.9	10	30
2513	Opekiska.	do.	Argillaceous limestone.	156	3.74	6.9	5.8	14.7	5	36
2514	Morgantown.	do.	Feldspathic sandstone.	150	2.51	11.2	3.6	15.2	5	11
3024	Smithtown.	do.	Ferruginous sandstone.	134	4.04	6.1	6.6	(2)	(2)	46
3033	Daybrooke.	do.	do.	153	3.61	(2)	(2)	14.0	9	24

5514	Sturgeson.....	do.	Calcareous sandstone.	168	29	13.8	16.8	11	40
3001	Great Cacapon.....	Morgan	Dolomite.	172	.91	12.3	14.8	19	71
5377	Berkeley Springs.....	do.	Limestone.	168	.45	7.5	12.2	6	42
9560	Berkeley Springs (near).....	do.	do.	168	.51	7.1	15.8	4	71
9563	do.	do.	do.	168	.36	6.5	(³)	(²)	62
9539	Sir John Reed (near).....	do.	Sandstone.	165	.30	13.3	18.8	12	13
9561	Berkeley Springs (near).....	do.	do.	162	.61	7.8	19.0	10	18
9562	Great Cacapon (near).....	do.	do.	162	.84	5.0	18.3	8	23
9564	Berkeley Springs (near).....	do.	Ferruginous sandstone.	162	1.69	8.0	16.3	11	26
1668	Valley Grove (near).....	Ohio.	Limestone.	165	1.99	4.0	10.0	17.2	24
1669	do.	do.	do.	165	1.78	4.2	9.5	7	21
1670	Elm Grove.....	do.	do.	165	1.48	4.8	8.4	(²)	24
1672	Elm Grove (near).....	do.	do.	168	.96	4.3	9.2	19.1	15
6137	Wheeling.....	do.	do.	168	1.30	3.5	11.6	18.0	20
1671	Paterson.....	do.	Dolomite.	165	.95	4.2	9.4	15.7	12
6225	Marlington.....	Pocahontas	Limestone.	165	2.86	4.0	10.1	17.4	69
2511	Buckhorn.....	Preston	Dolomitic limestone.	172	.06	3.6	11.1	16.0	12
2697	Rowlesburg.....	do.	Limestone.	165	.34	2.2	18.2	18.0	28
3492	(¹).....	do.	Argillaceous limestone.	168	1.14	8.4	4.8	(²)	47
2891	Red House.....	Putnam	Sandstone.	168	.16	4.9	8.2	14.2	33
4796	Raleigh.....	do.	do.	153	3.90	11.8	3.4	3.5	76
3002	Alpena.....	Randolph.	Limestone.	162	.29	3.9	10.2	16.5	10
3067	Silica.....	do.	Sandstone.	162	.63	(²)	18.5	10	9
3067	Kingsville.....	do.	Ferruginous sandstone.	150	3.46	16.3	2.5	11.8	3
8941	Cornwallis.....	do.	Feldspathic sandstone.	159	2.10	(²)	0.0	2	2
3068	Talbot.....	Ritchie.	Sandstone.	162	1.28	2.3	17.1	17.8	13
2966	Grafton.....	Summers	Sandstone.	156	3.45	6.4	6.2	13.7	6
2998	Sand Run.....	Taylor	Feldspathic sandstone.	156	1.46	7.2	5.5	18.1	7
2999	Newlonton.....	Upshur	Sandstone.	153	1.80	19.3	2.1	10.1	4
3028	Adrian.....	do.	do.	156	2.89	14.1	2.8	17.3	3
3236	(¹).....	do.	Limestone.	168	.56	3.7	10.7	16.9	30
2975	Webster Springs.....	Webster	do.	168	.41	(²)	16.5	9	94
3064	Uniontown.....	do.	Sandstone.	150	2.85	28.2	8.3	3	30
3075	do.	do.	do.	156	2.73	(²)	3.3	3	41
7830	Williamson.....	Wingo	Feldspathic sandstone.	162	2.47	5.3	7.0	6	45
4871	Palestine.....	Wirt	do.	156	2.93	8.3	4.7	5	14
4872	do.	do.	do.	156	2.89	16.3	2.5	7.7	16
2968	Parkeburg.....	Wood.	do.	156	4.32	(²)	3.2	6	68
8447	do.	do.	do.	162	3.32	7.7	5.9	5	(²)
8876	Engle.....	(¹)	Argillaceous limestone.	168	.24	6.8	14.5	3	23
2971	Baben.....	Wyoming	Sandstone.	162	.61	2.5	16.3	11	10
2973	Bakers Ridge district.....	do.	Feldspathic sandstone.	162	1.53	3.2	18.9	11	500+

WISCONSIN.

6452	Greenleaf.....	Brown.	Dolomite.	172	2.30	3.0	13.3	8	58
6504	Brillon.....	do.	do.	165	1.35	7.5	5.3	5	61
6161	Columbus.....	Columbia.	Argillaceous dolomite.	165	2.73	5.7	12.7	3	29
5788	Bridgeport.....	Crawford	Siliceous dolomite.	162	3.10	8.9	9.8	5	42

³ Test not made.¹ Exact locality not known.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

WISCONSIN—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	Pounds.					
6209	Soldiers Grove.....	Crawford	Dolomite.....	102	2.96	8.4	4.8	11.3	4	24
6216	Prairie du Chien.....	do.	do.	165	2.65	7.0	5.7	5.8	4	16
6223	Bridgeport.....	do.	do.	175	.65	(1)	(1)	12.7	8	20
746	Madison.....	Dane	Rhyolite.....	165	.09	2.4	17.0	(1)	(1)	(1)
1009	do.	do.	Dolomite.....	165	2.70	9.0	4.4	14.0	7	174
5362	(2)	do.	Argillaceous limestone.	168	2.30	4.3	9.4	14.7	8	20
6082	do.	do.	Dolomite.....	175	1.21	8.9	4.5	14.0	10	34
6092	Hamilton.....	do.	do.	162	1.67	3.6	11.1	14.0	(1)	19
6083	do.	do.	Siliceous dolomite.....	172	1.57	6.1	6.6	11.3	6	19
6228	Madison.....	do.	Quartzite dolomite.....	172	1.90	5.1	7.9	13.7	10	14
6438	Madison.....	do.	Argillaceous dolomite.....	162	2.09	10.8	3.7	12.5	4	94
1397	Portland.....	Dodge	Quartzite.....	168	1.13	4.4	14.2	19.0	19	5
5790	Redwood.....	do.	Argillaceous dolomite.....	172	1.53	4.5	9.1	16.1	11	34
6500	Hubard.....	do.	Dolomite.....	172	1.10	4.5	9.0	14.3	8	53
5016	Sturgeon.....	Door	do.	178	.26	4.5	9.0	14.2	12	6
6214	Kewaunee.....	do.	Dolomite marble.....	178	.22	3.8	10.6	12.8	6	53
5795	Commonwealth.....	Florence	Ferruginous slate.....	168	3.41	17.1	2.3	(1)	(1)	89
5523	Poebles.....	Fon du Lac	Dolomite.....	178	.51	5.4	7.5	13.7	8	35
6203	Marblehead.....	do.	do.	175	.36	3.4	11.9	14.4	7	18
6479	do.	do.	do.	175	.51	4.6	8.7	15.2	10	52
6752	do.	do.	do.	178	.30	3.7	10.8	13.4	7	27
6807	Hamilton.....	do.	do.	175	1.01	5.2	7.6	13.8	6	49
6210	Benton.....	Grant	do.	168	2.16	12.9	3.1	12.9	4	16
6230	Cassville.....	do.	do.	168	1.43	9.6	4.2	12.3	4	39
6222	Hazel Green.....	do.	Siliceous dolomite.....	165	1.88	7.1	5.6	15.2	5	18
6212	Lancaster.....	do.	Limestone.....	162	1.67	4.1	9.7	14.8	8	21
6208	Pilotville.....	do.	Dolomite.....	172	1.57	7.4	5.4	15.0	5	15
6215	Monroe.....	Greene	Argillaceous dolomite.....	172	1.68	22.5	1.8	(1)	(1)	18
6221	Broadhead.....	do.	do.	162	4.97	8.8	4.5	9.3	3	41
6225	Martintown.....	do.	Siliceous dolomite.....	162	3.33	11.4	3.5	16.2	5	33
6227	Broadhead.....	do.	Dolomite.....	162	4.72	11.1	3.6	14.1	4	27
747	Uley.....	Greene Lake	do.	172	.87	4.1	9.8	(1)	(1)	8
607	Berlin.....	do.	Rhyolite.....	165	.05	1.8	22.5	(1)	(1)	15
668	do.	do.	do.	165	.03	4.0	10.0	(1)	(1)	10
695	Uley.....	do.	do.	165	.04	5.6	8.0	(1)	(1)	(1)
696	do.	do.	do.	165	.06	5.6	7.2	(1)	(1)	35
1427	Portin.....	do.	do.	165	.10	1.9	20.6	10.0	23	5
1434	Uley.....	do.	do.	162	.05	2.5	16.2	18.9	19	17
6207	Blue Mound.....	do.	Argillaceous dolomite.....	162	4.75	11.3	3.6	10.7	4	9
6213	Mineral Point.....	Iowa	Limestone.....	168	.39	5.2	15.7	7.7	11	21
6211	do.	do.	do.	165	2.96	3.9	10.3	14.5	11	16

[illegible]

¹ Test not made.

Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.*

WISCONSIN—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
6159	Whitewater.....	Walworth.....	Dolomite.....	Pounds, 168	Pounds, 2.27	6.4	6.3	13.3	7	27
3509	Lannon.....	Waukesha.....	do.....	175	.91	3.4	11.7	15.9	13	24
3800	do.....	do.....	do.....	172	1.12	3.2	12.7	16.1	13	26
6170	Pewaukee.....	do.....	do.....	172	1.84	4.1	9.9	15.3	13	14
6171	Lannon.....	do.....	do.....	168	2.03	6.7	8.0	13.3	9	36
6172	Waukesha.....	do.....	do.....	172	1.56	3.6	11.0	15.0	7	20
6173	Lannon.....	do.....	do.....	175	.85	3.5	11.1	15.6	10	22
8656	do.....	do.....	do.....	175	.85	3.6	11.1	15.4	10	25
1408	Waupaca.....	Waupaca.....	Granite.....	162	1.96	1.4	27.8	18.9	29	6
3011	Waupaca (2 miles north of).....	do.....	Blotie granite.....	168	.15	5.3	7.5	19.0	9	26
8018	Wausau.....	do.....	do.....	168	.25	4.1	9.7	18.7	5	28
1374	Lohrville.....	Waushara.....	Granite.....	168	.26	2.0	20.0	19.0	(1)	6
1340	do.....	do.....	do.....	(1)	(1)	2.4	16.4	(1)	(1)	(1)
1435	Marion.....	do.....	do.....	165	.30	1.5	26.3	18.9	23	7
1432	Lohrville.....	do.....	do.....	165	.19	2.7	12.6	18.4	21	9
1431	Red Granite.....	do.....	do.....	165	.14	1.1	27.0	18.8	25	3
1398	Glen Rock.....	do.....	do.....	165	.42	1.5	37.4	13.2	24	6
5586	Red granite.....	do.....	do.....	(1)	(1)	(1)	(1)	19.0	14	(1)
6237	Oshkosh.....	Winnebago.....	Sandstone.....	175	.65	3.8	10.6	15.5	8	37
6236	Appleton.....	do.....	Dolomite.....	175	.53	3.4	11.8	16.5	10	45
6246	Ouro.....	do.....	do.....	172	1.65	3.6	7.1	16.3	7	32
6487	Poyan.....	do.....	do.....	175	.62	3.4	11.9	14.7	11	23
6573	Neenah.....	do.....	do.....	168	2.68	4.1	9.8	14.3	9	31
8920	Rudolph.....	do.....	Sandstone.....	156	1.10	3.4	11.8	18.7	5	2
5796	(2).....	Wood.....	Ferruginous sandstone.....	140	4.51	25.2	1.6	0.0	3	20
6181	(2).....	(2).....	Argillaceous dolomite.....	168	1.86	10.7	3.7	11.7	7	9
6180	(2).....	(2).....	do.....	168	2.96	7.3	5.5	15.0	7	18
6179	(2).....	(2).....	do.....	153	6.90	7.3	5.5	12.7	5	19
6177	(2).....	(2).....	do.....	165	2.82	6.1	6.6	12.7	5	26
6176	(2).....	(2).....	do.....	165	3.59	7.6	5.3	4.0	3	13
6175	(2).....	(2).....	do.....	168	2.67	7.4	5.4	13.3	12	32
6185	(2).....	(2).....	do.....	168	2.99	5.4	5.4	13.2	6	13
6186	(2).....	(2).....	Siliceous dolomite.....	168	3.01	8.1	4.9	15.0	7	23
6183	(2).....	(2).....	do.....	162	3.68	9.9	4.1	4.5	2	22
6178	(2).....	(2).....	Dolomite.....	162	2.51	8.0	5.0	12.0	3	27
6174	(2).....	(2).....	do.....	172	1.35	5.6	7.1	15.5	11	25
6182	(2).....	(2).....	do.....	159	3.13	11.3	3.5	11.7	4	32
6184	(2).....	(2).....	do.....	175	.86	9.2	3.5	13.7	4	33
9231	(2).....	(2).....	do.....	162	3.44	6.1	6.5	14.5	4	20
5791	(2).....	(2).....	do.....	175	.83	3.6	11.0	14.0	10	24
6232	(2).....	(2).....	do.....	165	3.41	6.5	6.2	16.0	9	38

WYOMING.

6233	(²)	Argillaceous limestone.....	165	.78	6.2	6.5	(¹)	(¹)	28
7024	(²)	Dolomite.....	168	.79	7.3	5.5	14.0	6	36

CUBA.

6452	Sheridan.....	Ferruginous sandstone.....	150	7.55	14.4	2.8	5.0	9	3
2209	do.....	Calcareous sandstone.....	168	1.49	2.7	15.0	15.3	10	97
2380	do.....	do.....	165	1.86	4.2	9.6	15.3	6	251

PORTO RICO.

471	Cienfuegos.....	Andesite.....	159	2.04	2.6	15.3	(¹)	(¹)	337
472	Campo Florida.....	Diorite.....	172	.66	3.4	11.7	(¹)	(¹)	137
575	Habana.....	do.....	168	.81	2.2	18.3	(¹)	(¹)	148
473	do.....	Marble.....	168	1.04	4.0	10.1	(¹)	(¹)	90

CANADA.

6660	Vernon.....	Crystalline limestone.....	168	0.36	(¹)	(¹)	12.4	5	125
6728	do.....	Vitreous basalt.....	165	.55	4.4	9.1	18.4	8	85
6729	do.....	do.....	162	1.45	3.5	11.4	18.3	14	41
7661	Endrick.....	Basalt breccia.....	153	4.87	5.9	6.8	18.3	8	500+
2213	Portlock Harbor.....	Slate.....	172	.57	3.0	13.2	16.9	10	19
7079	(²).....	do.....	172	.07	2.8	14.3	16.9	10	12
2510	Masselon.....	Feldspathic quartzite.....	165	.22	1.9	20.6	(¹)	(¹)	14
3819	Desbarrats.....	do.....	178	.86	(¹)	(¹)	17.3	10	141
6136	Humberg Point.....	Altered diabase.....	181	.18	2.5	15.8	18.0	9	26
6360	Bruce Mines.....	do.....	187	.17	2.2	18.2	18.5	18	66
6518	(²).....	do.....	184	.72	2.1	19.4	18.0	31	67
7069	(²).....	Altered quartz diabase.....	187	.09	2.3	17.4	18.6	17	23

¹ Test not made.² Exact locality not known.³ Province.

TABLE V.—Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916—Contd.

CANADA—Continued.

Serial No.	Town or city.	Province.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent. of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
7387	Bruce Mines	Ontario	Altered diabase.	Pounds. 178	Pounds. 0.70	2.6	15.4	17.3	15	109
7388	do.	do.	do.	184	.25	2.5	16.3	18.7	20	155
7389	Hamelock.	do.	do.	190	.08	2.2	18.2	18.7	(1)	16
4813	Cape Breton	do.	Open hearth slag.	196	1.68	3.1	12.9	(1)	9	500+
5367	Pole Island.	do.	Altered gabbro.	175	.10	2.1	17.6	17.2	6	47
6889	Desbarats.	do.	do.	175	.10	5.1	7.8	16.1	16	35
7188	do.	do.	do.	184	.44	3.7	10.7	17.8	16	104
5831	Bruce Mines	do.	Altered augite andesite.	181	.34	2.1	18.7	17.9	22	29
7256	Belmont Township.	do.	Altered Andesite.	187	.28	(1)	(1)	18.5	9	39
5933	Dundas.	do.	Dolomite.	175	1.17	2.9	13.7	15.8	11	27
7268	Fergus.	do.	do.	175	.40	(1)	(1)	13.8	5	48
7269	Owen Island.	do.	Argillaceous dolomite.	165	2.25	(1)	(1)	14.8	3	39
7671	do.	do.	Siliceous dolomite.	175	1.25	(1)	(1)	18.3	3	62
7672	do.	do.	Dolomite.	175	.57	5.3	7.5	16.6	14	41
8163	Dundas.	do.	do.	172	.83	5.5	7.3	14.1	6	17
8164	do.	do.	do.	175	.35	3.9	10.0	15.8	13	36
8165	do.	do.	do.	175	.57	3.7	10.9	16.2	9	46
8166	do.	do.	do.	175	.24	3.6	11.1	16.0	11	61
8167	do.	do.	do.	168	.66	3.8	10.5	13.5	10	19
7372	do.	do.	do.	172	.52	3.8	10.5	15.8	6	26
6168	Copley Island.	do.	Argillaceous dolomite.	168	1.95	3.0	13.4	12.8	8	50
7251	Modoc Township.	do.	Feldspathic sandstone.	168	.30	2.5	16.3	18.2	34	33
7252	Elzvir Township.	do.	Altered diorite porphyry.	190	.17	3.0	13.2	17.8	13	79
7253	Belmont Township.	do.	Quartz diorite.	190	.10	(1)	13.6	18.3	16	34
7254	do.	do.	Hornblende epidote schist.	187	.19	2.9	(1)	17.9	13	47
7257	do.	do.	Amphibolite.	187	.31	(1)	(1)	18.3	24	87
7257	do.	do.	do.	193	.31	(1)	(1)	18.6	17	57
7255	Elzvir Township.	do.	Hornblende gneiss.	190	.19	(1)	(1)	17.6	9	48
7266	Collingwood.	do.	Argillaceous limestone.	165	1.39	(1)	(1)	10.3	4	40
7283	do.	do.	Limestone.	165	.93	(1)	(1)	18.8	12	119
8873	Hagersville.	do.	Siliceous limestone.	175	.29	3.5	11.3	19.0	11	23
5725	Sherbrooke.	Quebec.	Siliceous dolomite.	187	.31	3.6	11.2	17.7	14	22
7303	Dundas.	Ontario.	Dolomite.	172	.61	(1)	(1)	15.8	10	19
7305	do.	do.	do.	175	.81	(1)	(1)	14.3	10	35
7333	Galt.	do.	do.	168	1.72	4.2	9.6	15.3	7	36
7367	Dundas.	do.	do.	172	.33	3.6	11.2	15.4	11	33
7368	do.	do.	do.	172	.65	3.8	10.4	15.9	13	68

² Exact locality not known.

¹ Test not made.