

**SURVEY OF HIGHWAY CONSTRUCTION MATERIALS
IN THE TOWN OF EDEN, LAMOILLE COUNTY, VERMONT**

prepared by

**Engineering Geology Section, Materials Division
Vermont Department of Highways**

in cooperation with

**United States Department of Transportation
Federal Highway Administration**

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TABLE OF CONTENTS

Introduction

Acknowledgements 1

History 1

Inclosures 2

Location 4

County and Town Outline Map of Vermont

Survey of Rock Sources

Procedure for Rock Survey 5

Discussion of Rock and Rock Sources 6

Survey of Sand and Gravel Deposits

Procedure for Sand and Gravel Survey 7

Discussion of Sand and Gravel Deposits 8

Summary of Rock Formations in the Town of Eden 9

Glossary of Selected Geologic Terms 10

Bibliography 11

Partial Specifications for Highway Construction Materials . . . Appendix I

Eden Granular Data Sheets Table I

Eden Property Owners - Granular Supplement

Eden Rock Data Sheets Table II

Eden Property Owners - Rock Supplement

Granular Materials Map Plate I

Rock Materials Map Plate II

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The work of this Project was greatly implemented by the cooperation and assistance of many groups and individuals. The following were particularly helpful in carrying out the Project's objectives.

1. Various departments and individuals of the Vermont State Department of Highways, notably the Planning and Mapping Division and the Highway Testing Laboratory.
2. Professor D. P. Stewart of Miami University, Oxford, Ohio.
3. Professor C. G. Doll, Vermont State Geologist, University of Vermont, Burlington, Vermont.
4. United States Department of Commerce, Bureau of Public Roads.

History

The Materials Survey Project was formed in 1957 by the Vermont State Department of Highways with the assistance of the United States Bureau of Public Roads. Its prime objective was to compile an inventory of highway construction materials in the State of Vermont. Prior to the efforts of the personnel of the Survey as described in this and other reports, searches for highway construction materials were conducted only as the immediate situation required. Thus only limited areas are surveyed, and no overall picture of material resources was available. Highway contractors or resident engineers are usually required to locate the materials for their respective projects and have samples tested by the Highway Testing Laboratory. The additional cost of exploration for construction materials is passed onto the State in the form of higher construction costs. The Materials Survey Project was established to minimize or eliminate this factor by enabling the State and its contractors to proceed with information

on materials sources available beforehand. Prior knowledge of locations of suitable material is an important factor in planning future highways.

The sources of construction materials are located by this Project through ground reconnaissance study of maps and aerial photographs, and geological and physiographic interpretation. Maps, data sheets, and work sheets for reporting the findings of the Project were designed with their intended use in mind. These maps and data sheets were devised to furnish information of particular use to the contractor or construction man. For maximum benefit, the maps, data sheets, and this report should be studied simultaneously.

Inclousures

Included in this folder are two surface-geology maps, one defining the location of tests conducted on bedrock sources, the other defining the location of tests conducted on granular materials. These maps are derived from 15-minute or 7½-minute quadrangles of the United States Geological Survey enlarged or reduced to 1:31250 or 1" = 2604'. Delineated on the Bedrock Map are the various rock types of the area. This information was obtained from numerous sources: Vermont Geological Survey Bulletins, Vermont State Geologist Reports, United States Geological Survey Bedrock Maps, and the Centennial Geological Map of Vermont, as well as other references.

The granular materials map depicts areas covered by various types of glacial deposits (outwash, moraines, kames, kame terraces, eskers, etc.) by which potential sources of gravel and sand may be recognized. This information was obtained primarily from a survey conducted by Professor D. P. Stewart of Miami University, Oxford, Ohio, who had been mapping the glacial features of Vermont during the summer months since 1956. Further

information was obtained from the Soil Survey (Reconnaissance) of Vermont conducted by the Bureau of Chemistry and Soils of the United States Department of Agriculture, and from Vermont Geological Survey Bulletins, United States Geological Survey Quadrangles, aerial photographs, the Surficial Geologic Map of Vermont, and other sources. On both maps the areas tested are represented by Identification Numbers. Several tests are usually conducted in each area represented by an Identification Number, the number of such tests being more or less arbitrarily determined either by the character of the material or by the topography.

Also included in this folder are data sheets for both the Bedrock and Granular Materials Survey, which contain detailed information for each test conducted by the Project as well as information obtained from other sources, and including an active card file compiled by the Highway Testing Laboratory. The latter information was gathered over a period of years by many persons and consequently lacks the organized approach and detail required for effective use. The information on the cards varied widely in completeness. Transfer of information from the cards to the data sheets was made without elaboration or verification. When possible, the locations of the deposits listed in the card files have also been plotted on the maps; however, some cards in the file were not used because the information on the location of the deposit was incomplete or unidentifiable. Caution should be exercised wherever this information appears incomplete. This Project does not assume responsibility for the information taken from the card files.

Work sheets contain more detailed information on each test and a detailed sketch of each identification Number Area. The work sheets and laboratory reports are on file in the office headquarters of this Project.

LOCATION

The town of Eden is situated in the north-central part of Vermont at the northeast corner of Lamoille County. Eden is bounded on the north by Montgomery, on the northeast by Lowell, on the east by Albany, on the southeast by Craftsbury, on the south by Hyde Park, on the southwest by Johnson, and on the northwest by Belvidere. (See County and Town Outline Map of Vermont on the following page.)

The northwest part of Eden lies within the Green Mountains physiographic region and the southeast part of Eden lies within the Vermont Piedmont subdivision of the New England upland. The Green Mountains are characterized by rugged, steep-sided mountainous terrain whereas the Central Plateau Region of the Vermont Piedmont has broad valleys and rounded hills. Elevations range from about 3140 feet on the south slope of Belvidere Mountain to less than 880 feet where the Gihon River crosses the Hyde Park Town Line. Principal drainage is into that river via the White Branch, Stony Brook and Wild Brook in the northern half of the township. Lesser watersheds are the Seaver Branch of the Black River at the eastern corner of the township and the Green River near the south corner of Eden.

SURVEY OF ROCK SOURCES

Procedure for Rock Survey

The routine employed by the project in a survey of possible sources of rock for highway construction is divided into two main stages; office and field investigations.

The office investigation is conducted primarily during the winter months and comprises the mapping and description of rock types as indicated in various reference sources. Many different sources of information are utilized, as indicated in the bibliography. These references differ considerably in dependability due to new developments and studies that have contributed to the obsolescence of a number of reports. In addition, the results of samples taken by other individuals are analyzed, and the location at which these samples were taken is mapped when possible. In other words, as complete a correlation as possible is made of all the information available concerning the geology of the area under consideration.

The field investigation is begun by making a cursory preliminary survey of the entire area. The information obtained in the preliminary survey, together with the information assimilated in the office investigation, is employed to determine the areas where testing and sampling will be concentrated. When a promising source has been determined by rock type, volume of material, accessibility, and adequate exposure and relief, chip samples are taken with a hammer across the strike or trend of the rock. The samples are submitted to the Material Testing Laboratory for abrasion testing both by the Deval Method (AASHO T-3) and the Los Angeles Method (AASHO T-96). It should be kept in mind that the samples taken by the chip method are often within the weathered zone of the outcrop and consequently may give a less satisfactory test result than fresh material deeper in the rock structure. When the material is uniform and acceptable abrasion tests result from the chip samples, the material source is included in this report as being satisfactory.

Discussion of Rock and Rock Sources

It should be noted that information on the Rock Materials Map is somewhat simplified. (For a more detailed description of the respective rock formations, see the Summary included in this report.) In the Summary it is apparent that complex metamorphic rocks comprise almost the entire lithology within the town of Eden. A few occurrences of ultramafics are located in the vicinities of Belvidere and Bowen Mountains, however.

Occasionally, rocks belonging to the same formation and exhibiting similar characteristics (i.e., color, texture, etc.) may produce different abrasion results owing to differing physical and chemical properties. Therefore, in no case should satisfactory test results of an area be construed to mean that the same formation, even in the same area, will not later produce unsatisfactory material. This is especially true of metamorphic rocks.

Apart from the ultramafics, which were tested at Map Ident. No. 1, it was believed that greenstone and amphibolite of the Stowe formation might be a possible source of Crushed Stone for Sub-base. However, it was determined in the field that fissility and thin-bedding rule out that possibility where these rock types are well exposed.

SURVEY OF SAND AND GRAVEL SOURCES

Procedure for Sand and Gravel Survey

The method employed by the project in a survey of possible sources of sand and gravel for highway construction is divided into two main stages; office and field investigations.

The office investigation is conducted primarily during the winter months and comprises the mapping of possible potentially productive areas as indicated from various references. Of these references, the survey of glacial deposits mapped by Professor Stewart proves to be valuable, particularly when used in conjunction with other references such as soil-type maps, aerial photographs, and United States Geological Survey quadrangles. The last two are used in the recognition and location of physiographic features indicating glacial deposits and in the study of drainage patterns. In addition, the locations of existing pits are mapped when known. The locations in which samples were taken by other individuals are noted and mapped when possible.

The field investigation is begun by making a cursory preliminary survey of the entire town. All pits and other areas which show physiographic features that give evidence of glacial or fluvial deposition are noted. These locations are later investigated by obtaining samples of pit faces and other exposed materials. Test pits, dug with a backhoe to a depth of approximately 11 feet, are also sampled. The samples are submitted to the Materials Testing Laboratory where they are tested for gradation and stone abrasion, the latter by the Deval Method (AASHO T-4), and the Los Angeles Method (AASHO T-96).

Discussion of Sand and Gravel Deposits

According to D.P. Stewart the town of Eden was partially covered by a high-level post-glacial lake during the final recession of the continental glacier in northern Vermont. This lake emplaced several beach gravels that were tested at Map Ident. Nos. 5, 27, 28 and 30 in addition to pebbly sands at Map Ident. Nos. 10 and 14.

Apparently related to the final glacial wasting were several fluvial features. These consist of a large kame moraine, in the center of the town that was tested at Map Ident. Nos. 29, 32, 33, 34, 35 and 36; several kame terraces that were sampled at Map Ident. Nos. 3, 4, 6, 7, 8, 9, 11, 12, 13, 15, 16, 17, 19, 20, 22, 23, 24, 25, 26 and 31; fluvial outwash that was tested at Map Ident. Nos. 1, 2 and 18; and the edge of a second kame moraine that was sampled at Map Ident No. 21.

At the time of this survey specification material totals estimated within the town were as follows: Gravel for Sub-base, 348,000 cubic yards; Sand Borrow and Sand Cushion, 90,000 cubic yards; Granular Borrow, 306,000 cubic yards. Specification material was not found above 1,400 feet in elevation. 75 percent of the areas tested were the sites of either active or inactive pits.

SUMMARY OF ROCK FORMATIONS IN THE TOWN OF EDEN

Belvidere Mountain amphibolite member (Hazens Notch formation): Coarse-to fine-grained hornblende-epidote-albite rock; grades to epidote-chlorite-actinolite-albite greenstone where less metamorphosed.

Hazens Notch formation: Interbedded carbonaceous and non-carbonaceous quartz-sericite-albite-chlorite schist; grades to quartzite and gneiss.

Moretown member (Missisquoi formation): Quartzite and quartz-plagioclase granulite in layers one-eighth to several inches thick, separated by pinstripe partings that contain muscovite, chlorite, epidote, biotite, and locally garnet; also greenish quartz-sericite-chlorite phyllite and schist, and minor carbonaceous phyllite.

Ottawaquechee formation: Black carbonaceous phyllite or schist containing interbeds of massive quartzite commonly criss-crossed by veins of white quartz; quartzite is dark gray and carbonaceous, light gray or white; also includes light green quartz-sericite-chlorite phyllite or schist and sericitic quartzite; beds of phyllitic graywacke and feldspar granule conglomerate are north of Lamoille River.

Stowe formation: Quartz-sericite (muscovite-paragonite)-chlorite phyllite and schist; porphyroblasts of albite; garnet, chloritoid or kyanite are common locally; includes phyllitic graywacke north of Lamoille River. Schist contains abundant segregations of granular white quartz.

Carbonaceous schist and phyllite north of Lamoille River.

Greenstone and amphibolite- epidote-albite-chlorite rocks contain actinolite and hornblende where more metamorphosed.

Umbrella Hill member (Missisquoi formation): Quartz and slate pebble, phyllitic conglomerate with interbeds of slate and phyllite -- chiefly quartz-sericite-magnetite-chloritoid rocks.

Ultramafic rocks: Dunite, peridotite, and serpentinite.

Serpentinite, carbonate rock, talc-carbonate rock and steatite.

GLOSSARY OF SELECTED GEOLOGIC TERMS

Cross-bedding: A diagonal arrangement of bedding in sedimentary rocks such that the layers are inclined at various angles to the more general plane of stratification. Sand-dune, river-channel, and delta deposits commonly show cross-bedding on an extensive scale.

Delta: A predominantly alluvial deposit built by a stream entering the sea or other body of water. Usually it has the form of the Greek letter delta.

Fissile: The tendency possessed by some rocks to split into thin sheets along either bedding planes or cleavage planes induced by fracture or flowage.

Fluvial: Pertaining to streams.

Kame: A conical hill of generally poorly stratified drift, deposited in contact with glacial ice by streams flowing in or on the ice.

Kame moraine: An accumulation of material deposited directly from the frontal portion of the glacial ice and partially sorted by water action. Deposits may take the form of coalescent knolls, hummocks, ridges, etc.

Kame terrace: Stratified sands and gravels deposited by streams between a glacier and an adjacent valley wall.

Metamorphic rocks: Rocks that owe their distinctive characteristics to the transformation of pre-existing rocks, either through intense heat or pressure or both.

Outwash: Stratified sands and gravels that are stream-built beyond the glacier; deposited by meltwater streams issuing from the face of the glacial ice.

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PARTIAL SPECIFICATIONS FOR HIGHWAY CONSTRUCTION MATERIALS

Listed below are partial specifications for Highway Construction Materials as they apply to this report at date of publication. For a complete list of specifications see Standard Specifications for Highway and Bridge Construction, approved and adopted by the Vermont Department of Highways in July, 1971.

DIVISION 700 - MATERIALS

Section 703.03, Soils and Borrow Materials

703.03 Sand Borrow and Cushion

Sand Borrow shall consist of material reasonably free from silt, loam, clay, or organic matter. It shall be obtained from approved sources and shall meet the requirements of the following table:

Table 703.03A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	Sand Portion
2"	100	
1½"	90-100	
½"	70-100	
No. 4	60-100	100
No. 100		0-30
No. 200		0-12

703.05 Granular Borrow

Granular Borrow shall be obtained from approved sources, consisting of satisfactorily graded, free draining, hard, durable stone and coarse sand reasonably free from loam, silt, clay, and organic material.

The Granular Borrow shall meet the requirements of the following table:

Table 703.05A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	Sand Portion
No. 4	20-100	100
No. 200		0-15

The maximum size stone particles of the Granular Borrow shall not exceed 2/3 of the thickness of the layer being spread.

Section 704, Aggregate

704.05 Gravel for Sub-base

Gravel for Sub-base shall consist of material reasonably free from silt, loam, clay, or organic matter. It shall be obtained from approved sources and shall meet the following requirements.

(a) Grading

The gravel shall meet the requirements of the following table:

Table 704.05A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	Sand Portion
No. 4	(20-60)	100
No. 100		0-18
No. 200		0- 8

The stone portion of the gravel shall be uniformly graded from coarse to fine, and the maximum size stone particles shall not exceed 2/3 the thickness of the layer being placed.

(b) Percent of Wear

The percent of wear of the gravel shall be not more than 25 when tested in accordance with AASHTO T 4, or more than 40 when tested in accordance with AASHTO T 96.

704.06 Crushed Stone for Sub-base

Crushed Stone for Sub-base shall consist of clean, hard, crushed stone, uniformly graded, reasonably free from dirt, deleterious material, pieces which are structurally weak and shall meet the following requirements:

(a) Source

This material shall be obtained from approved sources and the area from which this material is obtained shall be stripped and cleaned before blasting.

(b) Grading

This material shall meet the requirements of the following table:

Table 704.06A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	
4½"	100	
4"	90-100	
1½"	25- 50	
No. 4	0- 15	

(c) Percent of Wear

The percent of wear of the parent rock shall be not more than 8 when tested in accordance with AASHTO T 3, or the crushed stone a percent of wear of not more than 40 when tested in accordance with AASHTO T 96.

(d) Thin and Elongated Pieces

Not more than 30 percent, by weight, of thin and elongated peices will be permitted.

Thin and elongated pieces will be determined on the material coarser than the No. 4 sieve.

(e) Filler

The filler shall be obtained from approved sources and shall meet the requirements as set up for Sand Cushion, Subsection 703.03.

(f) Leveling Material

The leveling material shall be obtained from approved sources and may be either crushed gravel or stone screening produced by the crushing process. The material shall consist of hard durable particles, reasonably free from silt, loam, clay or organic matter.

This material shall meet the requirements of the following table:

Table 704.06B - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	
1"		100
3/4"		90-100
1/2"		50- 90
No. 4		30- 70
No. 100		0- 20
No. 200		0- 10

704.07 Crushed Gravel for Sub-base

Crushed Gravel for Sub-base shall consist of material reasonably free from silt, loam, clay or organic matter. It shall be obtained from approved sources and shall meet the following requirements:

(a) Grading

The crushed gravel shall be uniformly graded from coarse to fine and shall meet the requirements of the following table:

Table 704.07A - Gradation Requirements

Grading	Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
		Total Sample	Sand Portion
Coarse	4"	100	
	No. 4	25- 50	100
	No. 100		0- 20
	No. 200		0- 12
Fine	2"	100	
	1 1/2"	90-100	
	No. 4	30- 60	100
	No. 100		0- 20
	No. 200		0- 12

(b) Percent of Wear

The percent of wear of the parent gravel shall be not more than 20 when tested in accordance with AASHTO T 4, or the crushed gravel a percent of wear of not more than 35 when tested in accordance with AASHTO T 96.

(c) Fractured Faces

At least 30 percent, by weight, of the stone content shall have at least one fractured face.

Fractured faces will be determined on the material coarser than the No. 4 sieve.

704.09 Dense Graded Crushed Stone for Sub-base

Dense Graded Crushed Stone for Sub-base shall consist of clean, hard, crushed stone, uniformly graded, reasonably free from dirt, deleterious material and pieces which are structurally weak, and shall meet the following requirements:

(a) Source

This material shall be obtained from approved sources and the area from which this material is obtained shall be stripped and cleaned before blasting.

(b) Grading

This material shall meet the requirements of the following table:

Table 704.09A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	Total Sample
3½"		100
3"		90-100
2"		75-100
1"		50- 80
½"		30- 60
No. 4		15- 40
No. 200		0- 10

(c) Percent of Wear

The percent of wear of the parent rock shall be not more than 8 when tested in accordance with AASHTO T 3, or the crushed stone a percent of wear of not more than 40 when tested in accordance with AASHTO T 96.

(d) Thin and Elongated Pieces

Not more than 30 percent, by weight, of thin or elongated pieces will be permitted.

Thin and elongated pieces will be determined on the material coarser than the No. 4 sieve.

704.10 Gravel Backfill for Slope Stabilization

Gravel Backfill for Slope Stabilization shall be obtained from approved sources, consisting of satisfactorily graded, free draining, hard, durable stone and coarse sand reasonably free from loam, silt, clay, and organic material.

The gravel backfill shall meet the requirements of the following table:

Table 704.10A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	Sand Portion
No. 4	20-50	100
No. 100		0- 20
No. 200		0- 10

The stone portion of the gravel backfill shall be uniformly graded from coarse to fine, and the maximum size stone particles shall not exceed 2/3 the thickness of the layer being placed.

704.11 Granular Backfill for Structures

Granular Backfill for Structures shall be obtained from approved sources, consisting of satisfactorily graded, free draining granular material reasonably free from loam, silt, clay, and organic material.

The granular backfill shall meet the requirements of the following table:

Table 704.11A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	Sand Portion
3"	100	
2½"	90-100	
No. 4	50-100	100
No. 100		0- 18
No. 200		0- 8

EDEN GRANULAR DATA SHEET NO. 1

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	¾"	#4	#100	#200			
1	1	1971	1.5-9	0-1	No	67	56	40	29	11	8	28.7%	Gran. Borrow (Grav.)	Owner: Hayden Morin. Area is the north end of an outwash or fluvial terrace on the east side of Town Highway No. 9 at a point 1.25 mile from its junction with Town Highway No. 13. Test #1 was in a bank at north end of the terrace 20 feet east of Town Highway No. 9. Material is: 1.5'-9', stony tabular gravel.
	2	1971	1.5-8.5	0-1.5	No	71	67	42	28	16	10	15.4%	Gran. Borrow (Grav.)	Test #2 was at northeast side of feature 200 feet southeast of Test #1. Material is 1.5'-6.5', cobbly gravel; 6.5'-8', stony sand; 8'-8.5', sand. These tests represent about 24,000 cubic yards.
2	1	1971	1-8	0-1	Yes	58	49	33	23	11	8	33.3%	Gran. Borrow (Grav.)	Owner: Joseph Daigle. Area contains a gravel pit on the east side of Town Highway No. 9 at a point 1.1 mile from junction with Town Highway No. 13. Test #1 was in middle of the east face of pit. Material is: 1'-8', indistinctly bedded pebbly gravel with a few cobbles.
	2	1971	1-10.5	0-1	Yes	74	58	35	22	14	10	35.4%	Gran. Borrow (Grav.)	Test #2 was in west corner of the northwest face of pit. Material is: 1'-4', fine gravel and gravelly sand; 4'-10.5', gravel, interbedded cobbles and fine gravel. There appears to be about 3,300 cubic yards of material remaining in this pit.

EDEN GRANULAR DATA SHEET NO. 2

Map Ident No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1 1/2"	1/2"	#4	#100	#200			
3	1	1971	1.5-8	0-1.5	Yes	78	61	42	31	12	5	25.4%	Gran. Borrow (Grav.)	<p>Owner: Joseph Daigle. Area contains pit that truncates wooded kame on north side of Town Highway No. 9 at a point 0.28 mile west of Town Highway No. 13.</p> <p>Test #1 was in upper northeast face of pit. Material is: 1.5'-4', stony sand; 4'-8.5'+, tabular sandy gravel with cobbles.</p>
	2	1971	1.5-13.5	0-1.5	Yes	73	64	41	28	10	6	42.5%	Gran. Borrow (Grav.)	<p>Test #2 was located in a 20-foot high northeast face, west of the middle level of the pit. Material is: 1.5'-7', loose tabular gravel; 7'-11.5', cobbly bouldery gravel; 11.5'-13.5'+, fine gravel.</p> <p>These tests represent about 8,400 cubic yards of material.</p>
4	1	1971	0.5-5	0-0.5	Yes	.	100	92	67	22	7	-----	Sand	<p>Owner: Frank Lackey. Area contains a sand pit at east end of a kame terrace. Pit is south of Town Highway No. 9 at a point 0.15 mile west of Town Highway No. 13.</p> <p>Test #1 was in lower east face of pit. Material is: 0.5'-3', gravelly sand; 5'+, gravel.</p>
	2	1971	7.5-19.5	0-1.5	Yes				100	37	14	-----	Gran. Borrow (Grav.)	<p>Test #2 was in lower west face of pit. Material is: 1.5'-7.5', slope strewn with tabular stones (not tested); 7.5'-19.5'+, fine sand.</p>
	3	1971	0.5-10.5	0-0.5	Yes	100	93	75	70	24	5	-----	Sand	<p>Test #3 was in floor of upper level at north end of pit. Material is: 0.5'-5', sand with stone</p>

EDEN GRANULAR DATA SHEET NO. 3

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	¾"	#4	#100	#200			
	4	1971	1-5	0-1	No	N O T S A M P L E D								pockets; 5'-8', irregular fine gravel beds dipping southward; 8'-10.5'+, sand. Test #4 was located in field at point 50 feet east of Test No. 1. Silt to clay from 1'-5' was not sampled.
	5A	1971	1.5-5	0-1.5	Yes			100	99	74	35	----	----	Test #5A was in upper south face of pit. Material is: 1.5'-5', very fine sand to silt.
	5B	1971	5-16		Yes	61	56	48	34	14	7	16.8%	Gravel	Test #5B was below Test #5A in lower south face of pit. Material is: 5'-7.5', hard-packed very fine pebble gravel; 7.5'-10', fine gravel with cobbles; 10'-16', hard-packed very fine pebble gravel with a few cobbles; bottom, same.
	6	1971	0.5-10	0-0.5	Yes	61	48	33	29	33	14	45.8%	Gran. Borrow (Grav.)	Test #6 was located in floor at south end of pit. Material is: 0.5'-4', fine sand; 4'-8', fine and cobbly gravel; 8'-10', gravelly and pebbly sand. These tests represent 6,600 yards of sand, 5,900 yards of granular borrow, and 4,900 yards of gravel.
5	1A	1971	1.5-24	0-1.5	Yes		100	95	68	8	4	42.5%	Gran. Borrow (Grav.)	Owner: Dennis Morin. Area contains pit in probable delta located west of Town Highway No. 13 at a point 0.95 mile south of its junction with Vermont Route 118. Test #1A was in upper west face of pit below high point. Material is: 1.5'-24', stratified very fine

EDEN GRANULAR DATA SHEET NO. 4

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	1"	#4	#100	#200			
	1B	1971	24-42		Yes		100	89	68	16	4	----	Sand	and fine gravels and pebbly sand. Test #1B was in west face below Test #1A. Material is: 24'-29', fine sand with small pebbles; 29'-35', gravel with cobbles and boulders; 35'-40', hard-packed very fine sand with stones; 40'-42'+, pebbly coarse sand.
	2	1971	0.5-9.5	0-0.5	Yes		100	81	69	10	5	----	Sand	Test #2 was in floor of pit below the northwest face. Material is: 0.5'-6.5', pebbly sand; 6.5'-9.5'+, gravelly sand and thin fine gravel layers. These tests represent 28,700 yards of granular borrow and 24,700 yards of sand.
6	1	1971	1.5-10	0-1.5	No	79	73	58	39	18	10	35.9%	Gran. Borrow (Grav.)	Owner: Dennis Morin. Area is a hillside pasture west of Town Highway No. 13 at point 1.15 miles south of its junction with Vermont Route 118. Test #1 was on a knoll west of house. Material is: 1.5'-4', cobbly and bouldery gravel; 4'-9.5'+, fine gravel with a few cobbles. Test #2 was located between rock outcrops at a point N.20°W. of Test #1. Material is: 1'-4', glacial till. There are probably about 8,000 cubic yards of granular borrow at this area.
	2	1971	1-4	0-1	No	N O T S A M P L E D								
7	1	1971	0.5-7	0-0.5	Yes		100	98	92	17	8	-----	Sand	Owner: Henry Ingalls. Area is a kamic ridge south of the junction

EDEN GRANULAR DATA SHEET NO. 5

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	2	1971	0.5-9	0-0.5	Yes	92	78	54	40	11	6	34.5%	Gran. Borrow (Grav)	of Town Highway No. 7 and No. 13. Three pits truncated the ridge at time of this survey. Test #1 was in southwest pit at northwest corner of north face. Material is: 0.5'-2', gravelly sand; 2'-7', coarse sand with occasional pebbles; 7'+, fine sand. Test #2 was at top of southeast side of north pit. Material is: 0.5'-7', gravelly sand; 7'-9'+, pebbly coarse sand.
	3	1971	0.5-10.5	0-0.5	Yes				100	70	28	----	----	Test #3 was located in floor of southwest pit. Material is: 0.5'-10.5', fine sand with silty or very fine sand seams.
	4	1971	0.5-9.5	0-0.5	Yes	79	70	50	35	15	8	46.4%	Gran. Borrow (Grav)	Test #4, also in floor of the southwest pit, was located 55 feet north of Test #3. Material is: 0.5'-2.5', sand; 2.5'-9.5'+, fine gravel with a few cobbles and two boulders.
	5	1971	0.5-9.5	0-0.5	Yes	71	64	50	37	11	8	40.8%	Gran. Borrow (Grav)	Test #5 was in north face of southeast pit. Material is: 0.5'-2.5', gray fine gravel; 2.5'-9.5'+, cobbly and bouldery, reddish sandy gravel with perhaps 10% of the stones in excess of 6 inches diameter.
	6	1971	10-20	0-0.5	Yes	87	83	61	47	17	9	39.6%	Gran. Borrow (Grav)	Test #6 was in lower southeast face of north pit. Material is: 0-10', represented by Test #2; 10'-12', fine sand; 12'-13', gravelly sand; 13'-20', very fine gravel.

EDEN GRANULAR DATA SHEET NO. 6

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	7	1971	0.5-9.5	0-0.5	Yes	80	75	44	25	25	16	30.1%	-----	<p>Test #7 was in floor of north pit. Material is: 0.5'-9.5', very stony fine gravel with occasional cobbles.</p> <p>There are approximately 1,900 cubic yards of sand and 7,100 cubic yards of granular borrow in this area.</p>
8	1A	1971	2-12	0-2	Yes	81	81	75	63	7	5	-----	Gran. Borrow (Sand)	<p>Owner: Henry Ingalls. Area comprises pit in ridge south of pit complex at Map Ident. No. 7. It is located at end of access road which is west of Town Highway No. 13, 0.13 mile south of junction with Town Highway No. 7. Feature tested appears to be a continuation of kamic ridge sampled at Map Ident. No. 7.</p> <p>Test #1A was in upper southeast face of pit. Material is: 2'-12', very pebbly, coarse, clean sand.</p>
	1B	1971	12-17	0-2	Yes	83	73	45	24	16	11	39.9%	Gran. Borrow (Grav.)	<p>Test #1B was in lower southeast face below Test #1A. Material is: 12'-17'+, fairly stony gravel.</p>
	2	1971	0-9	--	Yes	71	62	41	28	12	5	48.0%	Gran. Borrow (Grav.)	<p>Test #2 was in west face of pit near its north end. Material is: 0-4', pebbly gravel and pebbly coarse sand; 4'-9', gravel with very fine interstitial sand.</p>
	3	1971	3-10	0-3	Yes	65	59	34	14	21	21	38.4%	----	<p>Test #3 was in floor of pit. Material is: 3'-10', variably stony and pebbly to cobbly gravel.</p>
	4	1971	2-11	0-2	No	63	60	52	38	16	11	39.9%	Gran. Borrow (Grav.)	<p>Test #4 was located at south edge of access road 75 feet north-northeast of Test #3. Material is:</p>

EDEN GRANULAR DATA SHEET NO. 7

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														2'-11', silty looking sand, cobbly sand and pebbly sand beds. About 9,000 cubic yards of granular borrow occur in this area.
9	1A	1971	0-9	---	Yes	81	70	48	26	15	10	39.5%	Gran. Borrow (Grav.)	Owner: Henry Ingalls. Area is the east side of a ridge with pit west of Town Highway No. 13 at point 0.26 mile south of its junction with Town Highway No. 7. Test #1A was in upper west face of pit. Material is 0-9'+, gravel with tabular, soft cobbles.
	1B	1971	15-28	---	Yes	50	39	33	28	11	7	50.1%	Gran. Borrow (Grav.)	Test #1B was in west face of pit below Test #1A. Material is: 12'-19', cobbly gravel with very rotten stones; 19'-22', coarse sand; 22'-26', fine gravel; 26'-28', hard-packed, cobbly, silty gravel.
	2	1971	1.5-13	0-1.5	Yes	68	64	49	34	18	9	40.3%	Gran. Borrow (Grav.)	Test #2 was in northeast face of pit. Material is: 1.5'-2.5', pebbly sand; 2.5'-13'+, gravelly sand going to fine gravel with depth.
	3	1971	0.5-10	0-0.5	Yes	78	73	59	48	8	4		Gran. Borrow (Grav.)	Test #3 was in floor near northeast end of pit. Material is: 0.5'-10'+, variably stony gravelly sand or gravel. There was insufficient stone for percent of wear test.
	4	1971	1-11.5	0-1	No	80	77	61	43	16	9	41.1%	Gran. Borrow (Grav.)	Test #4 was in knoll east of pit. Material is: 1'-2', gravel; 2'-3', sand; 3'-7', fine gravel; 7'-12'+, gravel with a few cobbles. Approximately 1,300 cubic yards of gravel and 20,400 cubic yards

EDEN GRANULAR DATA SHEET NO. 8

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														of granular borrow occur in this area.
10	1	1971	7.5-22	0-1.5	No		100	95	78	10	5	----	Sand	<p>Owner: Ross Young. Area is a pit east of Town Highway No. 3 and south of Wild Brook.</p> <p>Test #1 was in the side of bulldozed trench 175' east of Town Highway. Material is: 7.5'-22', pebbly coarse grey to reddish-tan sand; 22'+, silty sand layer.</p>
	2	1971	0-15	---	Yes	100	83	77	65	16	3	-----	Gran. Borrow (Sand)	<p>Test #2 was located in south end of east face of pit. Material is: 0-3', fine gravel; 3'-15', interbedded fine and pebbly coarse sands.</p>
	3	1971	1.5-22	0-1.5	Yes	100	100	91	76	25	10	----	Sand	<p>Test #3 was located in east end of north face. Material is: 1.5'-2', sand; 2'-4', fine gravel; 4'-8', pebbly gravel or gravelly sand; 8'-14', hard-packed fine sand with stones; 14'-22', pebbly and fine sands.</p> <p>7,200 cubic yards of sand and 2,700 cubic yards of granular borrow occur in this area.</p>
11	1	1971	1-14	0-1	Yes	57	51	32	20	7	5	25.3%	Gran. Borrow (Grav.)	<p>Owner: Miss Elizabeth Specht. Area consists of low ridge in kame terrace with pit southeast of Vermont Route 100 junction with Town Highway No. 7.</p> <p>Test #1 was in north face of pit. Material is: 1'-14'+, variably stony gravel.</p>

EDEN GRANULAR DATA SHEET NO. 9

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	¾"	#4	#100	#200			
	2	1971	0.5-8.5	0-0.5	Yes	65	58	41	27	15	11	21.1%	Gran. Borrow (Grav)	Test #2 was in floor of pit. Material is: 0.5'-8', unconsolidated, clean, stony gravel with cobbles; 8'-8.5', boulders; 8.5'+, silt to clay.
	3	1971	1-7.5	0-1	No	66	60	41	24	7	5	20.8%	Gravel	Test #3 was near southwest end of ridge. Material is: 1'-7.5'+, loose gravel with cobbles.
	4	1971	1-10	0-1	No	60	52	38	28	6	5	27.0%	Gran. Borrow (Grav)	Test #4 was at northeast end of ridge next to meadow. Material is: 1'-10'+, loose fairly clean gravel with cobbles and boulders. About 2,800 cubic yards of gravel and 16,300 cubic yards of granular borrow occur in this area.
12	1	1971	1-9	0-1	No	72	56	37	26	10	8	27.4%	Gran. Borrow (Grav)	Owner: Miss Elizabeth Specht. Area is kame terrace southeast of Vermont Route 100 junction with Town Highway No. 7. Test #1 was at northwest edge of meadow, 50 feet northeast of field road. Material is: 1'-9', stony, variably sized, clean gravel layers; bottom, silt to clay.
	2	1971	2-9.5	0-2	No	100	73	71	68	4	2	----	Gran. Borrow (Sand)	Test #2 was at north edge of field 220 feet from northwest corner of terrace. Material is: 2'-9.5', coarse gray sand with pebbles and cobbles. Approximately 9,000 cubic yards of granular borrow occurs in this area.

EDEN GRANULAR DATA SHEET NO. 10

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	¾"	#4	#100	#200			
13	1	1971	1-8	0-1	No	50	45	28	19	9	7	22.1%	Gran. Borrow (Grav.)	<p>Owners: Robert and Norma Mullins. Area is a pasture in kame terrace south of Town Highway No. 13's junction with Vermont Route 100.</p> <p>Test #1 was located southwest of corner of stone walls in pasture south of field. Material is: 1'-3.5', very dirty bouldery cobbly gravel; 3.5'-7.5', fairly clean cobbly gravel; 7.5'-8'+, bouldery zone.</p>
	2	1971	1-10.5	0-1	No	54	45	30	22	12	9	25.7%	Gran. Borrow (Grav.)	<p>Test #2 was in pasture at tree line 220' N.60°W. of Test #1. Material is: 1'-10.5', bouldery and cobbly sandy gravel with many soft stones; bottom, same becoming moist.</p>
	3	1971	1-3.5	0-1	No	----- N O T S A M P L E D -----								<p>Test #3 was in west corner of upper level pasture 50' south of Vermont Route 100. Material is: 1'-3.5', boulders, silt and stones.</p>
	4	1971	1-8.5	0-1	No	55	52	37	27	7	4	28.7%	Gran. Borrow (Grav.)	<p>Test #4 was in lower pasture level 220' south of Vermont Route 100. Material is: 1'-5', gravel with a few cobbles and boulders; 5'-8.5', gravelly sand; bottom, gravelly sand with a few cobbles and boulders.</p>
	5	1971	1.5-10	0-1.5	No	64	62	48	33	6	4	29.8%	Gran. Borrow (Grav.)	<p>Test #5 was in lower pasture 140' S.40°E. of Test #4. Material is: 1.5'-8', fine gravel with cobbles; 8'-10'+, very fine gravel.</p> <p>About 38,800 cubic yards of granular borrow occur in this area.</p>

EDEN GRANULAR DATA SHEET NO. 11

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
14	1	1971	1-6	0-1	Yes	84	82	57	39	5	3	24.8%	Gravel	<p>Owner: Clifton Wescom. Area contains pit on hillside above the northeast side of Town Highway No. 13 about 0.1 mile from Town Highway No. 14.</p> <p>Test #1 was in east face of pit 75 feet from the south end. Material is: 1'-6', fine to very fine gravel; bottom, cobbles and silt.</p>
	2	1971	0.5-5	0-0.5	Yes	91	86	65	43	4	3	22.4%	Gravel	<p>Test #2 was in south face of pit. Material is: 0.5'-5', fine and very fine gravel; bottom, boulders and silt to clay.</p>
	3	1971	1-5	0-1	No	83	78	56	42	5	4	19.6%	Gravel	<p>Test #3 was located 160 feet south of pit in bulldozer test trench. Material is: 1'-5', very fine gravel and pebbly coarse sands; bottom, silt and rocks (till). Approximately 8,800 cubic yards of gravel occur in this area.</p>
15	1	1971	1.5-11	0-1.5	No	69	53	39	28	4	3	19.3%	Gravel	<p>Owner: Col. W.J. Burke. Area is ridge in pasture east of south pit next to Town Highway No. 21.</p> <p>Test #1 was located at north-east edge of pasture 170' southeast of a power line. Material is: 1.5'-11'+, layers of variably stony fine to coarse gravel with a few boulders. About 14,300 cubic yards of gravel occur in this area.</p>
16	1	1971	0-5	---	Yes		100	99	93	22	14	----	Gran. Borrow (Sand)	<p>Owner: Col. W. J. Burke. Area is a low terrace with pit east of Town Highway No. 21.</p>

EDEN GRANULAR DATA SHEET NO. 12

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks				
						2"	1½"	½"	#4	#100	#200							
	2	1971	0.5-2.5	0-0.5	Yes	----	N	O	T	S	A	M	P	L	E	D	-----	Test #1 was in northwest face of pit at lower level. Material is: 0-1.5', gravelly sand; 1.5'-4', pebbly coarse sand; 4'-4.5'+, fine slightly moist sand.
	3	1971			Yes	----	N	O	T	S	A	M	P	L	E	D	-----	Test #2 was in floor of pit 50 feet from south face. Material is: 0.5'-2.5', gravelly sand; bottom, silt to clay. Test #3 was in lower floor of pit below Test #1. Material is silt to clay. About 900 cubic yards of granular borrow occur in this area.
17	1	1971	1-5.5	0-1	Yes	63	59	44	33	7	6	18.2%	Gravel				Owner: Col. W.J. Burke. Area is a very flat terrace with pit east of Town Highway No. 21. Test #1 was in face at north-east corner of pit. Material is: 1'-3', gravel with cobbles; 3'-5.5'+, gravel grading to gravelly sand. Bottom of face has much sloughed material.	
	2	1971	1-10.5	0-1	Yes	56	54	40	30	2	2	19.1%	Gravel				Test #2 was on 10.5' northeast face of pit. Material is: 1'-10.5', variably stony layers of cobbly gravel to gravelly sand; bottom, gravel.	
	3	1971	0-2.5	----	Yes	----	N	O	T	S	A	M	P	L	E	D	-----	Test #3 was in face of pit 35' from north face. Material is: 0-2.5', good gravel; bottom, silt to clay. Approximately 1,100 cubic yards of gravel occur in this area.

EDEN GRANULAR DATA SHEET NO. 13

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks			
						2"	1½"	¾"	#4	#100	#200						
18	1A	1971	1-9.5	0-1	Yes	56	50	31	23	6	5	20.0%	Gravel	Owner: Midda Delisle. Area is a pit east of Town Highway No. 21 at point 0.8 mile north of junction with Town Highway No. 23. Test #1A was in east face of pit near the south end. Material is 1'-4.5', gravel; 4.5'-8.5', gravel with boulder zone; 8.5'-9.5'+, gravel.			
	1B	1971	9.5-20	---	Yes	76	62	45	31	5	3	21.8%	Gravel	Test #1B was in lower east face below Test #1A. Material is: 9.5'-18', fine and cobbly gravel beds; 18'-20', medium sand.			
	2	1971	1-12	0-1	Yes	100	81	70	53	7	6	-----	Gran. Borrow (Grav)	Test #2 was in north face of pit 90 feet from the west face. Material is: 1'-6', interbedded very fine gravel and pebbly sand; 6'-12', pebbly sand; bottom, gray medium sand.			
	3	1971	1-5.5	0-1	Yes	63	57	40	25	7	6	22.9%	Gravel	Test #3 was in north face of pit 65 feet from the east face. Material is: 1'-5.5', variable stony zones of cobbly gravel and pebbly gravel; bottom, gravelly sand.			
	4	1971				Yes	N	O	T	S	A	M	P	L	E	D	Test #4 was in the floor of pit below Test #1B. Material is: sand and gravel over clay.
	5	1971	1-12	0-1	Yes	85	79	56	38	4	4	22.3%	Gravel	Test #5 was in face at the north-east corner of pit. Material is: 1'-12', fine moist gravel with a few cobbles; bottom, silt-clay.			
6	1971	0-2		--	Yes	N	O	T	S	A	M	P	L	E	D	Test #6 was in floor of pit 90 feet from west face at bottom of north face. Material is pebbly	

EDEN GRANULAR DATA SHEET NO. 14

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	¾"	#4	#100	#200			
	7	1971	0-8	---	Yes	71	65	46	34	3	4	19.8%	Gravel	<p>gravel over silt-clay.</p> <p>Test #7 was in low face and floor at southeast part of pit. Material is: 0-8', moist fine gravel; bottom, coarse to fine sand.</p> <p>26,800 cubic yards of gravel and 2,900 cubic yards of granular borrow occur at this area.</p>
19	1	1971	1-8.5	0-1	Yes			100	98	18	11	-----	Sand	<p>Owner: Parker and Stearns. Area is a kame with pit east of Town Highway No. 21 at point 2.97 miles north of Vermont Route 100.</p> <p>Test #1 was in center of north-east face of pit. Material is: 1'-2.5', pebbly sand; 2.5'-8.5'+, fine sand with occasional pebbles; bottom, fine gray sand.</p> <p>900 cubic yards of sand occur in this area.</p>
20	1	1971	2-10	0-2	Yes	83	73	57	42	8	3	19.2%	Gravel	<p>Owner: Carroll Jones. Area is a pit in woodland west of State Aid Highway No. 1 about 2.6 miles north of Vermont Route 100.</p> <p>Test #1 was in west face of pit near north end. Material is: 2'-7', silty gravel and sand with stones; 7'-10', clean very fine gravel; bottom, silt-clay.</p>
	2	1971	0-7	---	Yes	73	71	50	36	7	7	19.6%	Gravel	<p>Test #2 was in face at north-east corner of pit. Material is: 0-7', fine cobbly gravel; bottom, silt-clay.</p>

EDEN GRANULAR DATA SHEET NO. 15

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	3	1971	2-7.5	0-2	Yes	76	72	48	35	17	12	19.5%	Gran. Borrow (Grav.)	<p>Test #3 was in middle of east face of pit. Material is: 2'-7.5', poorly sorted sandy or silty gravel; bottom, silt-clay.</p> <p>Test #4A was in face of pit truncating wooded knoll at southwest side. Material is: 0-1.5', roots and loam; 1.5'-6', fine gravel and gravelly sand.</p> <p>Test #4B was in face below Test #4A. Material is: 6'-11.5'+, coarse to fine sand with some cross-bedding.</p> <p>Test #5 was at southeast corner of pit. north of access road. Material is: 0-2', gravelly sand; 2'+, silt to clay.</p> <p>12,600 cubic yards of gravel, 4,000 cubic yards of sand and 14,200 cubic yards of granular borrow occur in this area.</p>
	4A	1971	1.5-6	0-1.5	Yes	66	58	41	22	10	5	20.4%	Gravel	
	4B	1971	6-11.5	0-	Yes			100	96	4	2	----	Sand	
	5	1971	0-2		Yes	-----N O T S A M P L E D-----								
21	1A	1971	1.5-14	0-1.5	Yes	73	71	50	33	6	4	17.6%	Gravel	<p>Owner: Mrs. Alma Dolan. Area is a pit north of Vermont Route 100 that is intersected by Lowell Town Line. Major extension would be into town of Lowell.</p> <p>Test #1A was in upper north face of pit. Material is: 1.5'-5', cobbly gravel with boulders; 5'-9', fine gravel with cobbles; 9'-14', pebbly gravel or pebbly very coarse sand; 14'+, same. This test is in Lowell.</p>

EDEN GRANULAR DATA SHEET NO. 16

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	¾"	#4	#100	#200			
	1B	1971	-----	N O T	S	A	M	P	L	E	D	-----	-----	<p>Test #1B was below Test #1A. No sample was taken because of heavy sloughings.</p>
	2	1971	0-10	---	Yes	75	68	53	40	8	7	17.4%	Gravel	<p>Test #2 was in 14.5 foot west face above lower level of pit. Material is: 0-2.5', fine gravel; 2.5'-7', bouldery gravel; 7'-10'+, pebbly very coarse sand.</p>
	3	1971	0.5-10	0-0.5	Yes	96	64	41	21	24	21	9.3%	----	<p>Test #3 was in floor near north end of pit. Material is: 0.5'-10', extremely stony, variably sized gravel with silt to clay coating.</p>
	4A	1971	0.5-5.5	0-0.5	Yes				100	84	52	-----	----	<p>Test #4A was in southwest corner of upper level next to access road. Material is: 0.5'-5.5', fine to very fine sand; bottom, gravel.</p>
	4B	1971	5.5-10.5	---	Yes	68	47	30	25	65	36	-----	----	<p>Test #4B was below Test #4A. Material is: 5.5'-10.5'+, poorly graded gravel.</p> <p>36, 700 cubic yards of gravel occur in this area.</p>
22	1	1971	1-9.5	0-1	No	61	60	41	31	8	5	15.2%	Gravel	<p>Owner: Vernon Bullard. Area is in brush-covered field north-west of Vermont Route 100 at point 0.35 mile north of junction with Town Highway No. 32.</p> <p>Test #1 was 50 feet north of highway near west end of clearing. Material is: 1'-9.5', bouldery and fine gravel layers with one sand lens; bottom, bouldery zone.</p>

EDEN GRANULAR DATA SHEET NO. 17

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks				
						2"	1½"	½"	#4	#100	#200							
	2	1971	1-9.5	0-1	No	65	58	45	33	17	13	15.0%	Gran. Borrow (Grav)	<p>Test #2 was at point in field 65 feet north of highway and 270 feet N.85°E. of Test #1. Material is: 1'-9.5', bouldery gravel becoming finer towards bottom of test hole.</p> <p>14,600 cubic yards each of gravel and granular borrow occur at this area.</p>				
23	1	1971	1-9	0-1	Yes	53	49	30	18	7	4	21.3%	Gran. Borrow (Grav)	<p>Owner: Boy Scouts of America. Area contains a pit in kame terrace about 0.1 mile northwest of Vermont Route 100 junction with Town Highway No. 32.</p> <p>Test #1 was in upper north face of pit near the east end. Material is: 1'-4', bouldery gravel; 4'-9', fine gravel with cobbles; 9'+, hard-packed wet stony gray till.</p>				
	2	1971	0-8	---	Yes	100	91	87	75	64	45	-----	-----	<p>Test #2 was in north face of pit near west end. Material is: 0-3', fine gravel; 3'-8', fine sand with silty clay.</p>				
	3	1971	0-2.5	---	Yes	-----	N	O	T	S	A	M	P	L	E	D	-----	<p>Test #3 was in floor of pit east of access road entrance. Material is: 0-2.5', gravelly sand; 2.5'-4'+, gray glacial till.</p>
	4	1971	2-3.5	0-2	Yes	-----	N	O	T	S	A	M	P	L	E	D	-----	<p>Test #4 was located 50 feet north-northwest of center of pit and northeast of woods road. Material is: 2'-3.5'+, boulders and loam to silt-clay.</p>
24	1	1971	0.5-8	0-0.5	Yes				38	9	7	18.3%	Gravel	Owner: Guy Harrington. Area				

EDEN GRANULAR DATA SHEET NO. 18

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	1"	#4	#100	#200			
	2	1971	0.5-5	0-0.5	Yes	58	48	33	22	11	9	18.9%	Gran. Borrow (Grav.)	<p>is kame terrace truncated by pit at northeast end. Pit is south of Vermont Route 100 and access is 1.12 miles north of junction with State Aid Highway No. 1.</p> <p>Test #1 was on upper southwest pit face near south end of pit. Material is: 0.5'-2', fine gravel; 2'-3.5', coarse sand with stones; 3.5'-8'+, gravel with cobbles and small boulders.</p> <p>Test #2 on upper southwest pit face was at point 110' northwest of Test #1. Material is: 0.5'-5', stony gravel with cobbles.</p> <p>3,900 cubic yards of gravel and 2,500 cubic yards of granular borrow occur in this area.</p>
25	1A	1971	1.5-19	0-1.5	Yes	59	56	37	27	5	1	11.5%	Gravel	<p>Owner: Richard Walker.</p> <p>Area is a pit in woods west of State Aid Highway No. 1 at point 0.14 mile north of its junction with Vermont Route 100.</p> <p>Test #1A was in northeast face 60 feet from northwest end of pit. Material is: 1.5'-3', sand; 3'-4', pebbly gravel; 4'-12', bouldery and cobbly gravel; 12'-15', gravel; 15'-18', coarse sand; 18'-20', gravel.</p>
	1B	1971	29-46		Yes	57	45	35	21	6	6	18.8%	Gravel	<p>Test #1B was below Test #1A in northeast face of pit. Material is: 19'-29', sloughed down and not in place; 29'-46', bouldery and cobbly gravel with much silt</p>

EDEN GRANULAR DATA SHEET NO. 19

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHTO T-4-35	Passes VHD Spec.	Remarks
						2"	1 1/2"	1/2"	#4	#100	#200			
	2A	1971	2-20	0-2	Yes	68	63	39	26	5	1	15.8%	Gravel	to clay below 45'. Test #2A was in northeast face 100 feet from southeast end of pit. Material is: 2'-7', bouldery gravel; 7'-11', gravel; 11'-16', gravelly sand; 16'-20', boulder-cobble zone with stony sand at 19'.
	2B	1971	20-35		Yes	65	56	42	33	3	2	10.5%	Gravel	Test #2B was below Test #2A in northeast face of pit. Material is 20'-35', interbedded stony gravelly sand and fine gravel.
	3	1971	41-55	0-1.5	Yes	68	66	42	31	9	7	14.7%	Gravel	Test #3 was in lower northeast face of pit east of Test #2B. Material is: ?-43', pebbly, coarse gray sand; 43'-55', cobbly and bouldery gravel, silt to clay coated.
	4	1971	0.5-9	0-0.5	Yes	71	61	47	35	8	8	19.9%	Gravel	Test #4 was located in floor of pit near east end. Material is: 0.5'-9'+, fine gravel with cobbles.
	5	1971	1.5-10.5	0-1.5	No	57	51	36	26	7	5	22.0%	Gravel	Test #5 was in extension 95' N.30°E. of pit at tree line. Material is: 1.5'-4', reddish sandy gravel; 4'-10.5'+, clean gray gravel. Material is bouldery and cobbly throughout.
	6	1971	1.5-11	0-1.5	No	61	49	35	26	9	7	25.3%	Gran. Borrow (Grav.)	Test #6 was in possible extension 180' N.60°E. of Test #5 and 40 feet west of State Aid Highway. Material is: 1.5'-8', gravel with cobbles and boulders; 8'-9', gravelly sand lens; 9'-11'+, gravel with cobbles. 50,500 cubic yards of gravel and 8,450 cubic yards of granular borrow occur in this area.

EDEN GRANULAR DATA SHEET NO. 20

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks			
						2"	1½"	½"	#4	#100	#200						
26	1	1971	.2-16	0-2	Yes	81	70	51	40	15	12	23.0%	Gran. Borrow (Grav.)	<p>Owner: Gerald Biggs. Area is a pit in wooded kame terrace on northeast side of Town Highway No. 25 at point 0.03 mile from Vermont Route 100.</p> <p>Test #1 was in north face. Material is: 2'-11', gravel with cobbles and a few boulders; 11'-16'+, coarse and pebbly coarse sands.</p> <p>About 900 cubic yards of granular borrow occur here.</p>			
27	1	1971	1-11	0-1	Yes	100	83	76	68	5	2	-----	Gran. Borrow (Sand)	<p>Owner: Richard Davis. Area is a pit surrounded by woods in feature mapped by D.P. Stewart as beach gravel. Pit is above south side of Vermont Route 100 with access road 0.1 mile east of junction with Town Highway No. 17.</p> <p>Test #1 was in upper east face of pit. Material is: 1'-2', pebbly sand; 2'-3', fine sand; 3'-6', pebbly coarse sand; 6'-8', gravelly sand; 8'-11', pebbly sand.</p>			
	2	1971	1-8	0-1	Yes			100	88	22	3	----	Sand	<p>Test #2 was in lower east pit face. Material is: 1'-2', pebbly coarse sand; 2'-5.5', medium sand; 5.5'-8', medium sand with pebbles; 8'+, silty sand.</p>			
	3	1971	---	---	Yes	N	O	T	S	A	M	P	L	E	D	-----	<p>Test #3 was in northwest floor of pit. Material is silt to clay.</p>
	4	1971	1-3.5	0-1	No	N	O	T	S	A	M	P	L	E	D	-----	<p>Test #4 was in northeast corner of a pasture above and 50' east of Test #1. Material is: 1'-3.5',</p>

EDEN GRANULAR DATA SHEET NO. 21

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis						Abrasion AASHTO T-4-35	Passes VHD Spec.	Remarks
						% Passing								
						2"	1½"	¾"	#4	#100	#200			
	5	1971	1-7.5	0-1	No		100	94	82	22	19	-----	-----	<p>silty sand, coarse sand and stones; 3.5'+, boulder till or blocks of detached bedrock.</p> <p>Test #5 was on knoll 230' southeast of Test #1. Material is: 1'-2.5', very fine sand; 2.5'-6.5', layers of pebbly and gravelly sand; 6.5'-7.5', fine gravel; 7.5'+, boulder till or blocks of detached bedrock.</p>
	6	1971	0-2	---	No	----- N O T S A M P L E D -----						-----	-----	<p>Test #6 was at northeast end of sand exposure about 225' southeast of pit. Material is: 0-2', pebbly coarse sand; 2'+, silt to clay.</p> <p>500 cubic yards of sand and 900 cubic yards of granular borrow occur in this area.</p>
28	1	1971	1-9	0-1	Yes		100	97	87	10	8	----	Sand	<p>Owner: Richard Davis. Area is a pit in pasture land southwest of pit at Map Ident. No. 27.</p> <p>Test #1 was in upper northeast face of pit. Material is: 1'-2', sand; 2'-7', pebbly coarse sand; 7'-9'+, sand.</p>
	2	1971	0.5-10.5	0-0.5	No		100	94	89	7	3	----	Sand	<p>Test #2 was in possible extension 35 feet north of northwest corner of pit. Material is: 0.5'-6', pebbly coarse gray sand; 6'-10.5'+, fine sand layers.</p>
	3	1971	0.5-5	0-0.5	No		100	95	87	2	1	-----	Sand	<p>Test #3 was located 95 feet northeast of Test #2 on north slope of knoll. Material is: 0.5'-5', pebbly gray medium sand; 5'+, silt to clay with stones.</p>

EDEN GRANULAR DATA SHEET NO. 22

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	¾"	#4	#100	#200			
														About 7,600 cubic yards of granular borrow occur at this area.
29	1	1971	1-9	0-1	No	51	46	31	22	23	19	16.9%	-----	Owner: Paul Bagalio. Area is within a kame moraine south of State Aid Highway No. 1 and is reached by private road 0.15 mile east of Vermont Route 100. Test #1 was at top of slope northwest of Eban Brown house. Material is: 1'-9', bouldery and cobbly dirty-looking gravel.
	2	1971	1-9.5	0-1	No	66	60	40	29	5	5	23.2%	Gravel	Test #2 was in west corner of field on low knoll 300 feet S.80°W. of Test #1. Material is: 1'-6', bouldery and cobbly gravel; 6'-9.5', fine gravel bottoming in cobbly gravel.
	3A	1971	0.5-7	0-0.5	Yes	65	55	38	26	10	6	17.6%	Gravel	Test #3A was in southeast face of pit about 290 feet south of Test #2. Material is: 0.5'-7', fine gravel with a few cobbles.
	3B	1971	7-10.5		Yes				100	11	6	----	Sand	Test #3B was below Test #3A in southeast face of pit. Material is: 7'-8', fine sand; 8-10.5', coarse clean gray sand.
	4	1971	0-9.5		Yes	76	69	39	25	16	5	13.5%	Gravel	Test #4 was in northeast floor of pit. Material is: 0-9.5', loose stony gravel with pockets of stones; 9.5'+, fine gray sand with stones.
	5	1971	1-10.5	0-1	No	69	66	49	36	5	3	19.9%	Gravel	Test #5 was near edge of woods 275 feet southwest of pit. Material is: 1'-4', cobbly dirty gravel; 4'-10.5'+, stony gravelly sand with fine gravel layers.

EDEN GRANULAR DATA SHEET NO. 23

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	1½"	#4	#100	#200			
	6	1971	1,5-11	0-1.5	No	66	58	49	43	6	2	-----	Gran. Borrow (Grav.)	<p>Test #6 was in southwest corner of field 275 feet southwest of Test #5. Material is: 1.5'-6', cobbly dirty gravel; 6'-9.5', coarse sand; 9.5'-11', pebbly sand. There was insufficient proper size stone for the "percent of wear" test.</p> <p>Approximately 55,200 cubic yards of gravel and 10,100 cubic yards of sand occur at this area.</p>
30	1A	1971	1-9	0-1	Yes	94	88	66	43	5	2	19.4%	Gravel	<p>Owner: John Stevenson. Area is a pit in grassy meadow mapped as a beach gravel by D.P. Stewart. Pit is south of State Aid Highway No. 1 at point 0.09 mile east of junction with Town Highway No. 26.</p> <p>Test #1A was in upper southeast face of pit. Material is: 1'-3', thin interbeds of fine gravel and gravelly sand; 3'-9', stony fine gravel.</p>
	1B	1971	9-16		Yes	100	86	60	41	12	10	20.5%	Gran. Borrow (Grav.)	<p>Test #1B was in lower southeast face of pit below Test #1A. Material is: 9'-12', clean coarse sand; 12'-16'+, gravel.</p>
	2	1971	1-9	0-1	Yes	79	65	46	32	7	4	22.9%	Gravel	<p>Test #2 was in southwest face of pit 80 feet from south end. Material is: 1'-5', gravel with cobbles and boulders; 5'-9', gravel and gravelly sand; 9'+, coarse sand.</p>
	3A	1971	1-4	0-1	Yes	48	39	31	24	14	11	18.2%	Gran. Borrow (Grav.)	<p>Test #3A was in northwest face 60 feet from north end of pit. Material is: 1'-3', cobbly reddish gravel; 3'-4', clean coarse sand.</p>

EDEN GRANULAR DATA SHEET NO. 24

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	1"	#4	#100	#200			
	3B	1971	4-11		Yes		100	94	89	9	6	-----	Sand	<p>Test #3B was below Test #3A in northwest face of pit. Material is: 4'-11'+, clean coarse sand.</p> <p>About 6,600 cubic yards of sand and 3,800 cubic yards of granular borrow occur at this area.</p>
31	1	1971	1.5-11	0-1.5	Yes	88	75	51	35	7	4	17.4%	Gravel	<p>Owner: Norman Rolband. Area is pit in kame terrace west of Town Highway No. 26 at point 0.25 mile south of State Aid Highway No. 1.</p> <p>Test #1 was in northwest face of pit. Material is: 1.5'-5', cobbly sandy gravel; 5'-11'+, gravel and gravelly sand.</p> <p>About 3,000 yards of gravel are here.</p>
32	1	1971	1.5-10.5	0-1.5	No	72	61	44	33	6	4	18.8%	Gravel	<p>Owner: Town of Eden. Area is town dump located in kame moraine 0.3 mile west of Town Highway No. 26 at point 0.4 mile south of State Aid Highway No. 1</p> <p>Test #1 was located on top of kame northeast of recently opened excavation. Material is: 1.5'-10.5'+, gravelly sand and fine gravel with pocket of cobbles.</p>
	2	1971	1.5-10.5	0-1.5	No	78	74	55	43	6	4	27.2%	Gran. Borrow (Grav)	<p>Test #2 was located 18 feet below and S.20° E. of Test #1 in depression. Material is: 1.5'-2.5', fine sand; 2.5'- 10.5',</p>

EDEN GRANULAR DATA SHEET NO. 25

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	3	1971	1-9.5	0-1	No	60	52	41	31	5	4	18.6%	Gravel	cobbly gravel; 10.5'+, fine gravel. Test #3 was on top of kame 250 feet south of Test #2. Material is: 1'-5', gravel with a few cobbles; 5'-9.5'+, fine gravel or gravelly sand. Material sampled is poorly consolidated. 13,100 cubic yards of gravel and 5,000 cubic yards of granular borrow occur in this area.
33	1	1971	1.5-10.5	0-1.5	No	84	78	62	49	14	7	35.8%	Gran. Borrow (Grav.)	Owner: Town of Eden. Area is a recently opened pit in kamic ridge west of access road from Map Ident. No. 32. Test #1 was on gentle slope 120 feet west of bend in access road. Material is: 1.5'-8.0', fine gravel with a few cobbles; 8.0'-9.0', steeply dipping fine sand seam; 9'-10.5', fine gravel.
	2	1971	1.5-10	0-1.5	No	74	64	49	42	10	5	30.0%	Gran. Borrow (Grav.)	Test #2 was on ridge 120 feet S.70°W. of pit. Material is: 1.5'-6.5', fine gravel with a few cobbles; 6.5'-9', fine sand lens; 9'-10'+, clean gray gravel.
	3	1971	1.5-11.5	0-1.5	No	66	62	47	37	10	9	17.9%	Gran. Borrow (Grav.)	Test #3 was in wooded saddle on ridge 145 feet S.80°W. of Test #2. Material is: 1.5'-3.5', dirty fine sand; 3.5'-9.0', gravel with cobbles.
	4	1971	0.5-10.5	0-0.5	Yes	100	85	82	75	15	4	-----	Gran. Borrow (Grav.)	Test #4 was at south side of pit floor near access road. Material is: 0.5'-8.5', orange and gray medium sands; 8.5'-10.5'+, pebbly sand.

EDEN GRANULAR DATA SHEET NO. 26

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														Approximately 20,900 cubic yards of granular borrow occur at this area.
34	1	1971	1-11	0-1	No	67	58	41	29	10	7	18.5%	Gravel	Owner: Mrs. Eva Parker. Area is large pasture west of Town Highway No. 26 at point 0.5 mile south of State Aid Highway No. 1. Test #1 was 95 feet west of Town Highway No. 26 and 105 feet south of field drive. Material is: 1'-8', hard-packed gravel with a few cobbles; 8'-11'+, gravelly sand.
	2	1971	1-10	0-1	No	93	85	68	55	5	3	17.2%	Gravel	Test #2 was 95 feet west of Town Highway No. 26 and 250 feet S.20°W. of Test #1. Material is: 1'-7', fine gravel; 7'-9', lens of gravelly sand; 9'-10', fine gravel; bottom, boulders.
	3	1971	1-8	0-1	No	68	64	50	38	6	2	22.6%	Gravel	Test #3 was 140 feet west of Town Highway No. 26 and 250 feet S.20°W. of Test #2. Material is: 1'-8', gravel with a few cobbles; 8'-9', white to tan fine sand; 9'+, coarse pebbly gray sand.
	4	1971	1-10	0-1	No	84	79	54	39	6	4	19.2%	Gravel	Test #4 was located 240 feet N.45°W. of Test #3 on top of slope. Material is: 1'-6', gravel with a few cobbles; 6'-7', sand seam; 7'-10', fine gravel; bottom, same.
	5	1971	1-11.5	0-1	No	100	81	72	68	20	9	-----	Gran. Borrow (Sand)	Test #5 was located 190 feet N.15°W. of Test #4 and 300 feet N.70°W. of Test #2. Material is: 1'-4.5', gravelly or pebbly sand; 4.5'-11.5', gray medium to coarse

EDEN GRANULAR DATA SHEET NO. 27

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	6	1971	1-9	0-1	No	82	77	51	35	9	7	17.3%	Gravel	<p>sand; 11.5'+, cobbles and water. Test #6 was located 250 feet N.20°E. of Test #5 and 280 feet N.70°W. of Test #1. Material is: 1'-9', fine gravel; 9'+, bedrock or boulders.</p> <p>About 89,500 cubic yards of gravel and 25,100 cubic yards of granular borrow occur in this area.</p>
35	1	1971	2-12	0-2	Yes	81	66	53	39	10	7	20.7%	Gravel	<p>Owner: Mrs. Eva Parker. Area is an inactive pit south of town dump road at point 0.15 mile west of Town Highway No. 26. Test #1 was at southeast corner of pit on face. Material is: 2'-4', fine gravel and pebbly sand; 4'-7', gravel; 7'-12'+, fine gravel and gravelly sand.</p>
	2	1971	1.5-9	0-1.5	Yes	69	65	46	33	12	11	20.3%	Gran. Borrow (Grav.)	<p>Test #2 was on south face of pit near the west end. Material is: 1.5'-7', gravel with a 1.5-foot sand bed; 7'-9'+, gravelly sand.</p>
	3	1971	0-11	---	Yes	88	79	70	60	3	2	-----	Sand	<p>Test #3 was in floor of pit near east face. Material is: 0-2', gravel with cobbles and boulders; 2'-11'+, pebbly sand.</p>
	4	1971	1-10	0-1	No	89	81	72	51	21	4	-----	Gran. Borrow (Grav.)	<p>Test #4 was located 100 feet east of Test #1 and 175 feet south of town dump road. Material is: 1'-3.5', fine gravel; 3.5'-10'+, pebbly sand.</p>
	5	1971	1.5-10.5	0-1.5	No	64	60	40	25	7	5	17.5%	Gravel	<p>Test #5 was located 150 feet south-southwest of Test #4 and 85 feet east of woods. Material is:</p>

EDEN GRANULAR DATA SHEET NO. 28

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														1.5'-8.5', gravel; 8.5'-10', gravelly sand or very fine gravel; 10'+, pebbly sand. Approximately 11,800 cubic yards of gravel, 5,000 cubic yards of sand and 12,500 cubic yards of granular borrow occur in this area.
36	1	1971	1.5-6.5	0-1.5	No		100	99	94	13	7	-----	Sand	Owner: Merrill B. Heath. Area is in woodland on possible kame moraine reached by private road about 1.0 mile south of Town Highway No. 26 and east of South Pond. Test #1 was at west edge of road about 0.1 mile southeast of woods roads junction. Material is: 1.5'-3', fine sand; 3'-6.5'+, gray, pebbly coarse sand.
	2	1971	1.5-4.5	0-1.5	No			100	98	31	12	-----	Gran. Borrow (Sand)	Test #2 was at west edge of road 325 feet south of Test #1 where road makes sharp bend toward west. Material is: 1.5'-3', very fine sand with pebbles and roots, 3'-4.5'+, gray fine sand.
	3	1971	2-9.5	0-2	No				100	34	34	-----	----	Test #3 was located 500 feet southwest of Test #2 and 320 feet northeast of South Pond in woods road. Material is: 2'-3', pebbly coarse sand; 3'-5.5', fine sand with cross-bedding; 5.5'-6.5', silty sand; 6.5'-9.5'+, reddish, layered fine sand. 27,700 cubic yards of sand and 4,400 cubic yards of granular borrow occur at this area.

TABLE I
Supplement

EDEN PROPERTY OWNERS - GRANULAR

Map Ident. No.

Bagalio, Paul	29
Biggs, Gerald	26
Boy Scouts of America	23
Bullard, Vernon	22
Burke, W.J. (Col.)	15,16,17
Daigle, Joseph	2,3
Davis, Richard	27,28
Delisle, Mida	18
Dolan, Alma (Mrs.)	21
Eden, Town of	32,33
Harrington, Guy	24
Heath, Merril B.	36
Ingalls, Henry	7,8,9
Jones, Carroll	20
Lackey, Frank	4
Morin, Dennis	5,6
Morin, Hayden	1
Mullins, Norma	13
Mullins, Robert	13
Parker, Eva (Mrs.)	34,35
Parker and Stearns Lumber Co.	19
Rolband, Norman	31
Specht, Elizabeth (Mrs.)	11,12
Stevenson, John	30
Walker, Richard	25
Wescom, Clifton	14
Young, Ross	10

EDEN ROCK DATA SHEET NO. 1

Map Ident. No.	Field Test No.	Year Field Tested	Rock Type	Existing Quarry	Method of Sampling	Abrasion AASHO T-3	Results
1	1	1971	Serpentine	Yes	Chip	3.5%	<p>Owner: General Aniline and Film Corporation. Area is known as the old asbestos quarry on Belvidere Mountain. At the time of survey it comprised a huge abandoned open-pit mine of two levels above a large waste pile, fallen mill buildings and silos for ore storage. There were thousands of yards of ultramafic blocks scattered about the upper floor that average about one cubic yard apiece in volume. Access to mine floors is very steep, narrow and winding. Access to mill buildings is of moderate grade.</p> <p>Test #1 material was of fallen blocks at random along 100-foot base of northwest face of upper level. An AASHO T-96 test yielded 21.2% wear.</p> <p>Test #2 material was of random blocks along base of north face of lower level. An AASHO T-96 test yielded 12.0% wear.</p> <p>Ultramafic rock tested was serpentinite and serpentinized dunite and peridotite. Bands of chrysotile (asbestos) occur in variable widths, and thus greatly affect hardness of rock locally.</p>
	2	1971	Serpentine	Yes	Chip	2.5%	

TABLE II
Supplement

EDEN PROPERTY OWNERS - ROCK

Map Ident. No.

General Analine Film Corporation

1