



MANITOBA

DEPARTMENT OF ENERGY AND MINES
MINERAL RESOURCES DIVISION

OPEN FILE REPORT
OF83-1

AGGREGATE RESOURCE INVENTORY
OF THE SOUTH RIDING MOUNTAIN AREA

By
R.V. Young



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Winnipeg, 1982

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AGGREGATE RESOURCE INVENTORY OF THE SOUTH RIDING MOUNTAIN AREA

ABSTRACT

An aggregate resource inventory was conducted within the South Riding Mountain area in 1981. Field investigations included mapping the surficial geology and backhoe testing of selected deposits. Laboratory sample analysis included grain size analysis and determination of clast lithologies. The sand and gravel deposits are located within kame moraines, outwash plains and meltwater terrace deposits. There are 275 million cubic meters of sand and gravel reserves within the study area, sufficient reserves for more than 25 years. High quality deposits are not present due to the high shale content.

INTRODUCTION

The South Riding Mountain study area consists of Rural Municipalities of Strathclair, Harrison, Clanwilliam, Minto and the Local Government District of Park. It is located between latitudes $50^{\circ} 14'$ to $50^{\circ} 43'$ north and longitudes $99^{\circ} 41'$ to $100^{\circ} 31'$ west, and south of and adjoining Riding Mountain National Park (Fig. 1). It covers an area of 2660 square kilometres.

The purpose of this study was to map the surficial geology and to provide detailed aggregate resource information for each municipality. Preliminary map series 1980 SRM 1-4 (Groom, 1980) at a scale of 1:50 000 are available delineating the surface deposits. The location and quality of aggregate resources shown on Map OF83-1 accompanying this report was based on this preliminary map series.

PREVIOUS WORK

Tyrrell (1890) studied the Cretaceous bedrock along the Assiniboine River and describes bedrock outcrops near Minnedosa. Using regional nomenclature, Kirk (1930) described the stratigraphy of the marine Cretaceous of Manitoba from Swan River to Turtle Mountain. A comprehensive report and map was published by Wickenden (1945) on the Mesozoic stratigraphy along the Manitoba Escarpment. The chemical and mineralogical composition of the Millwood and Odanah Members of the Riding Mountain Formation are presented by Bannatyne (1970) to determine the economic potential of these members. The bedrock topography and geology are shown in

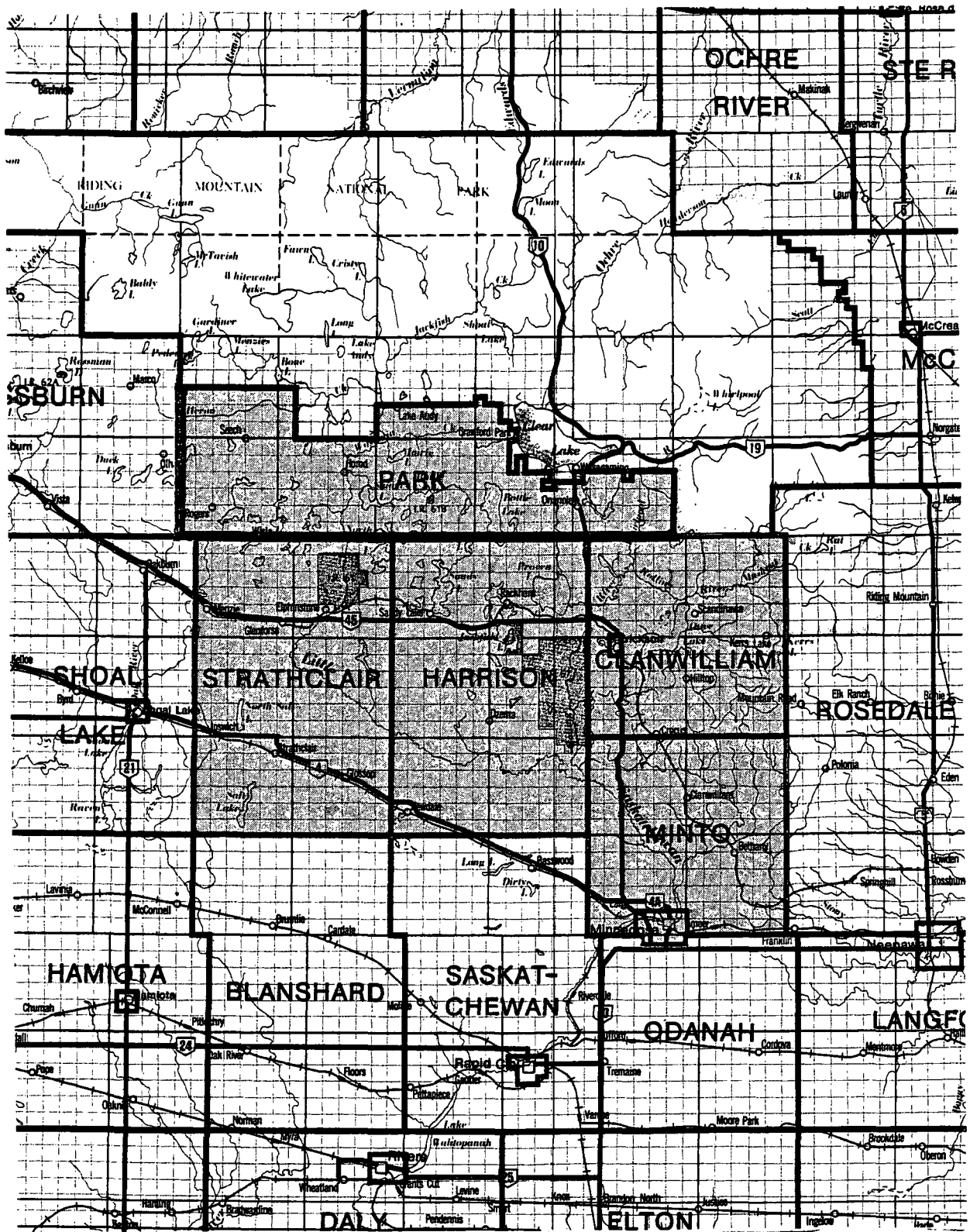


Figure 1. Location of the South Riding Mountain study area.

Klassen et al. (1970) and Teller et al. (1976). Cretaceous rocks and their foraminifera are described in detail by McNeil and Caldwell (1981) who correlate the Riding Mountain Formation with the Pierre Shale.

Early geological reports by Bell (1876) and Tyrrell (1892) mention some of the glacial geology of the area. A surficial geology map and description of surficial deposits was first presented by Johnston (1934). The Quaternary geology and geomorphology is described in detail by Klassen (1969, 1975, 1979) and Klassen and Elson (1972). A preliminary report on the surficial geology and aggregate resources was previously published by Groom (1980).

PRESENT STUDY

Airphotographs at scales of 1:70 000 and 1:15 840 were used to delineate surficial deposits. All natural exposures and road cuts were examined in the field by H. Groom. A backhoe was used to evaluate selected surficial deposits and to sample sand and gravel deposits. Laboratory analysis included sieving the sand and gravel samples between 0.074-101.6 mm. Sizes greater than 2.0 mm were retained for pebble analysis. Pebble analysis included the percentage of each lithology as well as the weight percentage shale. The grain size analysis data was run through the Aggregate Resources Section Industrial Usage Assessment computer program which correlated the data to industrial specifications.

The quality of each sand and gravel deposit was estimated based on the percentage gravel (sizes greater than 2.0 mm). Reserve estimates were calculated by multiplying the areal distribution of each deposit by the average depth. Reserve estimates for each quarter section are available on computer printout through the Aggregate Resources Section.

TOPOGRAPHY

The South Riding Mountain study area lies west of the Manitoba Escarpment at the Second Prairie Level. It can be divided into two physiographic regions. The Riding Mountain Uplands generally lie above the 550 m contour and cover the northeastern two-thirds of the map area. The Assiniboine River Plain lies below this contour and forms the remaining portion of the district. The topography on the uplands is that of a hummocky stagnation moraine. Numerous

kettle lakes and sloughs dot the area and the relief is high, often exceeding 10 m. The relief on the plain is more subdued and rarely exceeds 8 m. The topography is rolling and lakes and sloughs are numerous.

BEDROCK GEOLOGY

The upper bedrock in the study area consists of shales of the Upper Cretaceous Riding Mountain Formation (Pierre Shale of McNeil and Caldwell, 1981). Overburden depth varies from bedrock exposures along Minnedosa River to depths of 182 m (Teller *et al.*, 1976) southeast of Erickson. The bedrock consists primarily of the Odanah Member, a hard siliceous shale. South of Minnedosa (Little Saskatchewan) River and adjacent to Highway 10, the bedrock is bentonitic shale of the Millwood Member. The economic potential of each member is discussed by Bannatyne (1970).

SURFICIAL GEOLOGY

The surficial geology is shown in Figure 2. The oldest recognized till in the area is the Minnedosa Till named by Klassen (1966). This till is yellow brown to grey brown, compact, jointed and manganese stained along the joints. It was not seen in outcrop at the surface but was identified in several road cuts where it underlies younger till.

There are two surface tills in the study area: the Lennard Till on the plain and the Zelena on the uplands. Lithologically and physically they are very similar. They are loose, structureless, slightly clayey, yellow brown to grey brown in colour and contain shale, Precambrian and carbonate pebbles in the coarse fraction. Klassen (1979) differentiates the tills on the basis of the carbonate content of the matrix; the Lennard contains 14 to 19 per cent carbonate while the Zelena contains between 26 and 36 per cent.

The knolls and ridges of the plain are composed entirely of till but on the uplands the hummocks occasionally comprise till underlying stratified silt, sand or sand and gravel.

Two large kame moraines are found on the uplands. One is 8 km long and trends northward along the western edge of Bottle Lake (Fig. 3). The other extends west from the first kame moraine for 13 km to the Minnedosa River. These features are up to 25 m high and consist primarily of coarse sand and shaley pebble gravel.



Figure 3. Airphoto stereopair (A21808-36, 37, 1:70 000) showing sand and gravel kame moraine complex (1) of deposit 22011. Also shown is deposit 22007A and Bottle Lake (2).

Two roughly triangular glaciofluvial outwash plains cover a large portion of the upland area. One lies northwest of the Minnedosa River below Heron Creek and the other lies east of the Minnedosa River between Clear Lake and Proven Lake. The surface of these outwash plains is hummocky with relief up to 10 m although locally they are gently rolling. The northern plain consists largely of coarse, shaley gravel in the west and grades into sand and silt to the east along the Minnedosa River (Fig. 4). The eastern outwash plain also consists of coarse shaley gravel at its northern extent near Clear Lake and grades into sand and silt towards the south. The material within the hummocks is often faulted indicating the outwash was laid down over ice which later melted away producing the faulting and the rolling topography. A third outwash plain, east of Otter Lake, is much smaller in areal extent and its surface is flatter than the plains to the west. It is comprised of 3 to 5 m of shale rich pebble gravel.

The Minnedosa River and Rolling River Valleys are spillways that carried meltwater from the area during the last deglaciation. Their terraces, particularly along the Minnedosa River, are often comprised of thick accumulations of sand and gravel (Fig. 5). The deposits are usually very shaley but occasionally the shale content is as little as 15 per cent.

A series of meltwater channels much smaller than the spillways are located on the till plain near Strathclair. Two exposures in the channels indicate that they are floored by shallow deposits of shaley fine pebble gravel (Fig. 6).

Deposits of glaciolacustrine clays occur in a large area around Proven Lake and in a much smaller area near Erickson. In both of these areas the terrain is flat. They consist of yellow silt grading into yellow silty clay that is jointed and manganese stained and overlies a grey, lacustrine clay.

Drainage is not yet well established and with the exception of deposits on the spillway floors, there is little alluvium in the area. Organic deposits, on the other hand, are very common. There are large swamps around Proven and Bottle Lakes and along the banks of the creeks. Most of the small kettle lakes and sloughs are fringed with hay meadows or swamp deposits consisting of muck and peat.

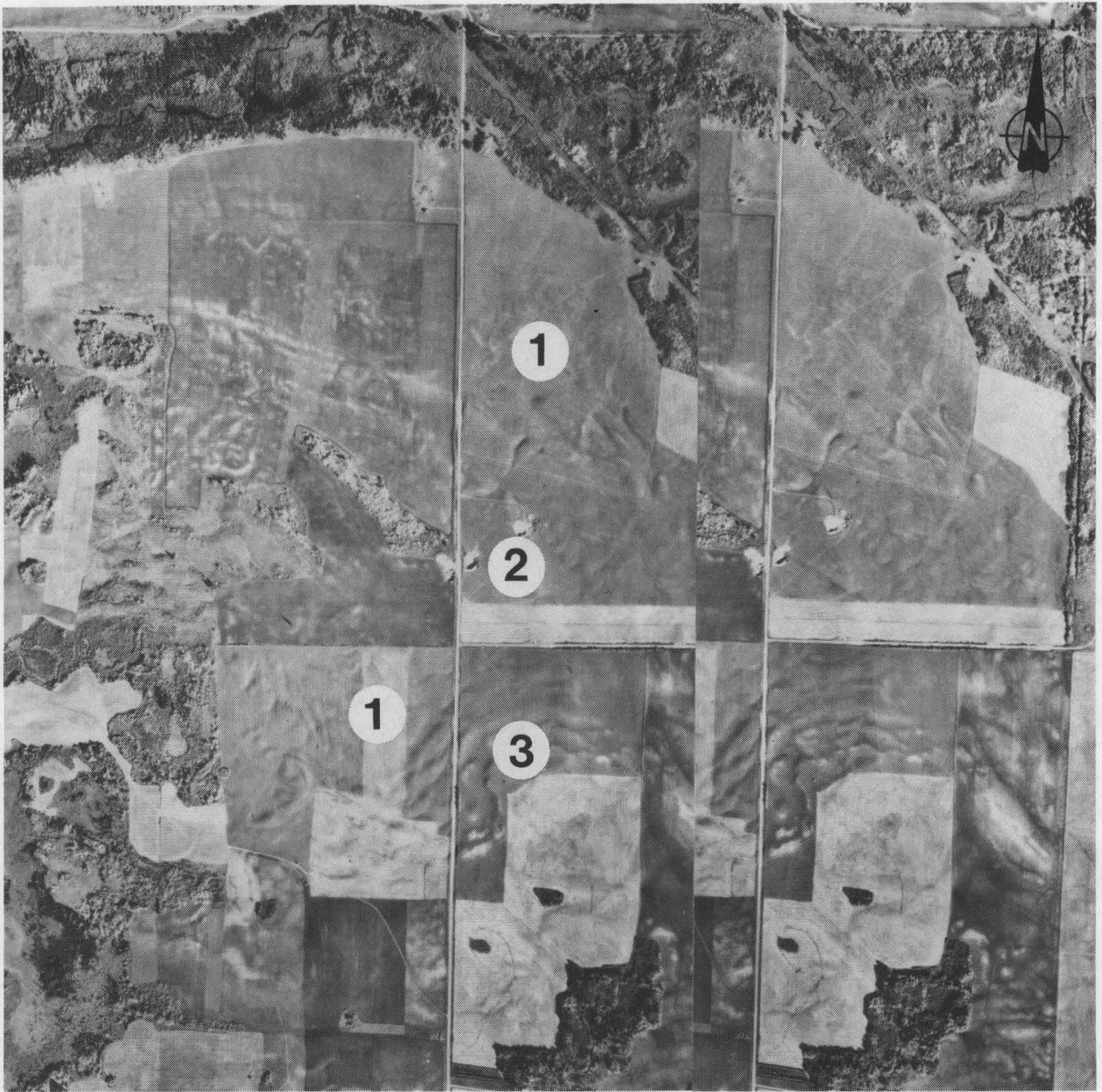


Figure 4. Airphoto stereopair (A18630-74, 75 at 1:15 840) of deposit 22006 showing outwash plain (1), gravel pits (2) and gravel ridges (3).

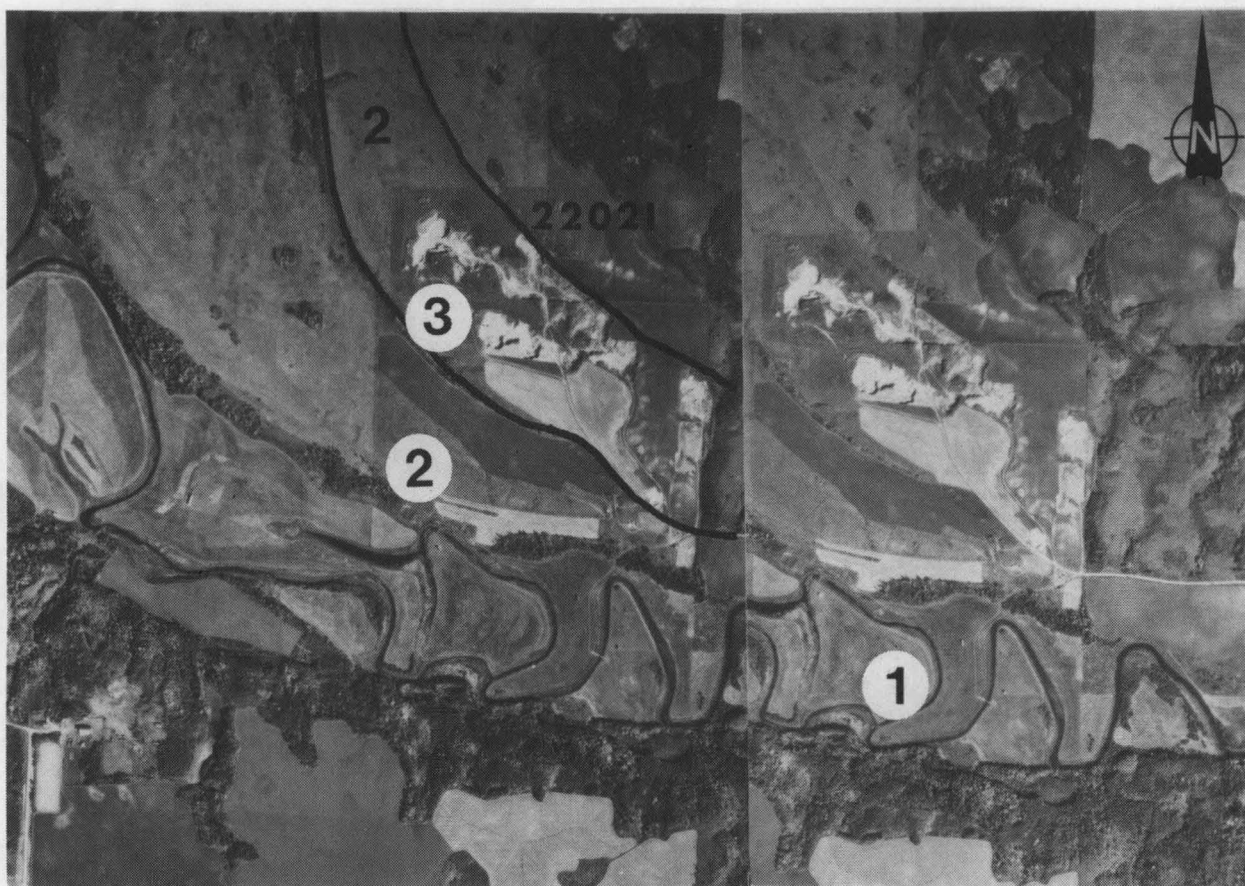


Figure 5. Airphoto stereopair (A18626-123, 124, 1:15 840) showing terrace sand and gravel deposit 22021. Also shown are Minnedosa (Little Saskatchewan) River floodplain (1), terraces (2) and gravel pits (3).

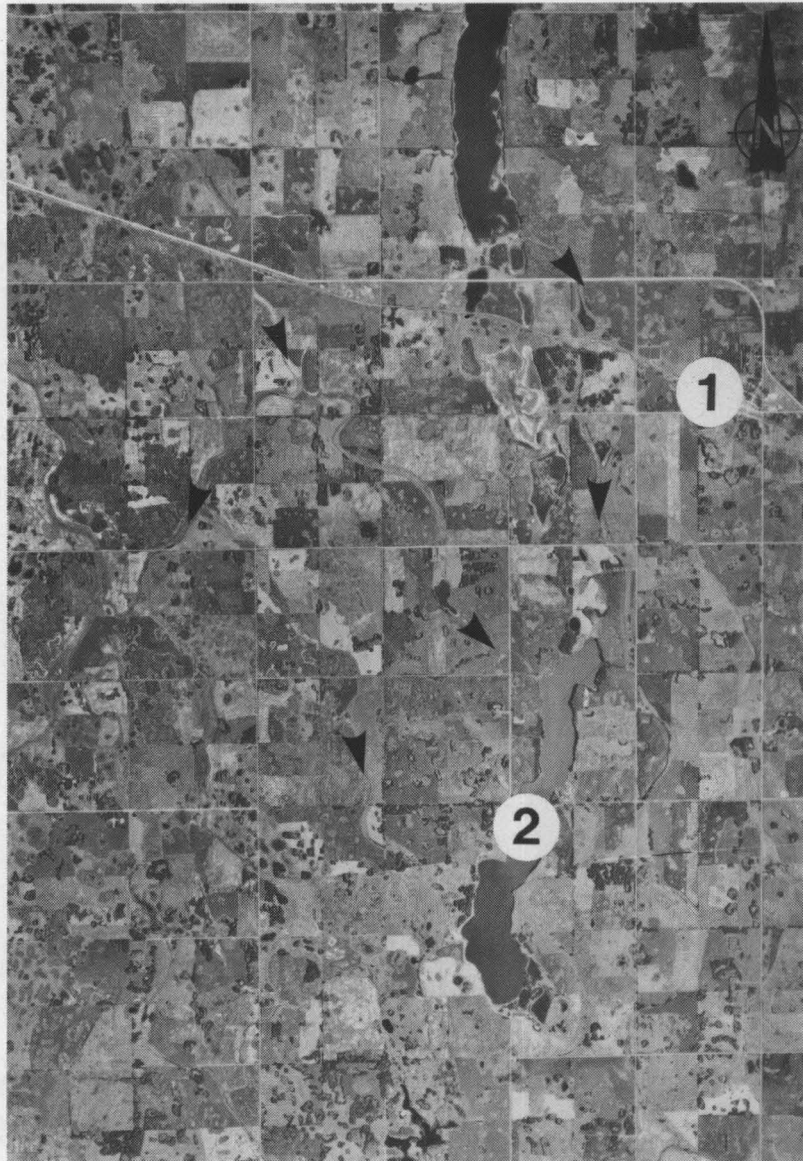


Figure 6. Airphoto (A21748-31, 1:70 000) showing meltwater channels near Strathclair (1) and Salt Lake (2). Arrows indicate direction of flow.

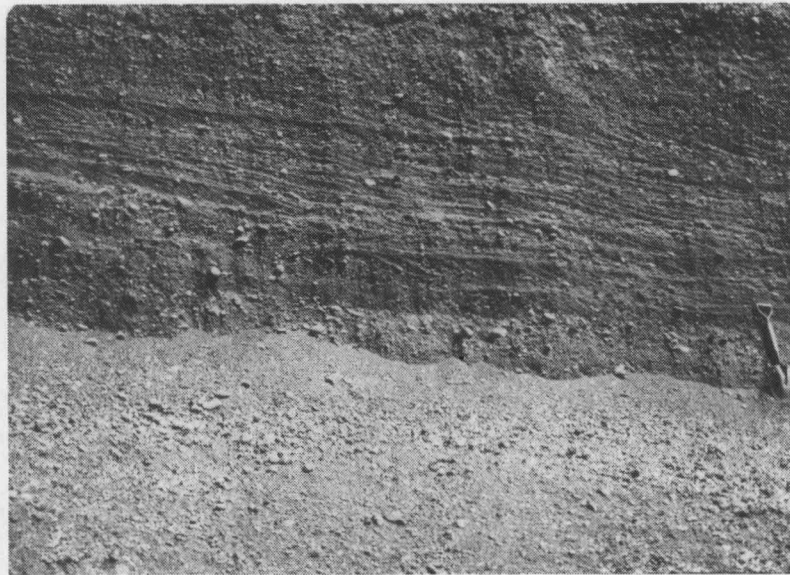


Figure 7. Terrace deposit 22021 along the Minnedosa Spillway, 5 km south of Elphinstone. Shovel is 0.97 m high.

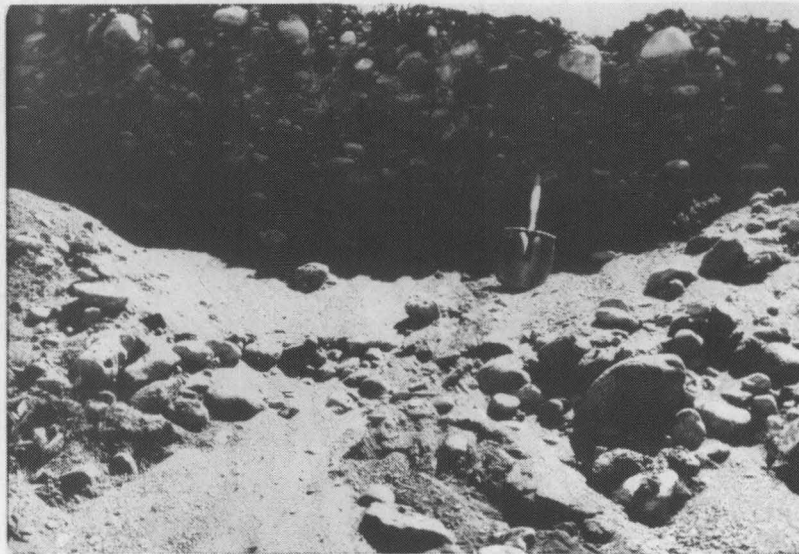


Figure 8. Cobble gravel of terrace deposit 22015 along the Minnedosa Spillway, 2 km north of Elphinstone. Shovel is 0.97 m high.

AGGREGATE RESOURCES

Aggregate resources within the study area are the result of the melting of stagnant ice on the Riding Mountain Upland. Meltwater flowed south from the Upland through a series of channels and spillways into Lake Souris, and at a later stage into Lake Agassiz. Two prominent spillways, the Minnedosa and Rolling Rivers deposited sand and gravel as river terraces (Figures 7 and 8). Esker-kame complexes and outwash plains (Fig. 9) were also deposited as the stagnant ice melted.

The distribution of sand and gravel deposits are shown on Map OF83-1 accompanying this report. Pebble lithologies and a summary of grain size analysis of each sample is shown on Table 1, Appendix I. Generalized material content, estimated quality, and reserves are shown on Table 2, Appendix I.

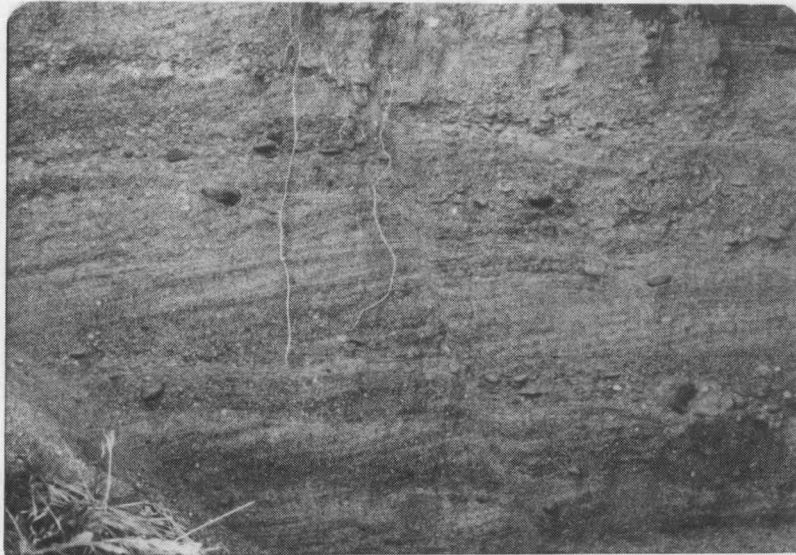


Figure 9. Faulted sand in outwash plain deposit 22006, 1.5 km south of Crawford Park. Scale is 1 cm = 0.19 m.

Quality of Sand and Gravel

A total of 76 deposits have been identified within the study area. The generalized quality of each deposit was estimated based on field observations, the percentage gravel (sizes greater than 2.0 mm), and potential industrial uses. Laboratory analyses were performed on 85 samples.

The type of industrial uses for which the sample is suited is related to the grain size distribution. Although processing methods can modify the sediment to accommodate a variety of potential uses, the industrial uses are based on the natural (unprocessed) characteristics of the deposit. A computer program developed by the Aggregate Resources Section of the Mineral Resources Division correlates specification requirements (grain size distribution) of 48 different industrial uses with the grain size distribution data derived from laboratory testing of each sample. The computed results include individual ratings (suitable, marginal, or not suitable) for each correlation, and a positive or negative indication of whether screening is required; whether it is necessary to remove silt or clay from the deposit; whether crushable material is available on site; or whether it is necessary to add fines to meet the specifications for a particular use.

Size fractions greater than 8 cm were normally not included within the deposit sample. Size fractions greater than 15 cm are recorded in the field and referred to as crushable material. Due to the complexity of sampling the coarse size fractions (cobbles and boulders) this size fraction was not included with the grain size distribution and is reflected in the absence of suitabilities for the coarse aggregate specifications.

The grain size distributions and industrial assessment for each sample are presented in Appendix II.

Reserves of Sand and Gravel

Total estimated reserves within the study area are 275 115 400 cubic metres. Reserves for each municipality are shown as Table 1, and total reserves by quality are shown as Table 2. There are no high quality reserves within the study area, although there are 127.4 million cubic metres of medium to high quality sand and gravel. The largest reserves are located within the L.G.D. of Park with an estimated 192.9 million cubic metres or 70 per cent of available reserves.

TABLE 1

Estimated Reserves of Sand and Gravel
by Municipality

Municipality	Reserves (cubic meters)	Per Cent
L.G.D. Park	192 900 000	70.1
R.M. Clanwilliam	14 400 000	5.2
R.M. Harrison	31 900 000	11.5
R.M. Strathclair	12 600 000	4.5
R.M. Minto	23 300 000	8.4
TOTAL	275 100 000	99.7

TABLE 2

Estimated Reserves of Sand and Gravel
by Quality

Quality	Reserves (cubic meters)
High	-
Medium-High	127 400 000
Medium	38 700 000
Low-Medium	83 400 000
Low	19 500 000
Unknown	6 100 000
TOTAL	275 100 000

TABLE 3

Estimated Annual Demand for Sand and Gravel
by Municipality
(cubic metres)

	LGD Park	R.M. Clanwilliam	R.M. Harrison	R.M. Strathclair	R.M. Minto
Municipal	500	6 000	15 000	14 000	300
Dept. Highways	3 600	9 200	13 000	38 800	700
Contractors	-	10 000	-	-	-
TOTAL	4 100	25 200	28 000	52 800	1 000
Cumulative Total	111 100 cubic metres				

Demand for Aggregate

The estimation of the demand for sand and gravel was derived from consideration of:

1. Manitoba Department of Highways and Transportation upgrading and improvements,
2. Requirements of each municipality, and
3. Construction requirements of private contractors and aggregate suppliers.

The demand for sand and gravel by municipality is shown on Table 3. Annual demand is estimated at 111 100 cubic metres, with the highest demand within the R.M. of Strathclair. The Manitoba Department of Highways and Transportation utilizes an estimated 63 500 cubic metres annually, or 59 per cent of all sand and gravel consumed.

CONCLUSIONS

The South Riding Mountain area has an abundance of sand and gravel resources located within the kame moraines, outwash plains and meltwater channel terraces. Although there is an abundance of sand and gravel there are no high quality deposits as the shale content is generally between 20 and 50 per cent. A comparison of supply and demand shows there are sufficient reserves of sand and gravel for more than 25 years.

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APPENDIX I
PEBBLE LITHOLOGIES, GRAIN SIZE ANALYSES
QUALITY AND RESERVE ESTIMATES

TABLE 1
PEBBLE LITHOLOGY AND GRAIN SIZE ANALYSES

----- LITHOLOGY -----

Deposit	Exposure	Precambrian Per Cent	Carbonate Per Cent	Shale Per Cent	Shale Weight Per Cent	Gravel Per Cent	Sand Per Cent	Silt/Clay Per Cent
22000	59	16.4	60.6	22.1	10.6	44.9	53.6	1.5
22001	13	28.4	58.6	11.6	6.3	66.6	25.2	8.2
	12	9.0	33.9	57.1	40.1	77.5	19.1	3.4
	73	33.2	60.0	4.9	3.5	73.8	24.4	1.8
	74	22.5	50.9	19.7	17.0	33.4	65.4	1.2
	49	18.8	32.6	46.4	38.9	53.7	44.3	2.0
	50	44.5	49.7	4.7	0.1	68.9	29.7	1.4
	51	35.4	51.7	4.8	10.1	65.8	31.3	2.9
	52	36.9	46.4	13.7	10.3	70.3	26.8	2.9
	54	27.5	38.0	29.0	9.8	25.6	73.4	1.0
22002	69	37.7	49.2	12.0	9.9	36.4	62.6	1.0
22004	814	14.4	42.5	43.2	33.8	43.9	50.9	5.2
22005	96	31.6	62.1	6.3	3.8	61.8	36.1	2.1
22006	3	15.3	31.7	51.8	50.2	38.9	60.0	1.0
	4	20.4	27.7	51.8	39.1	22.5	76.4	1.1
	14	14.4	29.7	55.9	32.8	73.5	24.8	1.7
	80	21.9	54.7	16.9	47.0	49.7	49.9	0.4
	81	27.3	58.4	15.2	11.3	62.1	37.4	0.5
	146	38.4	60.3	-	10.0	63.7	34.2	2.1
22007A	2	14.9	21.4	60.5	81.2	41.4	56.7	1.9
	68	24.1	61.8	13.2	10.7	68.8	29.5	1.7
	98	30.9	47.1	21.6	22.9	22.6	75.5	1.9
22007B	6	16.2	29.9	53.9	27.6	52.4	47.3	0.3
	8	30.6	36.4	32.2	12.0	54.2	44.1	1.7
	67	22.2	50.0	26.8	24.0	62.6	34.6	2.8
22008	79	26.1	52.6	14.1	7.8	36.2	60.7	3.1

----- LITHOLOGY -----

Deposit	Exposure	Precambrian Per Cent	Carbonate Per Cent	Shale Per Cent	Shale Weight Per Cent	Gravel Per Cent	Sand Per Cent	Silt/Clay Per Cent
22009	10	26.6	64.1	9.4	4.0	52.0	43.9	4.1
	11	34.8	55.5	7.1	5.1	59.3	28.8	11.9
22011	90	8.8	10.4	80.8	88.7	9.5	89.1	1.4
	109	32.9	53.8	10.6	4.4	65.9	32.2	1.9
22012	144	-	-	-	-	57.1	40.1	2.8
22014	143	31.5	52.3	10.0	5.2	56.1	42.4	1.5
22015	140	20.8	25.9	53.3	33.3	45.3	53.3	1.4
22017	B18	36.6	52.9	8.7	3.9	36.4	61.6	2.0
22018	60	32.3	57.3	7.7	6.7	14.8	82.0	3.2
22019	93	24.8	68.1	0.5	3.8	33.7	62.2	4.1
22020	139	34.3	59.8	1.4	-	52.9	44.5	2.6
22021	122	7.9	13.9	77.0	44.1	42.7	56.1	1.2
	123	41.5	51.1	4.0	0.6	45.9	52.9	1.2
22022	20	38.3	57.1	3.0	1.8	39.4	57.6	3.0
22023	21	32.7	55.3	9.0	6.5	30.3	67.6	2.1
22024	23	32.8	47.5	18.9	21.1	40.4	58.4	1.2
22025	46	34.1	53.6	8.2	12.0	67.1	28.1	2.8
22027	32	27.5	38.5	33.0	29.5	16.0	72.9	1.1
22028	36	32.2	37.9	29.1	23.2	55.4	43.5	1.1
22029	25	51.3	38.9	8.5	1.3	58.2	40.4	1.4
22030	29	41.5	44.9	13.6	13.0	47.3	51.5	1.2
22031	63	38.1	44.7	13.2	25.4	43.9	54.0	2.1
22033	115	26.7	52.9	5.5	6.5	47.4	50.7	1.9
22034	117	33.0	48.2	17.0	8.5	52.4	43.9	3.7
22036	110	11.7	10.6	76.7	73.8	46.5	45.0	8.5
22037	41	25.7	28.1	46.1	47.3	58.9	36.1	5.0
	42	25.5	35.5	36.9	21.7	59.5	39.5	1.0
	44	32.9	34.3	31.9	17.8	24.4	74.1	1.5

----- LITHOLOGY -----

Deposit	Exposure	Precambrian Per Cent	Carbonate Per Cent	Shale Per Cent	Shale Weight Per Cent	Gravel Per Cent	Sand Per Cent	Silt/Clay Per Cent
22039	215	26.5	59.3	9.7	-	69.1	26.3	4.6
22040	170	22.6	53.1	19.8	6.0	54.0	42.3	3.7
22042	149	13.9	15.5	70.6	71.5	24.7	73.5	1.8
22043	171	35.9	63.2	0.5	-	61.1	36.7	2.2
22044	151	22.7	44.0	33.3	29.4	32.4	66.3	1.3
	154	32.4	57.6	10.1	-	50.4	47.7	1.9
22045	188	26.3	59.0	10.4	3.3	70.6	27.1	2.3
22048	200	35.6	49.5	7.9	1.6	59.5	33.7	6.8
22049	157	30.1	54.1	15.3	5.1	48.1	49.9	2.0
22050	82	38.1	59.8	1.6	0.3	59.7	32.8	7.5
22051	194	36.8	57.9	3.2	-	73.3	24.5	2.2
22052	16	29.8	60.4	9.3	1.5	55.8	42.2	2.0
22053A	192	31.9	66.3	0.6	-	55.3	40.1	4.6
22054	18	31.4	58.8	6.7	8.0	72.7	24.7	2.6
22055	17	24.9	58.0	14.8	10.0	68.2	28.9	2.7
22057A	19	27.2	62.3	7.6	12.8	29.3	66.0	4.7
	206	25.4	52.5	21.3	11.0	54.4	43.0	2.6
22057B	205	29.4	62.3	6.7	5.3	50.7	48.1	1.2
22062	185	13.3	46.1	40.6	28.2	58.1	38.2	3.7
22067	309	22.2	29.3	46.7	17.0	62.7	34.7	2.6
22068	319	-	-	-	-	55.7	42.2	2.1
22069	298	-	-	-	-	59.3	38.2	2.5
22070	296	-	-	-	-	71.1	26.0	2.9
22072	257	-	-	-	-	72.4	21.0	6.6

----- LITHOLOGY -----

Deposit	Exposure	Precambrian Per Cent	Carbonate Per Cent	Shale Per Cent	Shale Weight Per Cent	Gravel Per Cent	Sand Per Cent	Silt/Clay Per Cent
21080	RL2	-	-	-	-	24.7	73.8	1.5
	BH32	30.6	40.5	28.9	21.2	54.6	40.0	5.4
	BH31	32.9	47.6	16.3	24.6	63.1	33.1	3.8
	293					81.8	12.4	5.8
	BH29	25.2	26.5	47.1	28.7	32.5	66.3	1.2
21081	262	-	-	-	-	79.3	14.9	5.8
	RL24	-	-	-	-	58.3	40.3	1.4

TABLE 2

SAND AND GRAVEL RESOURCES WITHIN THE SOUTH RIDING MOUNTAIN AREA

Deposit #	Generalized Material Content	Estimated Gravel Content (Quality)	Reserves (cu m)	Ownership	Comments
22000	sandy fine pebble gravel	M-H	8 010 000	P.	active pit
22001	sandy fine pebble gravel	M-H	54 484 100	P, C.	6 pits, 2 active
22002	sandy fine pebble gravel	L-M	698 100	P.	pit revegetated
22003	-	-	105 500	P, C.	similar to deposit 22002
22004	sandy fine pebble gravel	L-M	1 683 600	P, C.	shaley gravel, inactive pit
22005	sandy fine pebble gravel	M	1 467 500	P, C.	revegetated pit
22006	sandy fine-cobbly coarse	L-M	20 050 100	P, C.	4 active pits
22007A	sandy fine pebble gravel	M-H, L-M	43 835 700	P, C, M.	several active pits
22007B	sand, sandy coarse pebble	L-M-H	4 640 600	P, C, M.	several active pits
22007C	-	-	1 322 000	P.	similar to 22007B
22008	sand, sandy coarse pebble gravel	M	131 100	P.	pit revegetated
22009	sandy pebble gravel	M-H	5 116 700	P, C.	pit revegetated
22010	coarse pebble gravel, cobbles	M	7 613 300	P, I.R.	variable terrace deposit
22011	sand to sandy pebble gravel	L, L-M	24 625 400	P, C.	active pit
22012	sandy fine pebble gravel	M-H	45 000	P.	pit revegetated
22013	sandy fine pebble gravel	L-M	90 000	P.	

Deposit #	Generalized Material Content	Estimated Gravel Content (Quality)	Reserves (cu m)	Ownership	Comments
22014	sandy pebble gravel some cobbles	M	308 800	I.R.	active pit
22015	sandy fine pebble gravel	M	667 800	I.R.	garbage dump
22017	sandy fine pebble gravel	M	143 000	P.	pit revegetated
22018	sand, some pebble gravel	L	4 953 100	P, C.	near depletion
22019	sandy fine pebble gravel	M	327 000	P.	
22020	sandy pebble gravel	M	279 000	P.	nuisance grounds
22021	sandy fine pebble gravel	M-H	6 025 500	P, C.	active pit
22022	sandy fine pebble gravel	M-H	73 100	P.	pit revegetated
22023	pebbly sand	L-M	62 700	P.	pit revegetated
22024	sandy fine pebble gravel	M	141 800	P.	
22025	coarse pebble gravel, cobbles	M-H	35 900	P.	
22026	sandy fine pebble gravel	M	266 600	P.	
22027	sandy fine pebble gravel	L-M	3 297 000	P.	
22028	sandy pebble gravel	M-H	8 010 000	P.	active pit
22029	sandy pebble gravel	M-H	4 862 600	P, C.	
22030	sandy coarse pebble gravel	M	4 502 600	P, C.	active pit
22031	sandy pebble gravel	M	50 000	P.	rehabilitated pit
22032	sand	L	9 000	P.	
22033	sandy fine pebble gravel	M	990 300	P.	shallow deposit
22034	sandy fine pebble gravel	M, M-H	980 900	P, C.	pit revegetated

Deposit #	Generalized Material Content	Estimated Gravel Content (Quality)	Reserves (cu m)	Ownership	Comments
22035	-	-	1 858 300	P, C.	
22036	sandy pebble gravel	M	1 162 100	P.	active pit
22037	sandy fine pebble gravel	L-M, M-H	2 151 600	P.	active pit
22038	sandy fine pebble gravel	M-H	278 000	P.	
22039	sandy fine pebble gravel	M-H	44 600	P, C.	
22040	sandy pebble gravel	M-H	974 800	P.	active pit
22041	sandy fine pebble gravel	L-M	1 717 500	P, C.	1.0 m gravel over sand
22042	sandy fine pebble gravel	L-M	3 193 900	P, C.	
22043	sandy fine pebble gravel	M-H	539 500	P.	
22044	sandy fine pebble gravel	M	6 327 200	P, C.	active pit
22045	pebbly gravel	M-H	3 366 100	P, C.	pit revegetated
22046	-	-	201 000	P.	terrace deposit
22047	-	-	690 000	P, C.	terrace deposit
22048	fine pebble gravel	M	187 500	P, C.	
22049	sandy fine pebble gravel	M	976 300	P.	active pit
22050	sandy fine pebble gravel	M-H	556 300	P.	
22051	sandy fine pebble gravel	M-H	332 700	P.	shallow revegetated pit
22052	sandy fine pebble gravel	M-H	260 400	P.	active pit
22053A	sandy pebble gravel	M-H	1 158 000	P, C.	
22053B	-	-	270 000	P.	similar to 23053A
22054	sandy pebble gravel	M-H	708 200	P.	pit revegetated
22055	pebble gravel	M-H	72 300	P.	pit revegetated

Deposit #	Generalized Material Content	Estimated Gravel Content (Quality)	Reserves (cu m)	Ownership	Comments
22056	sandy fine pebble gravel	L-M	110 000	P.	1 depleted pit
22057A	sandy pebble gravel	L-M, M	7 364 200	P.	large active pit
22057B	sandy pebble gravel	M	810 900	P.	
22058	-	-	767 600	P, C.	terrace deposit
22059	-	-	415 000	P.	terrace deposit
22060	-	-	225 400	P.	terrace deposit
22061	-	-	95 200	P.	terrace deposit, 1 inactive
22062	sandy pebble gravel	M-H	72 000	P.	pit revegetated
22063	sandy pebble gravel	M, M-H	10 100 000	P, C, M.	active pits
22064	sandy fine pebble gravel	M	383 500	P.	
22065	medium pebble gravel	-	2 405 500	P.	terrace deposit
22067	sandy coarse pebble gravel	M-L	1 024 200	P.	1980 source for Hwy 10 improvements
22068	sandy fine pebble gravel	M-H	248 400	P.	
22069	coarse pebble gravel	M-L	341 000	P.	active pit
22070	cobbly coarse pebble gravel	M-H	1 176 000	P.	active pit
22071	sandy fine pebble gravel	M-L	1 638 300	P.	garbage dump; active pits, town of Minnedosa
22072	cobbly fine pebble gravel	M-L	62 500	P.	
21078	-	-	27 000		

Deposit #.	Generalized Material Content	Estimated Gravel Content (Quality)	Reserves (cu m)	Ownership	Comments
21080	fine pebble gravel, some cobble	L-M	10 482 400	P.	Stop status in vicinity of active pit - along PR 564; some areas very high shale
021081	sandy coarse pebble gravel	M-L - M-H	5 385 200	P.	material variable, high shale, active pit
21082	sandy coarse pebble gravel	M	415 400	P.	
Total Reserves			275 115 400		

Codes

P. - Private
 C. - Crown
 M. - Municipal
 I.R. - Indian Reserve
 H - High
 M-H - Medium to High
 M- Medium
 L-M - Low-Medium
 L - Low

APPENDIX II
GRAIN SIZE DISTRIBUTION AND
INDUSTRIAL USAGE ASSESSMENT

Sample Identification 022000 02022W07NWHG059A
Deposit Number 22000
Legal Description NW¼ of 7 - Tp. 20 R. 22 West
Sample Number HG59A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
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[illegible]

FINENESS MODULUS 4.23

% COBBLES	0.0	% PEBBLES	24.29	% GRANULES	20.58	% SAND	53.67	% SILT/CLAY	1.45
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022000 02022407N 46059A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	5436.70 GMS.	WASHED SAMPLE -	WEIGHT BEFORE	851.40	AFTER	831.80	% LOSS	2.30
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[illegible]

TOTALS	851.40	6322.08
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SPLITTING FACTOR 6.39

FINENESS MODULUS 4.79

% COBBLES	0.0	% PEBBLES	36.10	% GRANULES	17.61	% SAND	44.31	% SILT/CLAY	1.98
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INDUSTRIAL USAGE ASSESSMENT

022001 02021W06NEHG049A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	14.29	MARGINAL	YES		YES		
ASPHALT B (P. OF H.)	4.99	MARGINAL	YES				
ASPHALT C (P. OF H.)	64.19	NOT SUIT					
BASE COURSE (P. OF H.)	12.98	MARGINAL	YES	YES	YES		
BASE COURSE (P. OF H.)	12.98	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	28.98	MARGINAL	YES	YES		YES	YES
SUB-BASE (P. OF H.)	18.98	MARGINAL	YES	YES		YES	YES
SUB-BASE (P. OF H.)	20.34	MARGINAL	YES	YES	YES		YES
SUB-BASE (P. OF H.)	26.01	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	19.01	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	14.98	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	7.74	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	1.15	MARGINAL	YES		YES		
TRAFFIC GRAVEL (P. OF H.)	1.15	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.)	86.74	NOT SUIT					
SEAL COAT B (P. OF H.)	8.90	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (ASTH C33, D448)	205.83	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	19.01	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	180.89	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	130.94	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	177.14	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	120.96	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	175.88	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	180.72	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	150.26	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	142.24	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	144.42	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	132.36	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	146.31	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	139.82	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	99.86	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	62.35	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (P. OF H.)	15.35	MARGINAL	YES				
FINE CONCRETE AGGREGATE (ASTH C33, C404)	48.63	NOT SUIT					
FINE CONCRETE AGGREGATE (ASTH C33, C404)	56.61	NOT SUIT					
MORTAR (ASTH C144)	15.00	MARGINAL	YES				
PORTLAND CEMENT (P. OF H.)	26.71	MARGINAL	YES				
BUILT-UP ROOFS (ASTH D1863)	132.86	NOT SUIT					
RIEFIELD RUNWAYS (P. OF H.)	1.15	MARGINAL	YES		YES		
PIT RUN (P. OF H.)	0.00	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	16.99	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.00	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	3904.20 GMS.	WASHED SAMPLE - WEIGHT BEFORE	806.30	AFTER	792.20	% LOSS	1.75
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TOTALS	806.30	4916.18							
SPLITTING FACTOR	4.84								
FINENESS MODULUS	5.41								
% COBBLES	0.0	% PEBBLES	57.30	% GRANULES	11.58	% SAND	29.73	% SILT/CLAY	1.39

022001 02022W135WH6050A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
11.54	MARGINAL	YES	YES		
1.96	MARGINAL	YES	YES		
57.66	NOT SUIT				
9.41	MARGINAL	YES	YES		
9.04	MARGINAL	YES	YES		
8.67	MARGINAL		YES		
8.61	MARGINAL		YES		
9.21	MARGINAL	YES	YES		
8.07	MARGINAL	YES	YES		
29.51	MARGINAL	YES	YES		
27.46	MARGINAL	YES	YES		
69.46	NOT SUIT				
6.52	MARGINAL	YES	YES		
18.17	MARGINAL	YES	YES		
0.0	SUITABLE	YES	YES		
76.11	NOT SUIT				
0.93	MARGINAL	YES		YES	YES
0.0	SUITABLE	YES			
198.28	NOT SUIT				
168.58	NOT SUIT				
168.58	NOT SUIT				
159.95	NOT SUIT				
89.17	NOT SUIT				
149.49	NOT SUIT				
71.73	NOT SUIT				
127.70	NOT SUIT				
111.06	NOT SUIT				
111.46	NOT SUIT				
101.36	NOT SUIT				
76.89	NOT SUIT				
76.48	NOT SUIT				
90.29	NOT SUIT				
103.85	NOT SUIT				
125.98	NOT SUIT				
80.81	NOT SUIT				
74.16	MARGINAL	YES			
17.98	MARGINAL	YES			YES
35.28	NOT SUIT				
18.47	MARGINAL	YES			
16.64	MARGINAL	YES			
16.57	MARGINAL	YES			
90.79	NOT SUIT				
0.0	SUITABLE	YES			
0.0	SUITABLE	YES			
10.65	MARGINAL	YES		YES	
0.0	SUITABLE				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	4445.80	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	973.20	AFTER	938.80	% LOSS	3.53
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% COBBLES	7.21	% PEBBLES	41.48	% GRANULES	19.66	% SAND	28.99	% SILT/CLAY	2.67
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 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

[illegible]

TOTALS	782.50	3575.32
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SPLITTING FACTOR 3.70

FINENESS MODULUS 5.32

% COBBLES	0.0	% PEBBLES	52.17	% GRANULES	18.08	% SAND	26.87	% SILT/CLAY	2.89
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022001 02022W03NEHG052A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

<u>INDUSTRIAL USE</u>	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <#200	CRUSHING REQUIRED ON SITE	MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A ((P.OF H.M.)	2.27	MARGINAL	YES				
ASPHALT B ((P.OF H.M.)	6.8	SUITABLE	YES				
ASPHALT C ((P.OF H.M.)	52.16	NOT SUIT					
BASE COURSE A ((P.OF H.M.)	6.71	MARGINAL	YES	YES			
BASE COURSE B ((P.OF H.M.)	9.35	MARGINAL	YES	YES			
SUB-BASE BAG COURSE ((ASTH D1241))	4.35	MARGINAL	YES	YES	YES		
SUB-BASE BAG COURSE ((ASTH D1241))	5.08	MARGINAL	YES	YES	YES		
SUB-BASE SURFACE COURSE ((ASTH D1241))	5.08	MARGINAL	YES	YES	YES		
SUB-BASE SURFACE COURSE ((ASTH D1241))	24.42	MARGINAL	YES	YES	YES		
SUB-BASE SURFACE COURSE ((ASTH D1241))	18.31	MARGINAL	YES	YES	YES		
SUB-BASE SURFACE COURSE ((ASTH D1241))	60.21	NOT SUIT					
TRAFFIC GRAVEL ((U.H.A.))	4.44	MARGINAL	YES	YES			
TRAFFIC GRAVEL ((U.H.A.))	3.46	MARGINAL	YES	YES			
TRAFFIC GRAVEL ((U.H.A.))	0.0	SUITABLE	YES				
SEAL COAT A ((P.OF H.M.)	62.36	NOT SUIT					
SEAL COAT B ((P.OF H.M.)	0.0	SUITABLE	YES				
SEAL COAT C ((P.OF H.M.)	0.0	SUITABLE	YES				
COARS AGGREGATE I ((ASTH C33, C404))	193.90	NOT SUIT					
COARS AGGREGATE II ((ASTH C33, C404))	77.94	NOT SUIT					
COARS AGGREGATE III ((ASTH C33, C404))	77.94	NOT SUIT					
COARS AGGREGATE IV ((ASTH C33, C404))	357	NOT SUIT					
COARS AGGREGATE V ((ASTH C33, C404))	467	NOT SUIT					
COARS AGGREGATE VI ((ASTH C33, C404))	102.21	NOT SUIT					
COARS AGGREGATE VII ((ASTH C33, C404))	170.67	NOT SUIT					
COARS AGGREGATE VIII ((ASTH C33, C404))	163.17	NOT SUIT					
COARS AGGREGATE IX ((ASTH C33, C404))	193.91	NOT SUIT					
COARS AGGREGATE X ((ASTH C33, C404))	93.95	NOT SUIT					
COARS AGGREGATE XI ((ASTH C33, C404))	93.95	NOT SUIT					
COARS AGGREGATE XII ((ASTH C33, C404))	97.00	NOT SUIT					
COARS AGGREGATE XIII ((ASTH C33, C404))	102.98	NOT SUIT					
COARS AGGREGATE XIV ((ASTH C33, C404))	97.97	NOT SUIT					
COARS AGGREGATE XV ((ASTH C33, C404))	97.97	NOT SUIT					
FINE CONCRT AGGRGTE I P.OF M.	29.86	MARGINAL	YES				YES
FINE CONCRT AGGRGTE II (ASTH C33, C404)	64.45	NOT SUIT	YES				YES
FINE CONCRETE AGGRGTE III (ASTH C33, C404)	42.02	NOT SUIT					
MORTAR (ASTH C144)	25.25	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	39.35	NOT SUIT					
BUILT UP ROOFS (ASTH D1863)	93.53	NOT SUIT					
AIRFIELD RUNWAYS ((P.OF H.M.)	0.0	SUITABLE	YES				
P.T. RUN ((P.OF H.M.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	18.82	MARGINAL	YES				
SHOULDERS ((P.OF H.M.)	0.0	SUITABLE	YES				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	4001.80	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	730.40	AFTER	728.90	% LOSS	0.21
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[illegible]

TOTALS	730.40	4156.09					
SPLITTING FACTOR	5.48						
FINENESS MODULUS	3.30						
% COBBLES	0.0	% PEBBLES	15.75	% GRANULES	9.86	% SAND	73.36
						% SILT/CLAY	1.03

022001 01922W34N-HG054

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	43.76	NOT SUIT					
ASPHALT B (P. OF H.)	35.69	NOT SUIT					
ASPHALT C (P. OF H.)	46.67	NOT SUIT					
BASIN COURSE (P. OF H.)	46.69	NOT SUIT					
BASIN COURSE (P. OF H.)	21.91	MARGINAL		YES		YES	YES
SUB-BASE (ASTM D1241)	92.24	MARGINAL		YES		YES	
SUB-BASE (ASTM D1241)	75.35	NOT SUIT					
SUB-BASE (ASTM D1241)	56.96	NOT SUIT					
SUB-BASE (ASTM D1241)	14.98	MARGINAL	YES	YES	YES		YES
SUB-BASE (ASTM D1241)	14.95	MARGINAL	YES	YES			
SUB-BASE (ASTM D1241)	13.31	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.)	63.72	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	24.68	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	16.08	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.)	117.02	NOT SUIT					
SEAL COAT B (P. OF H.)	30.01	NOT SUIT					
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	22.26	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	16.74	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	381.58	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	170.83	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	209.06	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	155.18	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	209.76	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	33.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	180.00	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	27.66	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	186.01	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	219.96	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	170.91	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	216.17	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	200.42	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	196.81	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	118.51	NOT SUIT					
FINE CONCRETE AGGREGATE (P. OF H.)	0.00	SUITABLE	YES				YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	0.99	MARGINAL	YES				
FINE CONCRETE AGGREGATE (ASTM C33, C404)	5.63	MARGINAL	YES				
MORTAR (ASTM C144)	3.26	MARGINAL	YES				
BUILT-UP GOES (ASTM D1863)	6.76	MARGINAL	YES				YES
AIRFIELD RUNWAYS (P. OF H.)	17.21	NOT SUIT					
PIT RUN (P. OF H.)	9.25	MARGINAL				YES	
SEPTIC FIELDS (U.H.A.)	26.90	MARGINAL				YES	
SHOULDERS (P. OF H.)	14.25	MARGINAL				YES	

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	4559.20	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	1078.70	AFTER	1075.00	% LOSS	0.35
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TOTALS	1098.90		5336.78						
SPLITTING FACTOR	4.15								
FINESS MODULUS	5.42								
% COBBLES	0.0	% PEBBLES	55.42	% GRANULES	22.06	% SAND	19.15	% SILT/CLAY	3.37

022001 01921W20NEHG012A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

SAMPLE IDENTIFICATION 022001 01921W19N04G013A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND 4711.00 GMS. WASHED SAMPLE - WEIGHT BEFORE 772.40 AFTER 767.30 % LOSS 0.66

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		328.90	5.87	94.13	5.87
1/4		0.0	0.0	94.13	5.87
1/4		237.10	4.45	89.68	10.32
1/4		324.60	5.73	83.95	16.05
1/4		161.60	2.82	81.13	18.87
1/4		267.75	4.78	76.35	23.65
1/4		619.07	11.85	64.50	35.50
1/4		550.15	9.82	54.68	45.32
1/4		959.74	17.00	37.68	62.32
1/4		46.10	0.85	36.83	63.17
1/4		78.80	1.41	35.42	64.58
1/4		27.80	0.50	34.92	65.08
1/4		22.60	0.41	34.51	65.49
1/4		2.60	0.04	34.47	65.53
1/4		24.40	0.44	34.03	66.00
1/4		6.20	0.11	33.92	66.08
1/4		22.10	0.40	33.52	66.48
1/4		134.79	2.42	31.10	68.90
1/4		460.49	8.22	22.88	77.12

TOTALS 772.40 5601.58

SPLITTING FACTOR 6.10

FINENESS MODULUS 4.84

% COBBLES 0.0 % PEBBLES 44.47 % GRANULES 22.08 % SAND 25.23 % SILT/CLAY 8.22

INDUSTRIAL USAGE ASSESSMENT

022001 01921W19N04G013A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	2.62	MARGINAL	YES		YES	YES
ASPHALT B (P. OF H.)	37.77	MARGINAL	YES			YES
BASE COURSE A (P. OF H.)	0.0	SUITABLE	YES			
BASE COURSE B (P. OF H.)	0.0	SUITABLE	YES			
BASE COURSE C (P. OF H.)	0.0	SUITABLE	YES			
SUB-BASE/DAS COURSE A (ASTM D1241)	20.90	MARGINAL	YES		YES	YES
SUB-BASE/DAS COURSE B (ASTM D1241)	6.67	MARGINAL	YES		YES	
SUB-BASE/DAS COURSE C (ASTM D1241)	10.0	SUITABLE	YES			
SUB-BASE/DAS COURSE D (ASTM D1241)	10.0	SUITABLE	YES			
SUB-BASE/DAS COURSE E (ASTM D1241)	38.34	MARGINAL	YES			
TRAFFIC GRAVEL A (P. OF H.)	12.66	MARGINAL	YES		YES	
TRAFFIC GRAVEL B (P. OF H.)	6.33	MARGINAL	YES		YES	
TRAFFIC GRAVEL C (P. OF H.)	1.75	SUITABLE	YES		YES	
TRAFFIC GRAVEL D (P. OF H.)	0.0	SUITABLE	YES			
SEAL COAT A (P. OF H.)	6.32	NOT SUIT				
SEAL COAT B (P. OF H.)	10.91	MARGINAL	YES			YES
SEAL COAT C (P. OF H.)	6.13	MARGINAL	YES			YES
COARSE AGGREGATE I (ASTM C33, C448)	205.58	NOT SUIT				
COARSE AGGREGATE II (ASTM C33, C448)	109.58	NOT SUIT				
COARSE AGGREGATE III (ASTM C33, C448)	91.58	NOT SUIT				
COARSE AGGREGATE IV (ASTM C33, C448)	49.70	NOT SUIT				
COARSE AGGREGATE V (ASTM C33, C448)	98.75	NOT SUIT				
COARSE AGGREGATE VI (ASTM C33, C448)	132.44	NOT SUIT				
COARSE AGGREGATE VII (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE VIII (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE IX (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE X (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XI (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XII (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XIII (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XIV (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XV (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XVI (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XVII (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XVIII (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XIX (ASTM C33, C448)	134.90	NOT SUIT				
COARSE AGGREGATE XX (ASTM C33, C448)	134.90	NOT SUIT				
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	80.06	NOT SUIT				
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	56.82	NOT SUIT				
MORTAR (ASTM C134)	56.82	NOT SUIT				
PORTLAND CEMENT (P. OF H.)	121.89	NOT SUIT				
BUILT-UP ROOFS (ASTM D1863)	0.0	SUITABLE	YES			
AIRFIELD RUNWAYS (P. OF H.)	0.0	SUITABLE	YES			
PIT RUN (P. OF H.)	0.0	SUITABLE	YES			
SEPTIC FIELDS (U.N.A.)	19.35	MARGINAL	YES		YES	
SHOULDERS (P. OF H.)	0.0	SUITABLE	YES			

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

[illegible]

SPLITTING FACTOR 3.71

% COBBLES	0.0	% PEBBLES	46.33	% GRANULES	27.49	% SAND	24.36	% SILT/CLAY	1.82
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022001 01922N25NHC073A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *****

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

[illegible]

SPLITTING FACTOR 3.39

% COBBLES	0.0	% PEBBLES	18.38	% GRANULES	15.06	% SAND	65.34	% SILT/CLAY	1.22
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022001 01922W25NEHG074A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <\$200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <\$4)
ASPHALT A (P. OF M.)	39.00	NOT SUIT					
ASPHALT B (P. OF M.)	29.35	MARGINAL	YES	YES	YES		YES
ASPHALT C (P. OF M.)	52.59	NOT SUIT					
BASE COURSE A (P. OF M.)	46.35	NOT SUIT					
BASE COURSE B (P. OF M.)	10.35	MARGINAL		YES		YES	YES
BASE COURSE C (P. OF M.)	4.46	MARGINAL		YES		YES	
SUB-BASE A (ASTM D1241)	77.35	NOT SUIT					
SUB-BASE B (ASTM D1241)	62.00	NOT SUIT					
SUB-BASE C (ASTM D1241)	46.26	NOT SUIT					
SUB-BASE D (ASTM D1241)	14.56	MARGINAL	YES	YES			
SUB-BASE E (ASTM D1241)	1.95	MARGINAL	YES	YES			
SUB-BASE F (ASTM D1241)	1.95	MARGINAL	YES	YES			
TRAFFIC GRAVEL A (P. OF M.)	69.56	NOT SUIT					
TRAFFIC GRAVEL B (P. OF M.)	31.67	NOT SUIT					
TRAFFIC GRAVEL C (P. OF M.)	13.67	MARGINAL	YES		YES		
SEAL COAT A (P. OF M.)	107.63	NOT SUIT					
SEAL COAT B (P. OF M.)	21.20	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF M.)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	212.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	211.91	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	200.42	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.04	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	204.56	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	158.63	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	204.65	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	226.27	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	70.54	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	154.50	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	177.46	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	95.77	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	168.53	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	198.70	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	175.81	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	95.26	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	95.53	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF M.)	0.0	SUITABLE	YES				YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	2.67	MARGINAL	YES				
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	15.85	MARGINAL	YES				
MORTAR (ASTM C144)	7.83	MARGINAL	YES				
PORTLAND CEMENT (ASTM D1863)	0.0	SUITABLE	YES				
BUILT-UP	169.03	NOT SUIT					
AIRFIELD RUNWAYS (P. OF M.)	28.51	MARGINAL	YES		YES		YES
PIT RUN (P. OF M.)	6.62	MARGINAL				YES	
SEPTIC FIELDS (U.N.A.)	23.39	MARGINAL				YES	
SHOULDERS (P. OF M.)	11.62	MARGINAL				YES	

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

[illegible]

TOTALS	701.80	3234.38
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SPLITTING FACTOR 4.41

FINENESS MODULUS 3.62

% COBBLES	0.0	% PEBBLES	22.44	% GRANULES	13.91	% SAND	62.70	% SILT/CLAY	0.96
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022002 02020W06SWHG069A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *****

INDUSTRIAL USE

TOTAL

RATING

SCREENING

REMOVAL OF
LOOSE MATERIAL

CRUSH:

REQUIRED.

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	4643.40	GMS.	WASHED SAMPLE - WEIGHT BEFORE	805.10	AFTER	761.40	% LOSS	5.43
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[illegible]

TOTALS	805.10	4840.39
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SPLITTING FACTOR 5.77

FINENESS MODULUS 3.64

% COBBLES	0.0	% PEBBLES	28.41	% GRANULES	15.50	% SAND	50.88	% SILT/CLAY	5.21
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INDUSTRIAL USAGE ASSESSMENT

022004 01919N32NHHGB14A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <#200	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	11.92	MARGINAL	YES		YES	YES
ASPHALT B (P. OF H.)	7.38	MARGINAL	YES			YES
ASPHALT C (P. OF H.)	22.58	MARGINAL	YES			YES
BASE COURSE (P. OF H.)	14.50	MARGINAL	YES	YES	YES	YES
BASE COURSE (P. OF H.)	0.0	SUITABLE				
SUB-BASE (P. OF H.)	0.0	NOT SUIT				
SUB-BASE (P. OF H.)	64.0	NOT SUIT				
SUB-BASE (P. OF H.)	21.40	MARGINAL	YES		YES	YES
SUB-BASE (P. OF H.)	2.64	MARGINAL	YES	YES		
SUB-BASE (P. OF H.)	0.64	MARGINAL	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	2.64	MARGINAL	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	37.80	NOT SUIT				
TRAFFIC GRAVEL (P. OF H.)	7.12	MARGINAL	YES	YES		YES
SEAL COAT A (P. OF H.)	35.09	NOT SUIT			YES	YES
SEAL COAT B (P. OF H.)	33.06	NOT SUIT			YES	YES
COARSE AGGREGATE (ASTH C33, C404)	13.08	MARGINAL	YES			YES
COARSE AGGREGATE (ASTH C33, C404)	20.14	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	7.00	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	0.00	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	57.43	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	106.32	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	150.77	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	101.70	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	119.28	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	81.08	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	155.72	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	173.96	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	138.55	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	167.46	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	163.89	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	112.42	NOT SUIT				
COARSE AGGREGATE (ASTH C33, C404)	5.19	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE (P. OF H.)	7.61	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE (ASTH C33, C404)	22.53	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE (ASTH C33, C404)	14.67	MARGINAL	YES			YES
MORTAR (ASTH C33, C404)	32.08	MARGINAL	YES			YES
PORTLAND CEMENT (P.C.A.)	159.00	MARGINAL	YES			YES
BUILT-UP ROOFS (ASTH D1863)	0.0	NOT SUIT				
AIRFIELD RUNWAYS (P. OF H.)	8.86	MARGINAL	YES		YES	YES
PIT RUN (P. OF H.)	0.0	SUITABLE				
SEPTIC FIELDS (U.N.A.)	25.93	MARGINAL				
SHOULDERS (P. OF H.)	1.59	MARGINAL				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
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[illegible]

SPLITTING FACTOR 5.51

FINENESS MODULUS 4.98

% COBBLES	0.0	% PEBBLES	44.49	% GRANULES	17.27	% SAND	36.10	% SILT/CLAY	2.14
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022005 02019W05NEHG096A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS

**TOTAL
RESIDUAL**

RATING

**SCREENING
REQUIRED**

**REMOVAL OF
LESS THAN \$200 MATERIAL**

CRUSHING REQUIRED	MATERIAL
ON SITE	NOT ON SITE
<p>1. 100% CRUSHING REQUIRED</p> <p>2. 75% CRUSHING REQUIRED</p> <p>3. 50% CRUSHING REQUIRED</p> <p>4. 25% CRUSHING REQUIRED</p> <p>5. 0% CRUSHING REQUIRED</p>	<p>1. 100% CRUSHING REQUIRED</p> <p>2. 75% CRUSHING REQUIRED</p> <p>3. 50% CRUSHING REQUIRED</p> <p>4. 25% CRUSHING REQUIRED</p> <p>5. 0% CRUSHING REQUIRED</p>

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	4405.10	GMS.	WASHED SAMPLE - WEIGHT BEFORE	958.60	AFTER	954.00	% LOSS	0.48
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[illegible]

TOTALS	958.60	4761.78
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SPLITTING FACTOR 4.60

FINENESS MODULUS 4.50

% COBBLES	0.0	% PEBBLES	31.42	% GRANULES	18.26	% SAND	49.87	% SILT/CLAY	0.44
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INDUSTRIAL USAGE ASSESSMENT

022006 01919W21SWHG080A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE

TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <\$200	CRUSHING REQUIRED MATERIAL ON SITE	REMOVED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
14.16	MARGINAL	YES	YES	YES		
5.03	MARGINAL	YES	YES			
66.23	NOT SUIT					
20.14	MARGINAL	YES	YES	YES		
12.16	MARGINAL	YES	YES			
4.30	MARGINAL		YES			
37.07	NOT SUIT					
16.85	MARGINAL	YES	YES	YES		
26.47	MARGINAL	YES	YES			
19.47	MARGINAL	YES	YES			YES
36.10	NOT SUIT					
17.92	MARGINAL	YES	YES	YES		
5.28	MARGINAL	YES	YES			
0.0	SUITABLE					
87.05	NOT SUIT					
10.22	MARGINAL	YES		YES		
0.0	SUITABLE	YES				
212.06	NOT SUIT					
205.06	NOT SUIT					
205.06	NOT SUIT					
193.08	NOT SUIT					
147.03	NOT SUIT					
197.13	NOT SUIT					
136.94	NOT SUIT					
198.02	NOT SUIT					
128.97	NOT SUIT					
128.98	NOT SUIT					
128.98	NOT SUIT					
118.92	NOT SUIT					
118.92	NOT SUIT					
130.92	NOT SUIT					
146.98	NOT SUIT					
143.99	NOT SUIT					
23.92	NOT SUIT					
64.20	MARGINAL	YES				
8.03	MARGINAL	YES				
42.88	NOT SUIT					
48.66	NOT SUIT					
14.88	MARGINAL	YES				
22.25	MARGINAL	YES				
130.90	NOT SUIT					
0.7	MARGINAL	YES				
0.0	SUITABLE	YES				
22.93	MARGINAL	YES		YES		
0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	3252.40	GMS.	WASHED SAMPLE - WEIGHT BEFORE	732.40	AFTER	716.10	% LOSS	2.23
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STIEVE SIZE	FINE FRACTION (GMS.)	STIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		74.10	1.0	99.00	1.0
8		20.68	0.3	99.7	0.3
16	15.40	16.33	0.2	99.8	0.2
30	2.33	2.33	0.03	99.97	0.03
60	0.20	0.20	0.003	99.997	0.003
100	0.00	0.00	0.000	100.000	0.000
200	0.00	0.00	0.000	100.000	0.000
400	0.00	0.00	0.000	100.000	0.000
800	0.00	0.00	0.000	100.000	0.000
1000	0.00	0.00	0.000	100.000	0.000
2000	0.00	0.00	0.000	100.000	0.000
4000	0.00	0.00	0.000	100.000	0.000
8000	0.00	0.00	0.000	100.000	0.000
16000	0.00	0.00	0.000	100.000	0.000
32000	0.00	0.00	0.000	100.000	0.000
64000	0.00	0.00	0.000	100.000	0.000
128000	0.00	0.00	0.000	100.000	0.000
256000	0.00	0.00	0.000	100.000	0.000
512000	0.00	0.00	0.000	100.000	0.000
1024000	0.00	0.00	0.000	100.000	0.000
2048000	0.00	0.00	0.000	100.000	0.000
4096000	0.00	0.00	0.000	100.000	0.000
8192000	0.00	0.00	0.000	100.000	0.000
16384000	0.00	0.00	0.000	100.000	0.000
32768000	0.00	0.00	0.000	100.000	0.000
65536000	0.00	0.00	0.000	100.000	0.000
131072000	0.00	0.00	0.000	100.000	0.000
262144000	0.00	0.00	0.000	100.000	0.000
524288000	0.00	0.00	0.000	100.000	0.000
1048576000	0.00	0.00	0.000	100.000	0.000
2097152000	0.00	0.00	0.000	100.000	0.000
4194304000	0.00	0.00	0.000	100.000	0.000
8388608000	0.00	0.00	0.000	100.000	0.000
16777216000	0.00	0.00	0.000	100.000	0.000
33554432000	0.00	0.00	0.000	100.000	0.000
67108864000	0.00	0.00	0.000	100.000	0.000
134217728000	0.00	0.00	0.000	100.000	0.000
268435456000	0.00	0.00	0.000	100.000	0.000
536870912000	0.00	0.00	0.000	100.000	0.000
1073741824000	0.00	0.00	0.000	100.000	0.000
2147483648000	0.00	0.00	0.000	100.000	0.000
4294967296000	0.00	0.00	0.000	100.000	0.000
8589934592000	0.00	0.00	0.000	100.000	0.000
17179869184000	0.00	0.00	0.000	100.000	0.000
34359738368000	0.00	0.00	0.000	100.000	0.000
68719476736000	0.00	0.00	0.000	100.000	0.000
137438953472000	0.00	0.00	0.000	100.000	0.000
274877906944000	0.00	0.00	0.000	100.000	0.000
549755813888000	0.00	0.00	0.000	100.000	0.000
1099511627776000	0.00	0.00	0.000	100.000	0.000
2199023255552000	0.00	0.00	0.000	100.000	0.000
4398046511104000	0.00	0.00	0.000	100.000	0.000
8796093022208000	0.00	0.00	0.000	100.000	0.000
17592186044416000	0.00	0.00	0.000	100.000	0.000
35184372088832000	0.00	0.00	0.000		

TOTALS	732.40	3530.90
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SPLITTING FACTOR 4.44

FINENESS MODULUS 4.81

% COBBLES	0.0	% PEBBLES	40.75	% GRANULES	22.97	% SAND	34.23	% SILT/CLAY	2.05
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022006 01919N26SWHG146A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <\$200	CRUSHING REQUIRED ON SITE	MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	7.29	MARGINAL	YES				
ASPHALT B (P. OF H.)	2.29	MARGINAL	YES				
ASPHALT C (P. OF H.)	61.65	NOT SUIT					
BASE COURSE A (P. OF H.)	13.06	MARGINAL	YES	YES			
BASE COURSE B (P. OF H.)	9.84	MARGINAL	YES	YES			
SUB-BASE A (ASTH D1241)	14.42	MARGINAL	YES	YES		YES	
SUB-BASE B (ASTH D1241)	14.02	MARGINAL	YES	YES		YES	
SUB-BASE SURFACE COURSE (ASTH D1241)	10.65	MARGINAL	YES	YES		YES	
SUB-BASE SURFACE COURSE (ASTH D1241)	120.59	MARGINAL	YES	YES		YES	
SUB-BASE SURFACE COURSE (ASTH D1241)	10.59	MARGINAL	YES	YES		YES	
SUB-BASE SURFACE COURSE (ASTH D1241)	156.07	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	156.07	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	156.07	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	156.07	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	156.07	MARGINAL	YES	YES	YES		
SEAL COAT A (P. OF H.)	65.41	NOT SUIT					
SEAL COAT B (P. OF H.)	0.00	SUITABLE	YES				
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE I (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE II (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE III (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE IV (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE V (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE VI (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE VII (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE VIII (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE IX (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE X (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE XI (ASTH C33, D448)	22.11	NOT SUIT					
COARSE AGGREGATE XII (ASTH C33, D448)	22.11	NOT SUIT					
FINE CONCRETE AGGREGATE (P. OF H.)	22.11	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (ASTH C33, C404)	22.11	MARGINAL	YES				
FINE CONCRETE AGGREGATE II (ASTH C33, C404)	22.11	MARGINAL	YES				
HORTLAND CEMENT (ASTH C144)	22.11	MARGINAL	YES				
PORTLAND CEMENT (ASTH C144)	22.11	MARGINAL	YES				
BITUMEN (ASTH D1863)	22.11	NOT SUIT					
BITUMEN RUNWAYS (P. OF H.)	22.11	NOT SUIT					
BITUMEN SHOULDERS (U.M.A.)	22.11	NOT SUIT					
SHOULDERS (P. OF H.)	22.11	NOT SUIT					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	2335.60	GMS.	WASHED SAMPLE - WEIGHT BEFORE	846.40	AFTER	824.50	% LOSS	2.59
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[illegible]

TOTALS	839.73	3599.38
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SPLITTING FACTOR 2.76

FINENESS MODULUS 6.03

% COBBLES	0.0	% PEBBLES	62.67	% GRANULES	10.83	% SAND	24.84	% SILT/CLAY	1.67
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INDUSTRIAL USAGE ASSESSMENT

022006 01919W29NEHG014A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	4.56	MARGINAL	YES				
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.)	57.57	NOT SUIT					
BASIN COURSE (P. OF H.)	9.98	MARGINAL	YES	YES			
BASIN COURSE (P. OF H.)	8.09	MARGINAL	YES	YES			
BASIN COURSE (P. OF H.)	8.04	MARGINAL	YES	YES			
SUB-BASE BAG COURSE (ASTM D1241)	8.0	SUITABLE					
SUB-BASE BAG COURSE (ASTM D1241)	9.64	MARGINAL	YES	YES			
SUB-BASE BAG COURSE (ASTM D1241)	7.68	MARGINAL	YES	YES			
SUB-BASE BAG COURSE (ASTM D1241)	21.73	MARGINAL	YES	YES			
SUB-BASE BAG COURSE (ASTM D1241)	14.88	MARGINAL	YES	YES			
SUB-BASE BAG COURSE (ASTM D1241)	56.88	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	0.41	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.)	0.53	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.)	0.0	SUITABLE	YES				
SEAL COAT A (P. OF H.)	66.27	NOT SUIT					
SEAL COAT B (P. OF H.)	0.0	SUITABLE	YES				
SEAL COAT C (P. OF H.)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	1.85	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	2.72	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	2.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	2.11	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	2.55	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	4.42	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	4.66	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	5.66	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	4.66	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	9.9	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	9.9	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	9.9	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	6.7	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	6.8	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	9.4	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	10.1	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	10.8	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	6.7	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	8.72	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	1.8	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	26.59	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	57.78	NOT SUIT					
FINE CONCRETE AGGREGATE (ASTM C33, C404)	30.52	NOT SUIT					
MORTAR (ASTM C144)	17.59	MARGINAL	YES				
PORTLAND CEMENT (P. OF H.)	92.78	NOT SUIT					
BUILT-UP ROOFS (ASTM D1863)	0.0	SUITABLE	YES				
AIRFIELD RUNWAYS (P. OF H.)	0.0	SUITABLE	YES				
PIT RUN (P. OF H.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.M.A.)	13.81	MARGINAL	YES				
SHOULDERS (P. OF H.)	0.0	SUITABLE	YES		YES		

WEIGHT OF SAND	3543.10 GMS.	WASHED SAMPLE - WEIGHT BEFORE	1056.50	AFTER	1023.90	% LOSS	3.09
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TOTALS	1054.74	5303.20							
SPLITTING FACTOR	3.35								
FINENESS MODULUS	5.56								
% COBBLES	0.0	% PEBBLES	54.10	% GRANULES	10.13	% SAND	33.71	% SILT/CLAY	2.06

022006 01919W32SEHG005A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <#200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.M.)	3.91	MARGINAL	YES				
ASPHALT B (P. OF H.M.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.M.)	56.12	NOT SUIT					
BASE COURSE (P. OF H.M.)	86.83	HARGINAL	YES	YES			
BASE COURSE (P. OF H.M.)	0.0	HARGINAL	YES	YES			
SUB-BASE BAGG COURSE (ASTH D1241)	81.03	HARGINAL	YES				
SUB-BASE BAGG COURSE (ASTH D1241)	9.03	HARGINAL	YES				
SUB-BASE BAGG SURFACE COURSE (ASTH D1241)	7.69	HARGINAL	YES	YES			
SUB-BASE BAGG SURFACE COURSE (ASTH D1241)	13.69	HARGINAL	YES	YES			
SUB-BASE BAGG SURFACE COURSE (ASTH D1241)	44.44	HARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.M.)	22.25	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	8.51	HARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL (P. OF H.M.)	0.0	SUITABLE	YES		YES		
SEAL COAT A (P. OF H.M.)	90.54	NOT SUIT					
SEAL COAT B (P. OF H.M.)	6.22	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.M.)	0.0	SUITABLE	YES				
COARS AGGR GATE I (ASTH C33, D448)	175.00	NOT SUIT					
COARS AGGR GATE II (ASTH C33, D448)	129.92	NOT SUIT					
COARS AGGR GATE III (ASTH C33, D448)	136.09	NOT SUIT					
COARS AGGR GATE IV (ASTH C33, D448)	80.01	NOT SUIT					
COARS AGGR GATE V (ASTH C33, D448)	137.04	NOT SUIT					
COARS AGGR GATE VI (ASTH C33, D448)	75.61	NOT SUIT					
COARS AGGR GATE VII (ASTH C33, D448)	140.43	NOT SUIT					
COARS AGGR GATE VIII (ASTH C33, D448)	132.68	NOT SUIT					
COARS AGGR GATE IX (ASTH C33, D448)	98.17	NOT SUIT					
COARS AGGR GATE X (ASTH C33, D448)	178.97	NOT SUIT					
COARS AGGR GATE XI (ASTH C33, D448)	117.98	NOT SUIT					
COARS AGGR GATE XII (ASTH C33, D448)	119.04	NOT SUIT					
COARS AGGR GATE XIII (ASTH C33, D448)	138.25	NOT SUIT					
COARS AGGR GATE XIV (ASTH C33, D448)	145.70	NOT SUIT					
COARS AGGR GATE XV (ASTH C33, D448)	98.03	NOT SUIT					
COARS AGGR GATE XVI (ASTH C33, D448)	80.03	NOT SUIT					
FINE CONCRT AGGRGATE I (P. OF H.M.)	9.01	HARGINAL	YES				YES
FINE CONCRT AGGRGATE II (ASTH C33, C404)	21.58	HARGINAL	YES				YES
FINE CONCRT AGGRGATE III (ASTH C33, C404)	19.31	HARGINAL	YES				
MORTAR (ASTH C144)	11.77	HARGINAL	YES				
PORTLAND CEMENT (P.E.A.)	120.64	NOT SUIT					
BUILT-UP ROOFS (ASTH D1863)	0.0	SUITABLE	YES				
DITCH RUNS (P. OF H.M.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	5.93	MARGINAL	YES				
SHOULDERS (P. OF H.M.)	0.0	SUITABLE	YES		YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

WEIGHT OF SAND	4005.80	GMS.	WASHED SAMPLE - WEIGHT BEFORE	787.40	AFTER	787.40	% LOSS	0.0
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[illegible]

TOTALS	787.40	5553.28
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SPLITTING FACTOR 5.09

FINENESS MODULUS 5.50

% COBBLES	0.0	% PEBBLES	50.03	% GRANULES	12.10	% SAND	37.33	% SILT/CLAY	0.54
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INDUSTRIAL USAGE ASSESSMENT

022006 01919W32NEH6081A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE

**TOTAL
RESIDUAL****RATING**

**SCREENING
REQUIRED**

**REMOVAL OF
LESS THAN \$200 MATERIAL**

CRUSHED
MATERIAL

REQUIRED MATERIAL

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	4245.60 GMS.	WASHED SAMPLE -	WEIGHT BEFORE	1058.50	AFTER	1048.10	% LOSS	0.98
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[illegible]

SPLITTING FACTOR 4.01

% COBBLES	3.16	% PEBBLES	17.74	% GRANULES	19.92	% SAND	58.27	% SILT/CLAY	0.91
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022006 01919W33SWHG003A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <\$200	CRUSHING MATERIAL ON SITE	CRUSHING REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
38.62	NOT SUIT					
23.62	MARGINAL	YES	YES	YES		YES
26.45	NOT SUIT					
18.80	NOT SUIT					
17.72	MARGINAL	YES	YES	YES		
4.72	MARGINAL	YES	YES	YES		
7.43	NOT SUIT					
68.00	NOT SUIT					
51.53	NOT SUIT					
74.24	MARGINAL	YES	YES			
12.24	MARGINAL	YES	YES			
2.24	MARGINAL	YES	YES			
59.78	NOT SUIT					
24.52	MARGINAL	YES		YES		
14.43	MARGINAL	YES		YES		YES
36.27	NOT SUIT					
17.48	MARGINAL	YES		YES		
0.00	SUITABLE	YES				
20.00	NOT SUIT					
26.00	NOT SUIT					
80.88	NOT SUIT					
33.88	NOT SUIT					
46.10	NOT SUIT					
163.41	NOT SUIT					
210.13	NOT SUIT					
73.70	NOT SUIT					
167.00	NOT SUIT					
128.99	NOT SUIT					
178.40	NOT SUIT					
184.88	NOT SUIT					
161.78	NOT SUIT					
181.24	NOT SUIT					
155.67	NOT SUIT					
168.67	NOT SUIT					
69.89	NOT SUIT					
7.86	MARGINAL	YES				
6.10	MARGINAL	YES				YES
28.45	MARGINAL	YES				
48.97	NOT SUIT					
11.94	MARGINAL	YES				
17.20	MARGINAL	YES				
182.60	NOT SUIT					
2.60	MARGINAL	YES		YES		YES
25.36	MARGINAL	YES		YES		
11.68	MARGINAL	YES		YES		

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AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	3714.50	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	951.00	AFTER	948.30	% LOSS	0.28
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[illegible]

TOTALS	951.00	3848.90
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SPLITTING FACTOR 3.91

FINENESS MODULUS 3.21

% COBBLES	0.0	% PEBBLES	13.80	% GRANULES	8.67	% SAND	76.39	% SILT/CLAY	1.14
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INDUSTRIAL USAGE ASSESSMENT

022006 01919W33SMHG004

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.M.)	50.64	NOT SUIT					
ASPHALT B (P. OF H.M.)	40.64	NOT SUIT					
ASPHALT C (P. OF H.M.)	49.08	NOT SUIT					
BASE COURSE (P. OF H.M.)	31.58	NOT SUIT					
BASE COURSE (P. OF H.M.)	26.58	MARGINAL		YES		YES	YES
BASE COURSE (P. OF H.M.)	9.26	MARGINAL		YES		YES	
SUB-BASE/BASE COURSE A (ASTM D1241)	98.24	NOT SUIT					
SUB-BASE/BASE COURSE B (ASTM D1241)	83.55	NOT SUIT					
SUB-BASE/BASE COURSE C (ASTM D1241)	61.69	NOT SUIT					
SUB-BASE/BASE COURSE D (ASTM D1241)	20.03	MARGINAL	YES	YES	YES		YES
SUB-BASE/BASE COURSE E (ASTM D1241)	14.85	MARGINAL	YES	YES			
SUB-BASE/BASE COURSE F (ASTM D1241)	14.85	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.M.)	59.81	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	45.63	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	17.41	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.M.)	118.28	NOT SUIT					
SEAL COAT B (P. OF H.M.)	29.16	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.M.)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	216.64	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	216.64	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	203.62	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	175.07	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	169.68	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	213.20	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	135.21	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	200.21	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	190.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	226.64	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	177.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	225.52	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	155.52	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	119.29	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	8.38	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.M.)	1.58	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	2.87	MARGINAL	YES				
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	8.40	MARGINAL	YES				
MORTAR (ASTM C144)	2.35	MARGINAL	YES				
PORTLAND CEMENT (P. OF H.M.)	12.31	MARGINAL	YES				YES
BUILT-UP ROOF (ASTM D1863)	17.21	NOT SUIT					
PIRFIELD RUNWAYS (P. OF H.M.)	44.26	NOT SUIT					
PIT RUN (P. OF H.M.)	11.20	MARGINAL				YES	
SEPTIC FIELDS (U.M.A.)	26.51	MARGINAL				YES	
SHOULDERS (P. OF H.M.)	16.20	MARGINAL				YES	

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	2468.30	GMS.	WASHED SAMPLE - WEIGHT BEFORE	714.60	AFTER	710.00	% LOSS	0.64
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[illegible]

TOTALS	714.60	2544.80
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SPLITTING FACTOR 3.45

FINENESS MODULUS 4.02

% COBBLES	0.0	% PEBBLES	18.51	% GRANULES	22.93	% SAND	56.65	% SILT/CLAY	1.91
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022007A01920W21SWHG002A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL ≤\$200	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL ≤\$4)
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[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

WEIGHT OF SAND	3969.50 GMS.	WASHED SAMPLE - WEIGHT BEFORE	709.70	AFTER	694.90	% LOSS	2.09
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% COBBLES	9.68	% PEBBLES	30.39	% GRANULES	28.70	% SAND	29.53	% SILT/CLAY	1.70
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 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
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[illegible]

TOTALS	926.70	3660.34
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SPLITTING FACTOR 3.69

FINENESS MODULUS 3.34

% COBBLES	0.0	% PEBBLES	12.96	% GRANULES	9.63	% SAND	75.51	% SILT/CLAY	1.90
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022107A01920W26NEH6098A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	58.03	NOT SUIT					
ASPHALT B (P. OF H.)	48.03	NOT SUIT					
ASPHALT C (P. OF H.)	42.96	NOT SUIT					
BASIN COURSE (P. OF H.)	39.87	NOT SUIT					
BASIN COURSE (P. OF H.)	39.87	NOT SUIT					
BASIN COURSE (P. OF H.)	14.82	MARGINAL	YES	YES	YES		
SUB-BASE / BASE COURSE A (ASTH D1241)	115.76	NOT SUIT					
SUB-BASE / BASE COURSE B (ASTH D1241)	100.55	NOT SUIT					
SUB-BASE / BASE SURFACE COURSE (ASTH D1241)	75.25	NOT SUIT					
SUB-BASE / BASE SURFACE COURSE (ASTH D1241)	27.86	MARGINAL	YES	YES	YES		YES
SUB-BASE / BASE SURFACE COURSE (ASTH D1241)	1.33	MARGINAL	YES	YES			
SUB-BASE / BASE SURFACE COURSE (ASTH D1241)	1.33	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.)	33.71	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	33.71	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	33.71	NOT SUIT	YES		YES		
SEAL COAT A (P. OF H.)	121.10	NOT SUIT					
SEAL COAT B (P. OF H.)	33.71	NOT SUIT					
SEAL COAT C (P. OF H.)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTH C33; D448)	208.14	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	191.93	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	105.94	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	160.81	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	169.85	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	222.60	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	155.45	NOT SUIT					
FINE CONCRETE AGGREGATE (P. OF H.)	0.0	SUITABLE	YES				YES
FINE CONCRETE AGGREGATE I (ASTH C33; C404)	0.0	SUITABLE	YES				
FINE CONCRETE AGGREGATE II (ASTH C33; C404)	1.95	MARGINAL	YES				
MORTAR (ASTH C144)	1.95	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	3.70	MARGINAL	YES				YES
BUILT-UP ROOFS (ASTH D1863)	188.30	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.)	67.30	NOT SUIT					
PIT RUN (P. OF H.)	67.30	MARGINAL	YES		YES		
SEPTIC FIELDS (U.M.A.)	29.72	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	32.84	MARGINAL	YES		YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

WEIGHT OF SAND	4270.50	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	691.90	AFTER	674.10	% LOSS	2.57
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[illegible]

TOTALS	687.18	4291.35
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SPLITTING FACTOR 6.17

FINENESS MODULUS 2.87

FINENESS MODULUS	2.07								
% COBBLES	0.0	% PEBBLES	3.37	% GRANULES	5.44	% SAND	88.65	% SILT/CLAY	2.54

INDUSTRIAL USAGE ASSESSMENT

022007B01920W18NEHG009A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	74.16	NOT SUIT			
ASPHALT B (P. OF H.)	64.16	NOT SUIT			
ASPHALT C (P. OF H.)	50.49	NOT SUIT			
BASIS COURSE (P. OF H.)	70.47	NOT SUIT			
BASIS COURSE (P. OF H.)	71.03	NOT SUIT			
BASIS COURSE (P. OF H.)	69.03	MARGINAL			
SUB-BASE (ASTM D1241)	122.79	NOT SUIT		YES	YES
SUB-BASE (ASTM D1241)	122.51	NOT SUIT			
SUB-BASE (ASTM D1241)	90.91	NOT SUIT			
SUB-BASE (ASTM D1241)	47.64	NOT SUIT			
SUB-BASE (ASTM D1241)	6.04	MARGINAL	YES	YES	
SUB-BASE (ASTM D1241)	18.04	MARGINAL	YES	YES	
TRAFFIC GRAVEL (P. OF H.)	100.05	NOT SUIT			
TRAFFIC GRAVEL (P. OF H.)	80.84	NOT SUIT			
TRAFFIC GRAVEL (P. OF H.)	41.83	NOT SUIT			
SEAL COAT A (P. OF H.)	151.75	NOT SUIT			
SEAL COAT B (P. OF H.)	30.69	NOT SUIT			
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES		
COARSE AGGREGATE (ASTM C448)	29.29	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	29.29	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	208.10	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	90.66	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	222.40	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	69.97	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	222.55	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	69.77	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	222.53	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	67.71	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	222.74	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	67.90	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	222.62	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	69.67	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	222.86	NOT SUIT			
COARSE AGGREGATE (ASTM C448)	68.06	MARGINAL	YES		YES
FINE CONCRETE AGGREGATE (P. OF H.)	8.40	MARGINAL	YES		YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	0.96	MARGINAL	YES		YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	5.84	MARGINAL	YES		YES
MORTAR (ASTM C144)	0.00	SUITABLE	YES		
PORTLAND CEMENT (P. OF H.)	177.69	NOT SUIT			YES
BIRFIELD RUNWAYS (ASTM D1863)	28.80	NOT SUIT			
PIT RUN (P. OF H.)	22.54	NOT SUIT			
SEPTIC FIELDS (U.H.A.)	29.76	MARGINAL	YES	YES	
SHOULDERS (P. OF H.)	26.63	MARGINAL	YES		YES

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 6

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE									
WEIGHT OF SAND	3003.50	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	787.80	AFTER	745.50	% LOSS	5.37

[illegible]

TOTALS	787.80	3396.30
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SPLITTING FACTOR 3.81

FINENESS MODULUS 4.69

FINENESS MODULUS	4.69								
% COBBLES	0.0	% PEBBLES	40.00	% GRANULES	22.63	% SAND	32.62	% SILT/CLAY	4.75

INDUSTRIAL USAGE ASSESSMENT

022007801920W19SEHG067A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE

**TOTAL
RESIDUAL**

RATING

**SCREENING
REQUIRED**

REMOVAL OF
#200 MATERIAL

CRUSHED
MATERIAL
ON SITE

REQUIRED
MATERIAL
NOT ON SITE

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING. (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	3382.00	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	820.10	AFTER	817.00	% LOSS	0.38
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STEVE SIZE	FINE FRACTION (GMS.)	STEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		152.90	87.7	99.99	0.07
1/4		178.20	78.8	99.99	0.07
1/8		178.20	51.1	99.99	0.07
1/16		178.20	27.7	99.99	0.07
1/32		178.20	15.5	99.99	0.07
1/64		178.20	8.2	99.99	0.07
1/128		178.20	4.6	99.99	0.07
1/256		178.20	2.3	99.99	0.07
1/512		178.20	1.2	99.99	0.07
1/1024		178.20	0.7	99.99	0.07
1/2048		178.20	0.4	99.99	0.07
1/4096		178.20	0.2	99.99	0.07
1/8192		178.20	0.1	99.99	0.07
1/16384		178.20	0.1	99.99	0.07
1/32768		178.20	0.1	99.99	0.07
1/65536		178.20	0.1	99.99	0.07
1/131072		178.20	0.1	99.99	0.07
1/262144		178.20	0.1	99.99	0.07
1/524288		178.20	0.1	99.99	0.07
1/1048576		178.20	0.1	99.99	0.07
1/2097152		178.20	0.1	99.99	0.07
1/4194304		178.20	0.1	99.99	0.07
1/8388608		178.20	0.1	99.99	0.07
1/16777216		178.20	0.1	99.99	0.07
1/33554432		178.20	0.1	99.99	0.07
1/67108864		178.20	0.1	99.99	0.07
1/134217728		178.20	0.1	99.99	0.07
1/268435456		178.20	0.1	99.99	0.07
1/536870912		178.20	0.1	99.99	0.07
1/1073741824		178.20	0.1	99.99	0.07
1/2147483648		178.20	0.1	99.99	0.07
1/4294967296		178.20	0.1	99.99	0.07
1/8589934592		178.20	0.1	99.99	0.07
1/17179869184		178.20	0.1	99.99	0.07
1/34359738368		178.20	0.1	99.99	0.07
1/68719476736		178.20	0.1	99.99	0.07
1/137438953472		178.20	0.1	99.99	0.07
1/274877906944		178.20	0.1	99.99	0.07
1/549755813888		178.20	0.1	99.99	0.07
1/1099511627776		178.20	0.1	99.99	0.07
1/2199023255552		178.20	0.1	99.99	0.07
1/4398046511104		178.20	0.1	99.99	0.07
1/8796093022208		178.20	0.1	99.99	0.07
1/17592186044416		178.20	0.1	99.99	0.07
1/35184372088832		178.20	0.1	99.99	0.07
1/70368744177664		178.20	0.1	99.99	0.07
1/140737488355328		178.20	0.1	99.99	0.07
1/281474976710656		178.20	0.1	99.99	0.07
1/562949953421312		178.20	0.1	99.99	0.07
1/1125899906842624		178.20	0.1	99.99	0.07
1/2251799813685248		178.20	0.1	99.99	0.07
1/4503599627370496		178.20	0.1	99.99	0.07
1/9007199254740992		178.20	0.1	99.99	0.07
1/18014398509481984		178.20	0.1	99.99	0.07
1/36028797018963968		178.20	0.1	99.99	0.07
1/72057594037927936		178.20	0.1	99.99	0.07
1/144115188075855872		178.20	0.1	99.99	0.07
1/288230376151711744		178.20	0.1	99.99	0.07
1/576460752303423488		178.20	0.1	99.99	0.07
1/1152921504606846976					

TOTALS	814.88	3947.67
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SPLITTING FACTOR 4.12

FINENESS MODULUS 4.87

% COBBLES	0.0	% PEBBLES	38.37	% GRANULES	14.07	% SAND	47.24	% SILT/CLAY	0.32
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022007B01920W17NWHG006A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <#200	CRUSHING ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	14.89	MARGINAL	YES	YES	YES		YES
ASPHALT B (P. OF H.)	7.49	MARGINAL	YES	YES			YES
ASPHALT C (P. OF H.)	67.90	NOT SUIT					
BASE COURSE (P. OF H.)	20.89	MARGINAL	YES	YES	YES		YES
BASE COURSE (P. OF H.)	14.14	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	3.62	NOT SUIT					
SUB-BASE (P. OF H.)	3.62	MARGINAL	YES	YES	YES		YES
SUB-BASE (P. OF H.)	11.44	MARGINAL	YES	YES	YES		YES
SUB-BASE (P. OF H.)	7.90	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	0.90	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	36.36	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	16.91	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL (P. OF H.)	0.26	MARGINAL	YES				
TRAFFIC GRAVEL (P. OF H.)	87.91	NOT SUIT					
SEAL COAT A (P. OF H.)	8.08	MARGINAL	YES		YES		
SEAL COAT B (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (ASTH D448)	2.47	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	2.80	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	1.12	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	4.40	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	3.81	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	4.47	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	2.12	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	2.36	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	2.44	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	7.80	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	1.22	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	2.90	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	1.84	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	1.71	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	9.71	NOT SUIT					
COARSE AGGREGATE (ASTH D448)	9.83	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	16.33	MARGINAL	YES				
FINE CONCRETE AGGREGATE (ASTH C33, C404)	45.00	NOT SUIT					
FINE CONCRETE AGGREGATE (ASTH C33, C404)	47.11	NOT SUIT					
HORTAR (ASTH C144)	11.88	MARGINAL	YES				
PORTLAND CEMENT (ASTH D1863)	26.15	MARGINAL	YES				
BUILT-UP CURBS (ASTH D1863)	120.80	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.)	0.87	MARGINAL	YES				
PIT RUN (P. OF H.)	0.00	SUITABLE	YES				
SEPTIC FIELDS (U.M.A.)	20.22	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.00	SUITABLE	YES				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

HEIGHT OF SAND	5142.30 GMS.	WASHED SAMPLE - WEIGHT BEFORE	1133.80	AFTER	1128.90	% LOSS	0.43
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0</			

% COBBLES	0.0	% PEBBLES	35.75	% GRANULES	18.42	% SAND	44.15	% SILT/CLAY	1.69
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022007B01920W18NEHG008A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	11.36	MARGINAL	YES	YES	YES		
ASPHALT B (P. OF H.)	5.53	MARGINAL	YES	YES			
ASPHALT C (P. OF H.)	65.81	NOT SUIT					
BASIN COURSE A (P. OF H.)	16.44	MARGINAL	YES	YES	YES		
BASIN COURSE B (P. OF H.)	13.07	MARGINAL	YES	YES			
BASIN COURSE C (P. OF H.)	3.21	NOT SUIT					
SUB-BASIN COURSE A (P. OF H.)	21.21	MARGINAL	YES	YES		YES	YES
SUB-BASIN COURSE B (P. OF H.)	16.44	MARGINAL	YES	YES			
SUB-BASIN COURSE C (P. OF H.)	16.77	MARGINAL	YES	YES			
SUB-BASIN COURSE D (P. OF H.)	19.77	MARGINAL	YES	YES			
SUB-BASIN COURSE E (P. OF H.)	41.36	NOT SUIT					
TRAFFIC GRAVEL A (P. OF H.)	14.77	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL B (P. OF H.)	14.77	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL C (P. OF H.)	0.54	MARGINAL	YES				
SEAL COAT A (P. OF H.)	82.30	NOT SUIT					
SEAL COAT B (P. OF H.)	7.40	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE A (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE B (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE C (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE D (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE E (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE F (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE G (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE H (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE I (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE J (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE K (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE L (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE M (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE N (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE O (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE P (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE Q (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE R (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE S (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE T (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE U (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE V (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE W (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE X (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE Y (ASTM C33, D448)	22.22	NOT SUIT					
COARSE AGGREGATE Z (ASTM C33, D448)	22.22	NOT SUIT					
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	22.22	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	22.22	MARGINAL	YES				
FINE CONCRETE AGGREGATE III (ASTM C33, C404)	22.22	NOT SUIT					
FINE CONCRETE AGGREGATE IV (ASTM C33, C404)	22.22	NOT SUIT					
MORTAR (ASTM C144)	15.68	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	15.68	NOT SUIT					
BUILT-UP ROOFS (ASTM D1863)	121.50	NOT SUIT					
ATF FLD RUNWAYS (P. OF H.)	0.54	MARGINAL	YES				
ATF RUN (P. OF H.)	0.54	SUITABLE					
SEPTIC FIELDS (U.M.A.)	21.64	MARGINAL				YES	
SHOULDERS (P. OF H.)	0.00	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	3134.30	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	729.20	AFTER	701.10	% LOSS	3.85
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[illegible]

TOTALS	729.20	3908.90
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SPLITTING FACTOR 4.30

FINENESS MODULUS 3.91

% COBBLES	0.0	% PEBBLES	30.13	% GRANULES	6.04	% SAND	60.74	% SILT/CLAY	3.09
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INDUSTRIAL USAGE ASSESSMENT

022008 01921W23SWHG079A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.M.)	47.43	NOT SUIT					
ASPHALT B (P. OF H.M.)	36.74	NOT SUIT					
ASPHALT C (P. OF H.M.)	36.14	NOT SUIT					
BASE COURSE A (P. OF H.M.)	47.08	MARGINAL	YES	YES			YES
BASE COURSE B (P. OF H.M.)	0.91	MARGINAL		YES			
SUB-BASE A (ASTM D1241)	54.48	NOT SUIT					
SUB-BASE B (ASTM D1241)	30.74	NOT SUIT					
SUB-BASE C (ASTM D1241)	48.62	NOT SUIT					
SUB-BASE D (ASTM D1241)	0.80	MARGINAL	YES	YES			YES
SUB-BASE E (ASTM D1241)	2.45	MARGINAL	YES	YES			
SUB-BASE F (ASTM D1241)	2.44	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.M.)	33.80	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	33.80	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	33.80	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	33.80	NOT SUIT					
SEAL COAT A (P. OF H.M.)	18.08	NOT SUIT	YES		YES		YES
SEAL COAT B (P. OF H.M.)	39.63	NOT SUIT					
SEAL COAT C (P. OF H.M.)	8.49	MARGINAL	YES				YES
COARS AGGRGATE I (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE II (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE III (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE IV (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE V (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE VI (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE VII (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE VIII (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE IX (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE X (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XI (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XII (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XIII (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XIV (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XV (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XVI (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XVII (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XVIII (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XIX (ASTM C33, D448)	136.57	NOT SUIT					
COARS AGGRGATE XX (ASTM C33, D448)	136.57	NOT SUIT					
FINE CONCRETE AGGRGATE I (P. OF H.M.)	2.20	MARGINAL	YES				YES
FINE CONCRETE AGGRGATE II (ASTM C33, C404)	2.20	MARGINAL	YES				YES
FINE CONCRETE AGGRGATE III (ASTM C33, C404)	1.53	MARGINAL	YES				
MORTAR (ASTM C144)	1.53	MARGINAL	YES				
PORTLAND CEMENT (P.E.A.)	25.09	MARGINAL	YES				YES
BUILT-UP ROOFS (ASTM D1863)	175.63	NOT SUIT					
TRFIELD RUMAYS (P. OF H.M.)	0.18	SUITABLE	YES				
PI RUN (P. OF H.M.)	15.03	MARGINAL	YES		YES		
SEPTIC FIELDS (U.M.A.)	0.0	SUITABLE					
SHOULDERS (P. OF H.M.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

SAMPLE IDENTIFICATION 022009 01921W02NEHB011A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND 3927.60 GMS. WASHED SAMPLE - WEIGHT BEFORE 835.30 AFTER 674.00 % LOSS 19.31

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
1/2"		0.0	0.0	100.00	0.0
3/4"		0.0	0.0	100.00	0.0
1"		0.0	0.0	100.00	0.0
1 1/2"		0.0	0.0	100.00	0.0
2"		1020.50	16.00	84.00	16.00
2 1/2"		520.00	8.00	76.00	24.00
3"		664.00	10.00	66.00	34.00
3 1/2"		247.20	4.00	62.00	38.00
4"		0.0	0.0	62.00	38.00
4 1/2"	0.0	0.0	0.0	62.00	38.00
5"	100.00	200.00	3.00	59.00	41.00
5 1/2"	100.00	200.00	3.00	56.00	44.00
6"	100.00	200.00	3.00	53.00	47.00
6 1/2"	100.00	200.00	3.00	50.00	50.00
7"	100.00	200.00	3.00	47.00	53.00
7 1/2"	100.00	200.00	3.00	44.00	56.00
8"	100.00	200.00	3.00	41.00	59.00
9"	100.00	200.00	3.00	38.00	62.00
10"	100.00	200.00	3.00	35.00	65.00
12"	100.00	200.00	3.00	32.00	68.00
15"	100.00	200.00	3.00	29.00	71.00
18"	100.00	200.00	3.00	26.00	74.00
20"	100.00	200.00	3.00	23.00	77.00
24"	100.00	200.00	3.00	20.00	80.00
30"	100.00	200.00	3.00	17.00	83.00
36"	100.00	200.00	3.00	14.00	86.00
42"	100.00	200.00	3.00	11.00	89.00
48"	100.00	200.00	3.00	8.00	92.00
54"	100.00	200.00	3.00	5.00	95.00
60"	100.00	200.00	3.00	2.00	98.00
200 + W	161.28	758.32	11.89	0.0	100.00

TOTALS 835.17 6379.90

SPLITTING FACTOR 4.70

FINENESS MODULUS 5.11

% COBBLES 0.0 % PEBBLES 50.65 % GRANULES 8.67 % SAND 28.79 % SILT/CLAY 11.89

INDUSTRIAL USAGE ASSESSMENT

022009 01921W02NEHB011A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	45.04	NOT SUIT					
ASPHALT B (P. OF H.)	38.15	NOT SUIT					
ASPHALT C (P. OF H.)	36.75	MARGINAL	YES				YES
BAS. COURSE A (P. OF H.)	30.00	SUITABLE	YES				
BAS. COURSE B (P. OF H.)	0.0	SUITABLE	YES				
SUB-BASE/BAS. COURSE A (ASTM D1241)	30.38	NOT SUIT					
SUB-BASE/BAS. COURSE B (ASTM D1241)	3.42	MARGINAL	YES				YES
SUB-BASE/BAS. SURFACE COURSE (ASTM D1241)	35.39	NOT SUIT					
SUB-BASE/BAS. SURFACE COURSE (ASTM D1241)	3.17	MARGINAL	YES				YES
SUB-BASE/BAS. SURFACE COURSE (ASTM D1241)	4.17	MARGINAL	YES				YES
SUB-BASE/BAS. SURFACE COURSE (ASTM D1241)	4.17	MARGINAL	YES				YES
TRAFFIC GRAVEL A (P. OF H.)	63.06	NOT SUIT					
TRAFFIC GRAVEL B (P. OF H.)	38.96	NOT SUIT					
TRAFFIC GRAVEL C (P. OF H.)	21.88	MARGINAL	YES		YES		YES
TRAFFIC GRAVEL D (P. OF H.)	16.77	MARGINAL	YES		YES		YES
SEAL COAT A (P. OF H.)	18.47	NOT SUIT					
SEAL COAT B (P. OF H.)	32.24	NOT SUIT					
COARSE AGGREGATE I (ASTM C33, D448)	168.29	NOT SUIT					
COARSE AGGREGATE II (ASTM C33, D448)	142.29	NOT SUIT					
COARSE AGGREGATE III (ASTM C33, D448)	133.49	NOT SUIT					
COARSE AGGREGATE IV (ASTM C33, D448)	128.36	NOT SUIT					
COARSE AGGREGATE V (ASTM C33, D448)	96.43	NOT SUIT					
COARSE AGGREGATE VI (ASTM C33, D448)	159.94	NOT SUIT					
COARSE AGGREGATE VII (ASTM C33, D448)	183.51	NOT SUIT					
COARSE AGGREGATE VIII (ASTM C33, D448)	188.57	NOT SUIT					
COARSE AGGREGATE IX (ASTM C33, D448)	148.95	NOT SUIT					
COARSE AGGREGATE X (ASTM C33, D448)	196.06	NOT SUIT					
COARSE AGGREGATE XI (ASTM C33, D448)	174.08	NOT SUIT					
COARSE AGGREGATE XII (ASTM C33, D448)	173.26	NOT SUIT					
COARSE AGGREGATE XIII (ASTM C33, D448)	202.21	NOT SUIT					
COARSE AGGREGATE XIV (ASTM C33, D448)	189.38	NOT SUIT					
COARSE AGGREGATE XV (ASTM C33, D448)	167.16	NOT SUIT					
COARSE AGGREGATE XVI (ASTM C33, D448)	142.18	NOT SUIT					
COARSE AGGREGATE XVII (ASTM C33, D448)	20.01	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (P. OF H.)	57.24	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	54.94	NOT SUIT					
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	32.07	NOT SUIT					
MORTAR (ASTM C144)	65.46	NOT SUIT					
PORTLAND CEMENT (P.C.A.)	170.01	NOT SUIT					
BUILT-UP ROOFS (ASTM D1863)	28.74	MARGINAL	YES		YES		YES
AIRFIELD RUNWAYS (P. OF H.)	0.67	MARGINAL	YES		YES		YES
RTT RUN (P. OF H.)	1.05	MARGINAL	YES		YES		YES
SEPTIC FIELDS (U.N.A.)	0.0	SUITABLE	YES		YES		YES
SHOULDERS (P. OF H.)							

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

WEIGHT OF SAND	5343.80	GMS.	WASHED SAMPLE - WEIGHT BEFORE	1172.30	AFTER	1117.50	% LOSS	4.67
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[illegible]

% COBBLES	0.0	% PEBBLES	40.82	% GRANULES	11.15	% SAND	43.89	% SILT/CLAY	4.14
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022009 01921W24SWH6010A

***** NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *****

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL #200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	'ADDITION OF FINES (MATERIAL #24)
ASPHALT A (P. OF H.M.)	2.85	MARGINAL	YES				
ASPHALT B (P. OF H.M.)	0.00	SUITABLE	YES				
ASPHALT C (P. OF H.M.)	51.56	NOT SUIT					
BASIS COURSE (P. OF H.M.)	6.18	MARGINAL		YES			
BASIS COURSE (P. OF H.M.)	3.99	MARGINAL	YES				
SUB-BASE (ASTH D1241)	200.07	SUITABLE					
SUB-BASE (ASTH D1241)	200.07	MARGINAL				YES	
SUB-BASE (ASTH D1241)	17.13	MARGINAL	YES	YES			YES
SUB-BASE (ASTH D1241)	17.13	MARGINAL	YES	YES			YES
SUB-BASE (ASTH D1241)	10.13	MARGINAL	YES	YES			YES
SUB-BASE (ASTH D1241)	33.03	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	20.89	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.M.)	4.94	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL (P. OF H.M.)	0.66	SUITABLE	YES	YES			
SEAL COAT A (P. OF H.M.)	89.40	NOT SUIT					
SEAL COAT B (P. OF H.M.)	3.97	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.M.)	1.10	MARGINAL	YES				YES
COARS AGGR GATE (ASTH D448)	20.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	19.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	18.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	17.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	16.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	15.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	14.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	13.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	12.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	11.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	10.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	9.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	8.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	7.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	6.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	5.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	4.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	3.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	2.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	1.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	0.95	NOT SUIT					YES
COARS AGGR GATE (ASTH D448)	0.00	NOT SUIT					YES
FINE CONCRETE AGGREGATE (P. OF H.M.)	11.18	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (ASTH C33, C404)	25.64	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE II (ASTH C33, C404)	16.73	MARGINAL	YES				YES
PORTLAND CEMENT (ASTH C154)	0.75	MARGINAL	YES				YES
BUILT-UP ROADS (ASTH D1863)	10.68	MARGINAL	YES				YES
AIRFIELD RUNWAYS (P. OF H.M.)	120.27	NOT SUIT					
PIT RUN (P. OF H.M.)	0.00	SUITABLE	YES				
SEPTIC FIELDS (U.M.A.)	20.64	MARGINAL	YES				
SHOULDERS (P. OF H.M.)	0.00	SUITABLE			YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

TOTALS	800.30	3046.70
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SPLITTING FACTOR 3.78

FINENESS MODULUS 2.62

% COBBLES	0.0	% PEBBLES	3.00	% GRANULES	6.47	% SAND	89.13	% SILT/CLAY	1.39
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022011 01920W015WVG090A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

**TOTAL
RESIDUAL**

RATING

**SCREENING
REQUIRED**

**REMOVAL OF
\$200 MATERIAL**

CRUSHING
MATERIAL
ON SITE

**REQUIRED
MATERIAL
NOT ON SITE**

**ADDITION
OF FINES
(MATERIAL <#4)**

ASPHALT A	(P. OF H.)		75.38	NOT SUIT		
ASPHALT B	(P. OF H.)		75.39	NOT SUIT		
ASPHALT C	(P. OF H.)		75.40	NOT SUIT		
BASE COURSE	A (P. OF H.)		75.41	NOT SUIT		
BASE COURSE	B (P. OF H.)		75.42	NOT SUIT		
BASE COURSE	C (P. OF H.)		75.43	NOT SUIT		
SUB-BASE	D (P. OF H.)		75.44	HARGINAL	YES	YES
SUB-BASE	E (P. OF H.)		75.45	NOT SUIT		
SUB-BASE	F (P. OF H.)		75.46	NOT SUIT		
SUB-BASE	G (P. OF H.)		75.47	NOT SUIT		
SUB-BASE	H (P. OF H.)		75.48	NOT SUIT		
SUB-BASE	I (P. OF H.)		75.49	NOT SUIT		
SUB-BASE	J (P. OF H.)		75.50	NOT SUIT		
SUB-BASE	K (P. OF H.)		75.51	NOT SUIT		
SUB-BASE	L (P. OF H.)		75.52	NOT SUIT		
SUB-BASE	M (P. OF H.)		75.53	NOT SUIT		
SUB-BASE	N (P. OF H.)		75.54	NOT SUIT		
SUB-BASE	O (P. OF H.)		75.55	NOT SUIT		
SUB-BASE	P (P. OF H.)		75.56	NOT SUIT		
SUB-BASE	Q (P. OF H.)		75.57	NOT SUIT		
SUB-BASE	R (P. OF H.)		75.58	NOT SUIT		
SUB-BASE	S (P. OF H.)		75.59	NOT SUIT		
SUB-BASE	T (P. OF H.)		75.60	NOT SUIT		
SUB-BASE	U (P. OF H.)		75.61	NOT SUIT		
SUB-BASE	V (P. OF H.)		75.62	NOT SUIT		
SUB-BASE	W (P. OF H.)		75.63	NOT SUIT		
SUB-BASE	X (P. OF H.)		75.64	NOT SUIT		
SUB-BASE	Y (P. OF H.)		75.65	NOT SUIT		
SUB-BASE	Z (P. OF H.)		75.66	NOT SUIT		
SUB-BASE	AA (P. OF H.)		75.67	NOT SUIT		
SUB-BASE	AB (P. OF H.)		75.68	NOT SUIT		
SUB-BASE	AC (P. OF H.)		75.69	NOT SUIT		
SUB-BASE	AD (P. OF H.)		75.70	NOT SUIT		
SUB-BASE	AE (P. OF H.)		75.71	NOT SUIT		
SUB-BASE	AF (P. OF H.)		75.72	NOT SUIT		
SUB-BASE	AG (P. OF H.)		75.73	NOT SUIT		
SUB-BASE	AH (P. OF H.)		75.74	NOT SUIT		
SUB-BASE	AI (P. OF H.)		75.75	NOT SUIT		
SUB-BASE	AJ (P. OF H.)		75.76	NOT SUIT		
SUB-BASE	AK (P. OF H.)		75.77	NOT SUIT		
SUB-BASE	AL (P. OF H.)		75.78	NOT SUIT		
SUB-BASE	AM (P. OF H.)		75.79	NOT SUIT		
SUB-BASE	AN (P. OF H.)		75.80	NOT SUIT		
SUB-BASE	AO (P. OF H.)		75.81	NOT SUIT		
SUB-BASE	AP (P. OF H.)		75.82	NOT SUIT		
SUB-BASE	AQ (P. OF H.)		75.83	NOT SUIT		
SUB-BASE	AR (P. OF H.)		75.84	NOT SUIT		
SUB-BASE	AS (P. OF H.)		75.85	NOT SUIT		
SUB-BASE	AT (P. OF H.)		75.86	NOT SUIT		
SUB-BASE	AU (P. OF H.)		75.87	NOT SUIT		
SUB-BASE	AV (P. OF H.)		75.88	NOT SUIT		
SUB-BASE	AW (P. OF H.)		75.89	NOT SUIT		
SUB-BASE	AX (P. OF H.)		75.90	NOT SUIT		
SUB-BASE	AY (P. OF H.)		75.91	NOT SUIT		
SUB-BASE	AZ (P. OF H.)		75.92	NOT SUIT		
SUB-BASE	BA (P. OF H.)		75.93	NOT SUIT		
SUB-BASE	BB (P. OF H.)		75.94	NOT SUIT		
SUB-BASE	BC (P. OF H.)		75.95	NOT SUIT		
SUB-BASE	BD (P. OF H.)		75.96	NOT SUIT		
SUB-BASE	BE (P. OF H.)		75.97	NOT SUIT		
SUB-BASE	BF (P. OF H.)		75.98	NOT SUIT		
SUB-BASE	BG (P. OF H.)		75.99	NOT SUIT		
SUB-BASE	BH (P. OF H.)		76.00	NOT SUIT		
SUB-BASE	BI (P. OF H.)		76.01	NOT SUIT		
SUB-BASE	BJ (P. OF H.)		76.02	NOT SUIT		
SUB-BASE	BK (P. OF H.)		76.03	NOT SUIT		
SUB-BASE	BL (P. OF H.)		76.04	NOT SUIT		
SUB-BASE	BM (P. OF H.)		76.05	NOT SUIT		
SUB-BASE	BN (P. OF H.)		76.06	NOT SUIT		
SUB-BASE	BO (P. OF H.)		76.07	NOT SUIT		
SUB-BASE	BP (P. OF H.)		76.08	NOT SUIT		
SUB-BASE	BQ (P. OF H.)		76.09	NOT SUIT		
SUB-BASE	BR (P. OF H.)		76.10	NOT SUIT		
SUB-BASE	BS (P. OF H.)		76.11	NOT SUIT		
SUB-BASE	BT (P. OF H.)		76.12	NOT SUIT</		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

WEIGHT OF SAND	3002.10	GMS.	WASHED SAMPLE - WEIGHT BEFORE	733.70	AFTER	717.50	% LOSS	2.21
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STEVE SIZE	FTNE FRACTION	(GMS.)	WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4	IN		0.0	0.0	100.00	0.0
1/2	IN		0.0	0.0	100.00	0.0
	IN		0.0	0.0	100.00	0.0
1/2	IN		0.0	0.0	100.00	0.0
	IN		0.0	0.0	100.00	0.0
1/2	IN		0.0	0.0	100.00	0.0
	IN		0.0	0.0	100.00	0.0
4	IN		24.9	0.15	92.85	7.15
1/2	IN		39.7	6.81	86.04	13.96
1/2	IN		13.5	6.12	79.92	20.08
1/2	IN		13.1	6.13	79.79	20.21
1/2	IN		7.9	6.02	76.76	23.24
1/2	IN		7.7	6.00	75.55	24.45
1/2	IN		7.6	5.99	75.00	25.00
1/2	IN		7.6	5.98	74.02	25.98
1/2	IN		7.6	5.97	73.05	26.95
1/2	IN		7.6	5.96	72.08	27.92
1/2	IN		7.6	5.95	71.11	28.89
1/2	IN		7.6	5.94	70.14	29.86
1/2	IN		7.6	5.93	69.17	30.83
1/2	IN		7.6	5.92	68.20	31.80
1/2	IN		7.6	5.91	67.23	32.77
1/2	IN		7.6	5.90	66.26	33.74
1/2	IN		7.6	5.89	65.29	34.71
1/2	IN		7.6	5.88	64.32	35.68
1/2	IN		7.6	5.87	63.35	36.65
1/2	IN		7.6	5.86	62.38	37.62
1/2	IN		7.6	5.85	61.41	38.59
1/2	IN		7.6	5.84	60.44	39.56
1/2	IN		7.6	5.83	59.47	40.53
1/2	IN		7.6	5.82	58.50	41.50
1/2	IN		7.6	5.81	57.53	42.47
1/2	IN		7.6	5.80	56.56	43.44
1/2	IN		7.6	5.79	55.59	44.41
1/2	IN		7.6	5.78	54.62	45.38
1/2	IN		7.6	5.77	53.65	46.35
1/2	IN		7.6	5.76	52.68	47.32
1/2	IN		7.6	5.75	51.71	48.29
1/2	IN		7.6	5.74	50.74	49.26
1/2	IN		7.6	5.73	49.77	50.23
1/2	IN		7.6	5.72	48.80	51.20
1/2	IN		7.6	5.71	47.83	52.17
1/2	IN		7.6	5.70	46.86	53.14
1/2	IN		7.6	5.69	45.89	54.11
1/2	IN		7.6	5.68	44.92	55.08
1/2	IN		7.6	5.67	43.95	56.05
1/2	IN		7.6	5.66	42.98	57.02
1/2	IN		7.6	5.65	42.01	57.99
1/2	IN		7.6	5.64	41.04	58.96
1/2	IN		7.6	5.63	40.07	59.93
1/2	IN		7.6	5.62	39.10	60.90
1/2	IN		7.6	5.61	38.13	61.87
1/2	IN		7.6	5.60	37.16	62.84
1/2	IN		7.6	5.59	36.19	63.81
1/2	IN		7.6	5.58	35.22	64.78
1/2	IN		7.6	5.57	34.25	65.75
1/2	IN		7.6	5.56	33.28	66.72
1/2	IN		7.6	5.55	32.31	67.69
1/2	IN		7.6	5.54	31.34	68.66
1/2	IN		7.6	5.53	30.37	69.63
1/2	IN		7.6	5.52	29.40	70.60
1/2	IN		7.6	5.51	28.43	71.57
1/2	IN		7.6	5.50	27.46	72.54
1/2	IN		7.6	5.49	26.49	73.51
1/2	IN		7.6	5.48	25.52	74.48
1/2	IN		7.6	5.47	24.55	75.45

% COBBLES	0.0	% PEBBLES	49.09	% GRANULES	16.83	% SAND	32.18	% SILT/CLAY	1.90
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022011 01920W12SWHA109A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #24)
ASPHALT A (P. OF M.)	8.46	MARGINAL	YES				
ASPHALT B (P. OF M.)	1.35	MARGINAL	YES				
ASPHALT C (P. OF M.)	60.25	NOT SUIT					
BASAL COURSE (P. OF M.)	12.16	MARGINAL	YES	YES			
BASAL COURSE (P. OF M.)	2.60	MARGINAL	YES	YES			
SUB-BASE (P. OF M.)	1.42	MARGINAL	YES		YES		
SUB-BASE (P. OF M.)	10.65	MARGINAL	YES		YES		
SUB-BASE (P. OF M.)	9.93	MARGINAL	YES		YES		
SUB-BASE (P. OF M.)	26.23	MARGINAL	YES		YES		
SUB-BASE (P. OF M.)	19.41	MARGINAL	YES		YES		
SUB-BASE (P. OF M.)	61.41	NOT SUIT					
TRAFFIC GRAVEL (P. OF M.)	7.14	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF M.)	4.32	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF M.)	0.00	SUITABLE	YES				
SEAL COAT A (P. OF M.)	69.23	NOT SUIT					
SEAL COAT B (P. OF M.)	0.00	SUITABLE	YES				
SEAL COAT C (P. OF M.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	206.94	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	98.94	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	186.72	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	117.54	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	113.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	170.56	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	98.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	156.49	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	147.39	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	90.71	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	131.81	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	97.81	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	91.36	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	95.42	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	101.23	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	113.23	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	68.89	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	68.89	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	10.00	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF M.)	224.23	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	59.41	NOT SUIT					
FINE CONCRETE AGGREGATE (ASTM C33, C404)	45.87	NOT SUIT					
MORTAR (ASTM C144)	20.02	MARGINAL	YES				
PORTLAND CEMENT (P. OF M.)	94.41	NOT SUIT					
BUTTLE ROADS (ASTM D1863)	93.02	NOT SUIT					
TRFIELD RUNWAYS (P. OF M.)	0.00	SUITABLE	YES				
PIT RUN (P. OF M.)	0.00	SUITABLE					
SEPTIC FIELDS (U.M.A.)	16.04	MARGINAL					
SHOULDERS (P. OF M.)	0.00	SUITABLE			YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
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[illegible]

SPLITTING FACTOR 6.03

% COBBLES	0.0	% PEBBLES	33.44	% GRANULES	23.63	% SAND	40.13	% SILT/CLAY	2.80
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022012 01821W32NWHG144A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

ADDITION
OF FINES
(MATERIAL <#4)

ITEM	UNIT	QTY	UNIT PRICE	TOTAL	MARKET	STATUS	REMARKS
ASPHALT A (P. OF H.)	6.92				MARGINAL	YES	
ASPHALT B (P. OF H.)	8.00				SUITABLE	YES	
ASPHALT C (P. OF H.)	55.34				NOT SUIT	YES	
BASE COURSE A (P. OF H.)	11.84				MARGINAL	YES	
BASE COURSE B (P. OF H.)	5.65				MARGINAL	YES	
BASE COURSE C (P. OF H.)	2.20				MARGINAL	YES	
SUB-BASE A (P. OF H.)	2.20				MARGINAL	YES	
SUB-BASE B (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE C (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE D (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE E (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE F (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE G (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE H (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE I (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE J (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE K (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE L (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE M (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE N (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE O (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE P (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE Q (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE R (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE S (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE T (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE U (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE V (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE W (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE X (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE Y (P. OF H.)	1.00				MARGINAL	YES	
SUB-BASE Z (P. OF H.)	1.00				MARGINAL	YES	
TRAFFIC GRAVEL A (P. OF H.)	25.20				MARGINAL	YES	
TRAFFIC GRAVEL B (P. OF H.)	13.00				MARGINAL	YES	
TRAFFIC GRAVEL C (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL D (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL E (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL F (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL G (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL H (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL I (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL J (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL K (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL L (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL M (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL N (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL O (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL P (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL Q (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL R (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL S (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL T (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL U (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL V (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL W (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL X (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL Y (P. OF H.)	0.77				MARGINAL	YES	
TRAFFIC GRAVEL Z (P. OF H.)	0.77				MARGINAL	YES	
SEAL COAT A (

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	3646.70	GMS.	WASHED SAMPLE - WEIGHT BEFORE	849.80	AFTER	825.80	% LOSS	2.82
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4	IN	0.0	0.0	100.00	0.0
1 1/2	IN	0.0	0.0	100.00	0.0
3	IN	0.0	0.0	100.00	0.0
1 1/2	IN	0.0	0.0	100.00	0.0
2	IN	0.0	0.0	100.00	0.0
1 1/2	IN	0.0	0.0	100.00	0.0
1	IN	0.0	0.0	100.00	0.0
3/4	IN	0.0	0.0	100.00	0.0
1/2	IN	68.70	2.84	98.16	1.84
3/8	IN	28.00	1.10	98.90	1.10
1/4	IN	18.10	0.75	99.25	0.75
3/8	IN	18.10	0.75	99.25	0.75
1/4	IN	29.60	1.20	98.80	1.20
3/8	IN	29.60	1.20	98.80	1.20
1/4	IN	107.28	4.32	95.68	4.32
3/8	IN	107.28	4.32	95.68	4.32
1/2	IN	445.00	18.00	82.00	18.00
3/4	IN	140.75	5.63	94.37	5.63
1	IN	100.39	4.01	95.99	4.01
1 1/2	IN	32.60	1.30	98.70	1.30
2	IN	70.00	2.80	97.20	2.80
3	IN	139.00	5.56	94.44	5.56
4	IN	72.00	2.88	97.12	2.88
5	IN	72.00	2.88	97.12	2.88
10	IN	149.20	5.97	94.03	5.97
20	IN	30.50	1.22	98.78	1.22
40	IN	44.00	1.76	98.24	1.76
80	IN	102.99	4.12	95.88	4.12
100	IN	188.81	7.55	92.45	7.55
200	IN	102.99	4.12	95.88	4.12
400	IN	24.00	0.96	99.04	0.96
<200 + W					

TOTALS	849.80	3715.00
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SPLITTING FACTOR 4.29

FINENESS MODULUS 3.08

% COBBLES	0.0	% PEBBLES	14.65	% GRANULES	15.77	% SAND	66.81	% SILT/CLAY	2.77
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INDUSTRIAL USAGE ASSESSMENT

022013 01821W33SWHG135A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENINGS REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	44.03	NOT SUIT					
ASPHALT B (P. OF H.)	35.66	NOT SUIT					
ASPHALT C (P. OF H.)	22.76	MARGINAL	YES	YES			
BASIN COURSE A (P. OF H.)	22.76	NOT SUIT					
BASIN COURSE B (P. OF H.)	16.95	MARGINAL		YES	YES		YES
BASIN COURSE C (P. OF H.)	16.95	MARGINAL		YES	YES		
SUB-BASE A (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE B (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE C (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE D (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE E (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE F (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE G (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE H (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE I (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE J (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE K (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE L (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE M (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE N (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE O (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE P (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE Q (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE R (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE S (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE T (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE U (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE V (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE W (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE X (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE Y (ASTM D1241)	10.93	NOT SUIT					
SUB-BASE Z (ASTM D1241)	10.93	NOT SUIT					
TRAFFIC GRAVEL A (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL B (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL C (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL D (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL E (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL F (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL G (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL H (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL I (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL J (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL K (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL L (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL M (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL N (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL O (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL P (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL Q (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL R (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL S (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL T (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL U (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL V (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL W (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL X (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL Y (P. OF H.)	21.24	NOT SUIT					
TRAFFIC GRAVEL Z (P. OF H.)	21.24	NOT SUIT					
SEAL COAT A (P. OF H.)	1.00	NOT SUIT					
SEAL COAT B (P. OF H.)	1.00	NOT SUIT					
SEAL COAT C (P. OF H.)	1.00	NOT SUIT					
SEAL COAT D (P. OF H.)	1.00	NOT SUIT					
SEAL COAT E (P. OF H.)	1.00	NOT SUIT					
SEAL COAT F (P. OF H.)	1.00	NOT SUIT					
SEAL COAT G (P. OF H.)	1.00	NOT SUIT					
SEAL COAT H (P. OF H							

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

WEIGHT OF SAND	3973.70	GMS.	WASHED SAMPLE - WEIGHT BEFORE	774.50	AFTER	761.20	% LOSS	1.72
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[illegible]

% COBBLES	0.0	% PEBBLES	35.98	% GRANULES	20.11	% SAND	42.42	% SILT/CLAY	1.49
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022014 01821W27SEHC143A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	8.49	MARGINAL	YES	YES	YES		
ASPHALT B (P. OF H.)	0.28	MARGINAL	YES	YES			
ASPHALT C (P. OF H.)	58.72	NOT SUIT					
BAS. COURSE A (P. OF H.)	18.19	MARGINAL	YES	YES	YES		
BAS. COURSE B (P. OF H.)	7.75	MARGINAL	YES	YES			
SUB-BAS. COURSE A (P. OF H.)	22.75	MARGINAL	YES	YES	YES		
SUB-BAS. COURSE B (P. OF H.)	16.59	MARGINAL	YES	YES	YES		YES
SUB-BAS. COURSE C (P. OF H.)	16.42	MARGINAL	YES	YES	YES		
SUB-BAS. COURSE D (P. OF H.)	20.80	MARGINAL	YES	YES	YES		
SUB-BAS. COURSE E (P. OF H.)	13.80	MARGINAL	YES	YES			
SUB-BAS. COURSE F (P. OF H.)	21.87	NOT SUIT					
TRAFFIC GRAVEL A (P. OF H.)	12.82	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL B (P. OF H.)	13.08	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL C (P. OF H.)	1.34	MARGINAL	YES	YES	YES		
SEAL COAT A (P. OF H.)	77.86	NOT SUIT					
SEAL COAT B (P. OF H.)	8.78	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE A (ASTM C33, C448)	94.52	NOT SUIT					
COARSE AGGREGATE B (ASTM C33, C448)	34.52	NOT SUIT					
COARSE AGGREGATE C (ASTM C33, C448)	40.78	NOT SUIT					
COARSE AGGREGATE D (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE E (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE F (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE G (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE H (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE I (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE J (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE K (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE L (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE M (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE N (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE O (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE P (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE Q (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE R (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE S (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE T (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE U (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE V (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE W (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE X (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE Y (ASTM C33, C448)	40.50	NOT SUIT					
COARSE AGGREGATE Z (ASTM C33, C448)	40.50	NOT SUIT					
FINE CONCRETE AGGREGATE I (P. OF H.)	44.37	NOT SUIT	YES				YES
FINE CONCRETE AGGREGATE II (ASTH C33, C404)	41.21	NOT SUIT	YES				
FINE CONCRETE AGGREGATE III (ASTH C33, C404)	19.37	MARGINAL	YES				
MORTAR (ASTH C144)	19.37	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	19.37	MARGINAL	YES				
BUILT-UP ROOFS (ASTH D1863)	130.86	NOT SUIT					
PIPEFIELD RUNWAYS (P. OF H.)	0.00	MARGINAL	YES		YES		
PIT RUN (P. OF H.)	0.00	SUITABLE	YES				
SEPTIC FIELDS (U.M.A.)	19.13	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.00	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

SAMPLE IDENTIFICATION 022015 01821W16SEHG140A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND 3945.70 GMS. WASHED SAMPLE - WEIGHT BEFORE 920.70 AFTER 903.80 % LOSS 1.84

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		0.0	0.0	100.00	0.0
3/4 IN		302.00	6.00	94.00	6.00
3/4 IN		435.10	8.64	85.36	14.64
3/4 IN		352.50	7.00	78.36	21.64
3/4 IN		39.86	0.79	77.57	22.43
3/4 IN	9.30	98.14	1.95	75.62	24.38
3/4 IN	22.90	99.00	1.97	73.65	26.35
3/4 IN	22.90	142.78	2.95	68.70	31.30
3/4 IN	22.90	405.41	8.44	60.26	39.74
3/4 IN	45.10	193.28	3.84	56.42	43.58
3/4 IN	176.60	156.83	15.03	41.39	58.61
3/4 IN	382.40	1638.79	32.55	8.84	91.16
3/4 IN	24.50	105.00	2.09	6.75	93.25
3/4 IN	14.60	49.71	0.99	5.76	94.24
3/4 IN	14.10	59.14	1.12	4.64	95.36
3/4 IN	13.20	56.57	1.12	3.52	96.48
3/4 IN	16.90	72.43	1.44	2.08	97.92
3/4 IN				0.0	100.00

TOTALS 920.70 5035.29

SPLITTING FACTOR 4.29

FINENESS MODULUS 4.74

% COBBLES 0.0 % PEBBLES 31.66 % GRANULES 13.68 % SAND 53.23 % SILT/CLAY 1.44

INDUSTRIAL USAGE ASSESSMENT

022015 01821W16SEHG140A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	44.75	NOT SUIT				
ASPHALT B (P. OF H.)	30.76	NOT SUIT				
ASPHALT C (P. OF H.)	63.08	NOT SUIT				
BASE COURSE A (P. OF H.)	46.76	NOT SUIT				
BASE COURSE B (P. OF H.)	12.15	MARGINAL	YES	YES		
BASE COURSE C (P. OF H.)	2.56	MARGINAL		YES		
SUB-BASE/BASE COURSE A (ASTH D1241)	40.25	NOT SUIT				
SUB-BASE/BASE COURSE B (ASTH D1241)	31.15	NOT SUIT				
SUB-BASE/BASE COURSE C (ASTH D1241)	42.24	NOT SUIT				
SUB-BASE/BASE COURSE D (ASTH D1241)	25.45	MARGINAL	YES	YES		
SUB-BASE/BASE COURSE E (ASTH D1241)	18.45	MARGINAL	YES	YES		
SUB-BASE/BASE COURSE F (ASTH D1241)	30.45	NOT SUIT				
TRAFFIC GRAVEL A (P. OF H.)	68.26	NOT SUIT				
TRAFFIC GRAVEL B (P. OF H.)	48.26	NOT SUIT				
TRAFFIC GRAVEL C (P. OF H.)	20.44	MARGINAL	YES		YES	YES
SEAL COAT A (P. OF H.)	107.01	NOT SUIT	YES		YES	
SEAL COAT B (P. OF H.)	20.38	MARGINAL	YES		YES	
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES			
COARSE AGGREGATE 1 (ASTH C33, D448)	192.80	NOT SUIT				
COARSE AGGREGATE 2 (ASTH C33, D448)	182.80	NOT SUIT				
COARSE AGGREGATE 3 (ASTH C33, D448)	172.43	NOT SUIT				
COARSE AGGREGATE 4 (ASTH C33, D448)	162.43	NOT SUIT				
COARSE AGGREGATE 5 (ASTH C33, D448)	152.81	NOT SUIT				
COARSE AGGREGATE 6 (ASTH C33, D448)	142.79	NOT SUIT				
COARSE AGGREGATE 7 (ASTH C33, D448)	132.43	NOT SUIT				
COARSE AGGREGATE 8 (ASTH C33, D448)	122.43	NOT SUIT				
COARSE AGGREGATE 9 (ASTH C33, D448)	112.43	NOT SUIT				
COARSE AGGREGATE 10 (ASTH C33, D448)	102.43	NOT SUIT				
COARSE AGGREGATE 11 (ASTH C33, D448)	92.43	NOT SUIT				
COARSE AGGREGATE 12 (ASTH C33, D448)	82.43	NOT SUIT				
COARSE AGGREGATE 13 (ASTH C33, D448)	72.43	NOT SUIT				
COARSE AGGREGATE 14 (ASTH C33, D448)	66.71	NOT SUIT				
COARSE AGGREGATE 15 (ASTH C33, D448)	92.29	NOT SUIT				
COARSE AGGREGATE 16 (ASTH C33, D448)	76.09	NOT SUIT				
COARSE AGGREGATE 17 (ASTH C33, D448)	126.77	NOT SUIT				
COARSE AGGREGATE 18 (ASTH C33, D448)	82.43	NOT SUIT				
COARSE AGGREGATE 19 (ASTH C33, D448)	77.77	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE I (P. OF H.)	4.55	MARGINAL	YES			
FINE CONCRETE AGGREGATE II (ASTH C33, C404)	22.70	MARGINAL	YES			
FINE CONCRETE AGGREGATE III (ASTH C33, C404)	45.15	NOT SUIT				
MORTAR (ASTH C144)	9.40	MARGINAL	YES			
PORTLAND CEMENT (P.C.A.)	19.92	MARGINAL	YES			
BUILT-UP ROOFS (ASTH D1863)	167.21	NOT SUIT				
AIRFIELD RUNWAYS (P. OF H.)	10.00	MARGINAL	YES		YES	YES
PIT RUN (P. OF H.)	10.00	SUITABLE	YES			
SEPTIC FIELDS (U.M.A.)	13.36	MARGINAL	YES		YES	
SHOULDERS (P. OF H.)	0.00	SUITABLE				

WEIGHT OF SAND	2509.10	GMS.	WASHED SAMPLE - WEIGHT BEFORE	715.00	AFTER	697.40	% LOSS	2.46
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[illegible]

% COBBLES	0.0	% PEBBLES	28.54	% GRANULES	7.87	% SAND	61.58	% SILT/CLAY	2.01
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022017 01820W04NW HGB18A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

ADDITION
OF FINES
(MATERIAL <#4)

ITEM	DESCRIPTION	QTY	UNIT	PRICE	TOTAL	STATUS	REMARKS
ASPHALT B	(P. OF H.)	73.20	NOT SUIT				
ASPHALT C	(P. OF H.)	62.54	NOT SUIT				
BASE COURSE	(P. OF H.)	72.54	MARGINAL	YES	YES		
BASE COURSE	(P. OF H.)	76.68	NOT SUIT				
BASE COURSE	(P. OF H.)	25.04	MARGINAL	YES	YES	YES	
SUB-BASE	(P. OF H.)	1.99	MARGINAL				
SUB-BASE	(P. OF H.)	86.20	NOT SUIT				
SUB-BASE	(P. OF H.)	28.10	NOT SUIT				
SUB-BASE	(P. OF H.)	22.97	MARGINAL	YES	YES	YES	
SUB-BASE	(P. OF H.)	12.24	MARGINAL	YES	YES	YES	
SUB-BASE	(P. OF H.)	5.63	MARGINAL	YES	YES	YES	
TRAFFIC GRAVEL	(P. OF H.)	102.75	NOT SUIT				
TRAFFIC GRAVEL	(P. OF H.)	77.75	NOT SUIT				
TRAFFIC GRAVEL	(P. OF H.)	52.68	NOT SUIT				
SEAL COAT A	(P. OF H.)	118.00	NOT SUIT				
SEAL COAT B	(P. OF H.)	69.45	NOT SUIT				
SEAL COAT C	(P. OF H.)	38.49	NOT SUIT				
COARS	(P. OF H.)	196.09	NOT SUIT				
COARS	(P. OF H.)	186.09	NOT SUIT				
COARS	(P. OF H.)	177.65	NOT SUIT				
COARS	(P. OF H.)	161.90	NOT SUIT				
COARS	(P. OF H.)	148.17	NOT SUIT				
COARS	(P. OF H.)	126.22	NOT SUIT				
COARS	(P. OF H.)	183.68	NOT SUIT				
COARS	(P. OF H.)	200.26	NOT SUIT				
COARS	(P. OF H.)	161.34	NOT SUIT				
COARS	(P. OF H.)	151.11	NOT SUIT				
COARS	(P. OF H.)	167.77	NOT SUIT				
COARS	(P. OF H.)	171.06	NOT SUIT				
COARS	(P. OF H.)	220.83	NOT SUIT				
COARS	(P. OF H.)	208.78	NOT SUIT				
COARS	(P. OF H.)	208.27	NOT SUIT				
COARS	(P. OF H.)	171.83	NOT SUIT				
FINE CONC	(P. OF H.)	23.65	MARGINAL	YES	YES	YES	
FINE CONC	(P. OF H.)	40.81	MARGINAL	YES	YES	YES	
FINE CONC	(P. OF H.)	32.67	NOT SUIT				
MORTAR	(P. OF H.)	2.81	MARGINAL	YES	YES		
PORTLAND CEMENT	(P. OF H.)	78.51	NOT SUIT				
BUILT-UP ROOFS	(P. OF H.)	171.26	NOT SUIT				
AIRFIELD RUNWAYS	(P. OF H.)	61.79	MARGINAL	YES	YES		
SEPTIC FIELDS	(P. OF H.)	17.24	MARGINAL	YES	YES		
SHOULDER	(P. OF H.)	1.46	MARGINAL				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 6

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

TOTALS	734.89	3615.35
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SPLITTING FACTOR 4.91

FINENESS MODULUS 2.65

% COBBLES	0.0	% PEBBLES	4.66	% GRANULES	10.10	% SAND	82.02	% SILT/CLAY	3.23
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022018 01820W10NEHG060A

 NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS

**TOTAL
RESIDUAL**

RATING

**SCREENING
REQUIRED**

**REMOVAL OF
CR200 MATERIAL**

CRUSHING REQUIRED MATERIAL

ADDITION
OF FINES
MATERIAL (#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 6

WEIGHT OF SAND	3763.60 GMS.	WASHED SAMPLE - WEIGHT BEFORE	716.70	AFTER	686.60	% LOSS	4.20
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[illegible]

% COBBLES	0.0	% PEBBLES	15.92	% GRANULES	17.75	% SAND	62.24	% SILT/CLAY	4.09
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 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

ADDITION
OF FINES
(MATERIAL <#4)

ITEM	DESCRIPTION	QTY	UNIT	PRICE	TOTAL	REMARKS
ASPHALT A	(P. OF H.)	35.70				NOT SUIT
ASPHALT B	(P. OF H.)	35.70				MARGINAL
ASPHALT C	(P. OF H.)	35.70				YES
BASE COURSE A	(P. OF H.)	35.70				NOT SUIT
BASE COURSE B	(P. OF H.)	35.70				NOT SUIT
BASE COURSE C	(P. OF H.)	35.70				NOT SUIT
SUB-BASE A	(P. OF H.)	35.70				NOT SUIT
SUB-BASE B	(P. OF H.)	35.70				NOT SUIT
SUB-BASE C	(P. OF H.)	35.70				NOT SUIT
SUB-BASE D	(P. OF H.)	35.70				NOT SUIT
SUB-BASE E	(P. OF H.)	35.70				NOT SUIT
SUB-BASE F	(P. OF H.)	35.70				NOT SUIT
SUB-BASE G	(P. OF H.)	35.70				NOT SUIT
SUB-BASE H	(P. OF H.)	35.70				NOT SUIT
SUB-BASE I	(P. OF H.)	35.70				NOT SUIT
SUB-BASE J	(P. OF H.)	35.70				NOT SUIT
SUB-BASE K	(P. OF H.)	35.70				NOT SUIT
SUB-BASE L	(P. OF H.)	35.70				NOT SUIT
SUB-BASE M	(P. OF H.)	35.70				NOT SUIT
SUB-BASE N	(P. OF H.)	35.70				NOT SUIT
SUB-BASE O	(P. OF H.)	35.70				NOT SUIT
SUB-BASE P	(P. OF H.)	35.70				NOT SUIT
SUB-BASE Q	(P. OF H.)	35.70				NOT SUIT
SUB-BASE R	(P. OF H.)	35.70				NOT SUIT
SUB-BASE S	(P. OF H.)	35.70				NOT SUIT
SUB-BASE T	(P. OF H.)	35.70				NOT SUIT
SUB-BASE U	(P. OF H.)	35.70				NOT SUIT
SUB-BASE V	(P. OF H.)	35.70				NOT SUIT
SUB-BASE W	(P. OF H.)	35.70				NOT SUIT
SUB-BASE X	(P. OF H.)	35.70				NOT SUIT
SUB-BASE Y	(P. OF H.)	35.70				NOT SUIT
SUB-BASE Z	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL A	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL B	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL C	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL D	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL E	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL F	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL G	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL H	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL I	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL J	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL K	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL L	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL M	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL N	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL O	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL P	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL Q	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL R	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL S	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL T	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL U	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL V	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL W	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL X	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL Y	(P. OF H.)	35.70				NOT SUIT
TRAFFIC GRAVEL Z	(P. OF H.)	35.70				NOT SUIT
SEAL COAT A	(P. OF H.)	35.70				NOT SUIT
SEAL COAT B	(P. OF H.)	35.70				NOT SUIT
SEAL COAT C	(P. OF H.)	35.70				NOT SUIT
SEAL COAT D	(P. OF H.)	35.70				NOT SUIT
SEAL COAT E	(P. OF H.)	35.70				NOT SUIT

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

WEIGHT OF SAND	3556.80	GMS.	WASHED SAMPLE - WEIGHT BEFORE	864.30	AFTER	836.90	% LOSS	3.17
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% COBBLES	0.0	% PEBBLES	37.97	% GRANULES	14.95	% SAND	44.49	% SILT/CLAY	2.59
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022020 01821W06NEH6139A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

WEIGHT OF SAND	4890.60	GMS.	WASHED SAMPLE - WEIGHT BEFORE	759.10	AFTER	749.40	% LOSS	1.28
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% COBBLES	0.0	% PEBBLES	24.91	% GRANULES	20.95	% SAND	52.99	% SILT/CLAY	1.15
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022021 01721W30SEHG123A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	32.01	NOT SUIT					
ASPHALT B (P. OF H.)	18.23	MARGINAL	YES	YES	YES		YES
ASPHALT C (P. OF H.)	65.74	NOT SUIT					
BASE COURSE A (P. OF H.)	34.93	NOT SUIT					
BASE COURSE B (P. OF H.)	12.32	MARGINAL	YES	YES	YES		
BASE COURSE C (P. OF H.)	5.22	MARGINAL					
SUB-BASE/SURFACE (ASTM D1241)	29.43	NOT SUIT					
SUB-BASE/SURFACE (ASTM D1241)	37.13	NOT SUIT					
SUB-BASE/SURFACE (ASTM D1241)	25.97	MARGINAL	YES	YES	YES		
SUB-BASE/SURFACE (ASTM D1241)	18.97	MARGINAL	YES	YES	YES		
SUB-BASE/SURFACE (ASTM D1241)	30.97	NOT SUIT					
TRAFFIC GRAVEL A (P. OF H.)	56.30	NOT SUIT					
TRAFFIC GRAVEL B (P. OF H.)	16.30	NOT SUIT					
TRAFFIC GRAVEL C (P. OF H.)	17.08	MARGINAL	YES		YES		YES
SEAL COAT A (P. OF H.)	93.20	NOT SUIT					
SEAL COAT B (P. OF H.)	16.00	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COAR. AGGREGATE (ASTM C33, D448)	210.09	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	220.09	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	202.41	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	152.71	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	152.00	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	134.70	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	144.53	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	111.76	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	206.84	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	148.45	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	124.26	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	161.83	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	108.25	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	172.24	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	154.62	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	108.68	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	67.65	NOT SUIT					
COAR. AGGREGATE (ASTM C33, D448)	18.93	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	37.45	MARGINAL	YES				
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	14.78	NOT SUIT					
MORTAR (ASTM C144)	13.89	MARGINAL	YES				
PORTLAND CEMENT (P. C. A.)	19.78	MARGINAL	YES				
BUILT-UP ROOFS (ASTM D1863)	155.75	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.)	10.00	MARGINAL	YES		YES		YES
STATION (P. OF H.)	19.94	MARGINAL			YES		
SEPTIC FIELDS (U. M. A.)	5.09	MARGINAL			YES		
SHOULDERS (P. OF H.)	5.09	MARGINAL			YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

SAMPLE IDENTIFICATION 022021 01721W30SEHG122A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND 2442.60 GMS. WASHED SAMPLE - WEIGHT BEFORE 737.50 AFTER 728.00 % LOSS 1.29

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		27.60	1.06	98.94	1.06
1/2		107.98	4.11	94.79	5.21
1/2		222.30	8.65	91.35	8.65
1/2		333.40	12.55	88.80	11.20
1/2		1000.00	37.24	62.76	37.24
1/2		1119.90	41.30	58.70	41.30
1/2		1006.00	37.06	51.64	48.36
1/2		1000.00	37.06	44.58	55.42
1/2		1200.00	44.58	31.42	68.58
1/2		922.00	33.74	17.68	82.32
1/2		771.10	28.50	10.00	89.50
1/2		1000.00	37.06	3.94	96.06
1/2		1000.00	37.06	0.0	100.00
1/2		31.46	1.21	0.0	100.00

TOTALS 737.50 2600.40

SPLITTING FACTOR 3.31

FINENESS MODULUS 4.14

% COBBLES 0.0 % PEBBLES 26.15 % GRANULES 16.54 % SAND 56.09 % SILT/CLAY 1.21

INDUSTRIAL USAGE ASSESSMENT

022021 01721W30SEHG122A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	18.74	MARGINAL	YES	YES	YES	YES
ASPHALT B (P. OF H.)	10.33	MARGINAL	YES	YES	YES	YES
ASPHALT C (P. OF H.)	29.05	NOT SUIT				
BASE COURSE (P. OF H.)	24.74	MARGINAL	YES	YES	YES	YES
BASE COURSE (P. OF H.)	9.77	MARGINAL	YES	YES	YES	YES
SUB-BASE/BAS COURSE A (ASTM D1241)	56.29	NOT SUIT				
SUB-BASE/BAS COURSE B (ASTM D1241)	43.40	NOT SUIT				
SUB-BASE/BAS COURSE C (ASTM D1241)	34.58	NOT SUIT				
SUB-BASE/BAS COURSE D (ASTM D1241)	20.24	MARGINAL	YES	YES	YES	YES
SUB-BASE/BAS COURSE E (ASTM D1241)	28.24	MARGINAL	YES	YES	YES	YES
TRAFFIC GRAVEL A (P. OF H.)	25.87	NOT SUIT				
TRAFFIC GRAVEL B (P. OF H.)	17.04	MARGINAL	YES	YES	YES	YES
TRAFFIC GRAVEL C (P. OF H.)	7.91	MARGINAL	YES	YES	YES	YES
NEAL COAT (P. OF H.)	95.47	NOT SUIT				
NEAL COAT (P. OF H.)	10.06	MARGINAL	YES	YES	YES	YES
COARSE AGGREGATE (ASTM C33, D448)	213.08	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	33.08	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	106.88	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	192.74	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	59.58	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	47.52	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	100.17	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	14.01	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	152.23	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	109.08	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	167.13	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	144.06	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	168.69	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	160.15	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	112.08	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	80.77	NOT SUIT				
FINE CONCRETE AGGREGATE (P. OF H.)	5.70	MARGINAL	YES	YES	YES	YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	19.60	MARGINAL	YES	YES	YES	YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	27.51	MARGINAL	YES	YES	YES	YES
PORTLAND CEMENT (P. OF H.)	11.11	MARGINAL	YES	YES	YES	YES
SUIT-1000 (ASTM D1863)	14.04	NOT SUIT				
AIRFIELD RUNWAYS (P. OF H.)	13.18	MARGINAL	YES	YES	YES	YES
PIT RUN (P. OF H.)	0.0	SUITABLE	YES	YES	YES	YES
SEPTIC FIELDS (U.M.A.)	24.94	MARGINAL	YES	YES	YES	YES
SHOULDERS (P. OF H.)	3.85	MARGINAL				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	3573.40	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	704.70	AFTER	682.70	% LOSS	3.12
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% COBBLES	0.0	% PEBBLES	15.84	% GRANULES	23.60	% SAND	57.56	% SILT/CLAY	3.00
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OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	4308.70	GMS.	WASHED SAMPLE - WEIGHT BEFORE	935.10	AFTER	915.50	% LOSS	2.10
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% COBBLES	0.0	% PEBBLES	12.74	% GRANULES	17.58	% SAND	67.59	% SILT/CLAY	2.09
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022023 01719W21NWHG021

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <\$200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <\$4)
ASPHALT A (P. OF H.M.)	39.76	NOT SUIT					
ASPHALT B (P. OF H.M.)	29.76	MARGINAL	YES		YES		YES
ASPHALT C (P. OF H.M.)	42.91	NOT SUIT					
BASE COURSE A (P. OF H.M.)	38.50	NOT SUIT					
BASE COURSE B (P. OF H.M.)	19.85	MARGINAL		YES		YES	YES
SUB-BASE A (P. OF H.M.)	96.21	NOT SUIT		YES		YES	
SUB-BASE B (P. OF H.M.)	61.61	NOT SUIT					
SUB-BASE C (P. OF H.M.)	56.61	NOT SUIT					
SUB-BASE D (P. OF H.M.)	10.46	MARGINAL	YES	YES		YES	
SUB-BASE E (P. OF H.M.)	3.91	MARGINAL	YES	YES			
SUB-BASE F (P. OF H.M.)	13.60	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.M.)	67.39	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	40.91	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	20.73	MARGINAL				YES	
SEAL COAT A (P. OF H.M.)	102.19	NOT SUIT					
SEAL COAT B (P. OF H.M.)	26.68	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.M.)	0.07	SUITABLE	YES				
COARS AGGRGATE I (ASTH C33, D448)	220.67	NOT SUIT					
COARS AGGRGATE II (ASTH C33, D448)	224.84	NOT SUIT					
COARS AGGRGATE III (ASTH C33, D448)	209.66	NOT SUIT					
COARS AGGRGATE IV (ASTH C33, D448)	181.82	NOT SUIT					
COARS AGGRGATE V (ASTH C33, D448)	222.63	NOT SUIT					
COARS AGGRGATE VI (ASTH C33, D448)	179.69	NOT SUIT					
COARS AGGRGATE VII (ASTH C33, D448)	225.90	NOT SUIT					
COARS AGGRGATE VIII (ASTH C33, D448)	253.16	NOT SUIT					
COARS AGGRGATE IX (ASTH C33, D448)	206.58	NOT SUIT					
COARS AGGRGATE X (ASTH C33, D448)	190.06	NOT SUIT					
COARS AGGRGATE XI (ASTH C33, D448)	215.64	NOT SUIT					
COARS AGGRGATE XII (ASTH C33, D448)	171.15	NOT SUIT					
COARS AGGRGATE XIII (ASTH C33, D448)	206.90	NOT SUIT					
COARS AGGRGATE XIV (ASTH C33, D448)	182.27	NOT SUIT					
COARS AGGRGATE XV (ASTH C33, D448)	143.07	NOT SUIT					
COARS AGGRGATE XVI (ASTH C33, D448)	102.27	NOT SUIT					
COARS AGGRGATE XVII (ASTH C33, D448)	0.02	MARGINAL	YES				YES
FINE CONCRT AGGRGATE I (P. OF H.)	0.02	SUITABLE	YES				
FINE CONCRT AGGRGATE II (ASTH C33, C404)	7.36	MARGINAL	YES				
FINE CONCRT AGGRGATE III (ASTH C33, C404)	9.11	MARGINAL	YES				
MORTAR (ASTH C144)	9.11	MARGINAL	YES				
PORTLAND CEMENT (P. C.A.)	0.0	SUITABLE	YES				
BUILT-UP ROOFS (ASTH D1863)	171.65	NOT SUIT					
AIR-FLD RUNWAYS (P. OF H.)	42.24	NOT SUIT					
RT RUN (P. OF H.)	23.58	MARGINAL				YES	
SEPTIC FIELDS (U.M.A.)	17.26	MARGINAL				YES	
SHOULDERS (P. OF H.)		MARGINAL				YES	

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	4439.00	GMS.	WASHED SAMPLE - WEIGHT BEFORE	884.50	AFTER	873.60	% LOSS	1.23
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STIEVE SIZE	FINE FRACTION (GMS.)	STIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		5.90	1.16	98.84	1.16
8		81.30	17.8	97.07	2.93
16		0.0	0.0	97.07	4.93
30	0.0	58.72	12.8	95.78	4.22
60	11.70	125.46	27.0	93.08	6.92
100	24.60	223.84	48.9	88.14	11.86
200	45.60	172.64	37.8	86.37	13.63
400	62.40	155.03	33.2	86.06	13.94
800	62.40	155.03	33.2	86.06	13.94
1000	62.40	155.03	33.2	86.06	13.94
2000	62.40	155.03	33.2	86.06	13.94
4000	62.40	155.03	33.2	86.06	13.94
8000	62.40	155.03	33.2	86.06	13.94
10000	62.40	155.03	33.2	86.06	13.94
20000	62.40	155.03	33.2	86.06	13.94
40000	62.40	155.03	33.2	86.06	13.94
80000	62.40	155.03	33.2	86.06	13.94
100000	62.40	155.03	33.2	86.06	13.94
200000	62.40	155.03	33.2	86.06	13.94
400000	62.40	155.03	33.2	86.06	13.94
800000	62.40	155.03	33.2	86.06	13.94
1000000	62.40	155.03	33.2	86.06	13.94
2000000	62.40	155.03	33.2	86.06	13.94
4000000	62.40	155.03	33.2	86.06	13.94
8000000	62.40	155.03	33.2	86.06	13.94
10000000	62.40	155.03	33.2	86.06	13.94
20000000	62.40	155.03	33.2	86.06	13.94
40000000	62.40	155.03	33.2	86.06	13.94
80000000	62.40	155.03	33.2	86.06	13.94
100000000	62.40	155.03	33.2	86.06	13.94
200000000	62.40	155.03	33.2	86.06	13.94
400000000	62.40	155.03	33.2	86.06	13.94
800000000	62.40	155.03	33.2	86.06	13.94
1000000000	62.40	155.03	33.2	86.06	13.94
2000000000	62.40	155.03	33.2	86.06	13.94
4000000000	62.40	155.03	33.2	86.06	13.94
8000000000	62.40	155.03	33.2	86.06	13.94
10000000000	62.40	155.03	33.2	86.06	13.94
20000000000	62.40	155.03	33.2	86.06	13.94
40000000000	62.40	155.03	33.2	86.06	13.94
80000000000	62.40	155.03	33.2	86.06	13.94
100000000000	62.40	155.03	33.2	86.06	13.94
200000000000	62.40	155.03	33.2	86.06	13.94
400000000000	62.40	155.03	33.2	86.06	13.94
800000000000	62.40	155.03	33.2	86.06	13.94
1000000000000	62.40	155.03	33.2	86.06	13.94
2000000000000	62.40	155.03	33.2	86.06	13.94
4000000000000	62.40	155.03	33.2	86.06	13.94
8000000000000	62.40	155.03	33.2	86.06	13.94
10000000000000	62.40	155.03	33.2	86.06	13.94
20000000000000	62.40	155.03	33.2	86.06	13.94
40000000000000	62.40	155.03	33.2	86.06	13.94
80000000000000	62.40	155.03	33.2	86.06	13.94
100000000000000	62.40	155.03	33.2	86.06	13.94
200000000000000	62.40	155.03	33.2	86.06	13.94
400000000000000					

% COBBLES	0.0	% PEBBLES	15.63	% GRANULES	24.71	% SAND	58.46	% SILT/CLAY	1.20
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022024 01719W04NEHG023A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL #200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF M.)	32.32	NOT SUIT					
ASPHALT B (P. OF M.)	20.04	MARGINAL	YES	YES	YES		YES
ASPHALT C (P. OF M.)	57.93	NOT SUIT					
BASE COURSE A (P. OF M.)	32.43	NOT SUIT					
BASE COURSE B (P. OF M.)	19.83	MARGINAL	YES	YES	YES		
SUB-BASE A (P. OF M.)	77.91	NOT SUIT					
SUB-BASE B (P. OF M.)	67.41	NOT SUIT					
SUB-BASE C (P. OF M.)	46.18	NOT SUIT					
SUB-BASE D (P. OF M.)	19.66	MARGINAL	YES	YES	YES		
SUB-BASE E (P. OF M.)	12.30	MARGINAL	YES	YES	YES		
SUB-BASE F (P. OF M.)	28.30	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL A (P. OF M.)	28.82	NOT SUIT					
TRAFFIC GRAVEL B (P. OF M.)	29.84	MARGINAL	YES		YES		YES
TRAFFIC GRAVEL C (P. OF M.)	17.26	MARGINAL	YES		YES		
SEAL COAT A (P. OF M.)	64.73	NOT SUIT					
SEAL COAT B (P. OF M.)	18.08	MARGINAL	YES		YES		
SEAL COAT C (P. OF M.)	0.0	SUITABLE	YES		YES		
COARSE AGGREGATE A (ASTH C33, C404)	217.26	NOT SUIT					
COARSE AGGREGATE B (ASTH C33, C404)	207.00	NOT SUIT					
COARSE AGGREGATE C (ASTH C33, C404)	168.00	NOT SUIT					
COARSE AGGREGATE D (ASTH C33, C404)	204.82	NOT SUIT					
COARSE AGGREGATE E (ASTH C33, C404)	174.19	NOT SUIT					
COARSE AGGREGATE F (ASTH C33, C404)	214.19	NOT SUIT					
COARSE AGGREGATE G (ASTH C33, C404)	169.71	NOT SUIT					
COARSE AGGREGATE H (ASTH C33, C404)	216.12	NOT SUIT					
COARSE AGGREGATE I (ASTH C33, C404)	240.49	NOT SUIT					
COARSE AGGREGATE J (ASTH C33, C404)	271.89	NOT SUIT					
COARSE AGGREGATE K (ASTH C33, C404)	177.06	NOT SUIT					
COARSE AGGREGATE L (ASTH C33, C404)	188.61	NOT SUIT					
COARSE AGGREGATE M (ASTH C33, C404)	161.61	NOT SUIT					
COARSE AGGREGATE N (ASTH C33, C404)	184.01	NOT SUIT					
COARSE AGGREGATE O (ASTH C33, C404)	160.85	NOT SUIT					
COARSE AGGREGATE P (ASTH C33, C404)	113.10	NOT SUIT					
COARSE AGGREGATE Q (ASTH C33, C404)	72.67	MARGINAL	YES				
COARSE AGGREGATE R (ASTH C33, C404)	4.10	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (ASTH C33, C404)	18.22	MARGINAL	YES				
FINE CONCRETE AGGREGATE II (ASTH C33, C404)	38.25	NOT SUIT					
MORTAR (ASTH C144)	16.12	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	8.78	MARGINAL	YES				
BUILT-UP ROOFS (ASTH D1863)	162.71	NOT SUIT					
PIRFIELD RUMAYS (P. OF M.)	29.39	MARGINAL	YES		YES		YES
PIR RUN (P. OF M.)	9.37	MARGINAL			YES		
SEPTIC FIELDS (U.M.A.)	27.07	MARGINAL			YES		
SHOULDERS (P. OF M.)	14.37	MARGINAL			YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	4220.50	GMS.	WASHED SAMPLE - WEIGHT BEFORE	763.60	AFTER	734.30	% LOSS	3.84
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[illegible]

TOTALS	763.60	5840.68
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SPLITTING FACTOR 5.53

FINENESS MODULUS · 5.65

% COBBLES	0.0	% PEBBLES	56.73	% GRANULES	12.31	% SAND	28.18	% SILT/CLAY	2.77
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INDUSTRIAL USAGE ASSESSMENT

022025 01719W05NEHG046A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	CRUSHING REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	5.82	MARGINAL	YES				
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.)	55.70	NOT SUIT					
BASE COURSE A (P. OF H.)	9.00	MARGINAL	YES	YES			
BASE COURSE B (P. OF H.)	0.07	MARGINAL	YES	YES			
BASE COURSE C (P. OF H.)	0.07	MARGINAL	YES	YES			
SUB-BASE A (ASTM D1241)	0.0	SUITABLE					
SUB-BASE B (ASTM D1241)	8.94	MARGINAL	YES	YES			
SUB-BASE C (ASTM D1241)	6.98	MARGINAL	YES	YES			
SUB-BASE D (ASTM D1241)	20.16	MARGINAL	YES	YES			
SUB-BASE E (ASTM D1241)	13.16	MARGINAL	YES	YES			
SUB-BASE F (ASTM D1241)	54.99	NOT SUIT					
TRAFFIC GRAVEL A (P. OF H.)	4.16	MARGINAL	YES	YES			
TRAFFIC GRAVEL B (P. OF H.)	2.58	MARGINAL	YES	YES			
TRAFFIC GRAVEL C (P. OF H.)	0.0	SUITABLE					
SEAL COAT A (P. OF H.)	72.87	NOT SUIT					
SEAL COAT B (P. OF H.)	0.39	MARGINAL	YES				YES
SEAL COAT C (P. OF H.)	0.39	MARGINAL	YES				YES
COARSE AGGREGATE (ASTM C33, D448)	178.12	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	129.84	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	136.80	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	84.47	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	152.89	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	88.31	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	150.75	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	32.00	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	13.09	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	104.62	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	101.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	100.43	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	109.83	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	14.84	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	7.0	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	16.79	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	31.63	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	50.40	NOT SUIT					YES
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	31.89	NOT SUIT					
MORTAR (ASTM C144)	16.89	MARGINAL	YES				
PORTLAND CEMENT (P. C. A.)	26.89	MARGINAL	YES				
PORTLAND CEMENT (ASTM D1863)	106.73	NOT SUIT					YES
BIRFIELD RUNWAYS (P. OF H.)	0.0	SUITABLE	YES				
PIT RUN (P. OF H.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	15.92	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE	YES				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
10	1.00	1.00	100	100	0
20	0.50	0.50	50	50	50
40	0.20	0.20	20	30	70
60	0.10	0.10	10	40	60
80	0.05	0.05	5	45	55
100	0.02	0.02	2	47	53
120	0.01	0.01	1	48	52
140	0.01	0.01	1	49	51
160	0.01	0.01	1	50	50
180	0.01	0.01	1	51	49
200	0.01	0.01	1	52	48
220	0.01	0.01	1	53	47
240	0.01	0.01	1	54	46
260	0.01	0.01	1	55	45
280	0.01	0.01	1	56	44
300	0.01	0.01	1	57	43
320	0.01	0.01	1	58	42
340	0.01	0.01	1	59	41
360	0.01	0.01	1	60	40
380	0.01	0.01	1	61	39
400	0.01	0.01	1	62	38
420	0.01	0.01	1	63	37
440	0.01	0.01	1	64	36
460	0.01	0.01	1	65	35
480	0.01	0.01	1	66	34
500	0.01	0.01	1	67	33
520	0.01	0.01	1	68	32
540	0.01	0.01	1	69	31
560	0.01	0.01	1	70	30
580	0.01	0.01	1	71	29
600	0.01	0.01	1	72	28
620	0.01	0.01	1	73	27
640	0.01	0.01	1	74	26
660	0.01	0.01	1	75	25
680	0.01	0.01	1	76	24
700	0.01	0.01	1	77	23
720	0.01	0.01	1	78	22
740	0.01	0.01	1	79	21
760	0.01	0.01	1	80	20
780	0.01	0.01	1	81	19
800	0.01	0.01	1	82	18
820	0.01	0.01	1	83	17
840	0.01	0.01	1	84	16
860	0.01	0.01	1	85	15
880	0.01	0.01	1	86	14
900	0.01	0.01	1	87	13
920	0.01	0.01	1	88	12
940	0.01	0.01	1	89	11
960	0.01	0.01	1	90	10
980	0.01	0.01	1	91	9
1000	0.01	0.01	1	92	8
1020	0.01	0.01	1	93	7
1040	0.01	0.01	1	94	6
1060	0.01	0.01	1	95	5
1080	0.01	0.01	1	96	4
1100	0.01	0.01	1	97	3
1120	0.01	0.01	1	98	2
1140	0.01	0.01	1	99	1
1160	0.01	0.01	1	100	0

TOTALS	723.90	2372.80
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FINENESS MODULUS 4.03

INDUSTRIAL USAGE ASSESSMENT

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *****

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	2358.40	GMS.	WASHED SAMPLE - WEIGHT BEFORE	708.40	AFTER	699.70	% LOSS	1.23
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[illegible]

% COBBLES	0.0	% PEBBLES	14.01	% GRANULES	11.95	% SAND	72.90	% SILT/CLAY	1.14
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022027 01620W35SEHG032A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #84)
ASPHALT A (P. OF H.)	55.03	NOT SUIT					
ASPHALT B (P. OF H.)	45.03	NOT SUIT					
ASPHALT C (P. OF H.)	35.03	NOT SUIT					
BASE COURSE A (P. OF H.)	35.03	NOT SUIT					
BASE COURSE B (P. OF H.)	28.97	MARGINAL	YES	YES	YES	YES	YES
BASE COURSE C (P. OF H.)	9.85	NOT SUIT					
SUB-BASE A (ASTM D1241)	74.29	NOT SUIT					
SUB-BASE B (ASTM D1241)	67.67	NOT SUIT					
SUB-BASE C (ASTM D1241)	26.72	MARGINAL	YES	YES	YES		YES
SUB-BASE D (ASTM D1241)	16.10	MARGINAL	YES	YES	YES		
SUB-BASE E (ASTM D1241)	18.10	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL A (P. OF H.)	82.64	NOT SUIT					
TRAFFIC GRAVEL B (P. OF H.)	82.64	NOT SUIT					
TRAFFIC GRAVEL C (P. OF H.)	22.43	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.)	117.04	NOT SUIT					
SEAL COAT B (P. OF H.)	27.89	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE I (ASTM C33, C404)	209.47	NOT SUIT					
COARSE AGGREGATE II (ASTM C33, C404)	199.47	NOT SUIT					
COARSE AGGREGATE III (ASTM C33, C404)	06.47	NOT SUIT					
COARSE AGGREGATE IV (ASTM C33, C404)	93.26	NOT SUIT					
COARSE AGGREGATE V (ASTM C33, C404)	67.94	NOT SUIT					
COARSE AGGREGATE VI (ASTM C33, C404)	03.45	NOT SUIT					
COARSE AGGREGATE VII (ASTM C33, C404)	164.54	NOT SUIT					
COARSE AGGREGATE VIII (ASTM C33, C404)	116.00	NOT SUIT					
COARSE AGGREGATE IX (ASTM C33, C404)	449.28	NOT SUIT					
COARSE AGGREGATE X (ASTM C33, C404)	190.88	NOT SUIT					
COARSE AGGREGATE XI (ASTM C33, C404)	07.87	NOT SUIT					
COARSE AGGREGATE XII (ASTM C33, C404)	28.33	NOT SUIT					
COARSE AGGREGATE XIII (ASTM C33, C404)	225.15	NOT SUIT					
COARSE AGGREGATE XIV (ASTM C33, C404)	00.93	NOT SUIT					
COARSE AGGREGATE XV (ASTM C33, C404)	154.42	NOT SUIT					
COARSE AGGREGATE XVI (ASTM C33, C404)	08.51	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	1.47	MARGINAL	YES				
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	1.37	MARGINAL	YES				
FINE CONCRETE AGGREGATE III (ASTM C33, C404)	10.75	MARGINAL	YES				
MORTAR (ASTM C144)	4.82	MARGINAL	YES				
PORTLAND CEMENT (P. C. A.)	1.37	MARGINAL	YES				
BITUMEN (ASTM D1863)	183.75	NOT SUIT					
AT-VEED RUNWAYS (P. OF H.)	14.70	MARGINAL	YES		YES		
SEPTIC FIELDS (U.M.A.)	26.56	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	15.99	MARGINAL				YES	

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	3508.10	GMS.	WASHED SAMPLE - WEIGHT BEFORE	789.10	AFTER	780.40	% LOSS	1.10
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/4		0.0	0.0	100.00	0.0
2		112.30	22.22	99.97	0.03
4		82.25	16.45	99.97	0.03
8		72.02	14.40	99.97	0.03
16		187.16	37.43	99.97	0.03
30		225.40	45.08	99.97	0.03
40		222.28	44.46	99.97	0.03
60		810.45	162.09	99.97	0.03
80		268.96	53.79	99.97	0.03
100		646.46	129.29	99.97	0.03
140		440.64	88.13	99.97	0.03
200		109.73	21.95	99.97	0.03
280		81.16	16.23	99.97	0.03
400		48.01	9.60	99.97	0.03
600		38.75	7.75	99.97	0.03
800		0.00	0.00	99.97	0.03
1000		0.00	0.00	99.97	0.03
2000		0.00	0.00	99.97	0.03
2000 + M		0.00	0.00	99.97	0.03

TOTALS	790.51	3691.59
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SPLITTING FACTOR 4.45

FINENESS MODULUS 4.49

% COBBLES	0.0	% PEBBLES	26.18	% GRANULES	29.24	% SAND	43.53	% SILT/CLAY	1.05
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INDUSTRIAL USAGE ASSESSMENT

022028 01619W20NW HG036A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	16.59	MARGINAL	YES	YES	YES		
ASPHALT B (P. OF H.)	6.31	MARGINAL	YES	YES	YES		
ASPHALT C (P. OF H.)	64.04	NOT SUIT					
BASE COURSE A (P. OF H.)	32.51	MARGINAL	YES	YES	YES		
BASE COURSE B (P. OF H.)	11.46	MARGINAL	YES	YES	YES		
SUB-BASE A (ASTH D1241)	47.39	NOT SUIT					
SUB-BASE B (ASTH D1241)	40.57	NOT SUIT					
SUB-BASE C (ASTH D1241)	24.50	MARGINAL	YES	YES	YES		
SUB-BASE D (ASTH D1241)	35.02	MARGINAL	YES	YES	YES		
SUB-BASE E (ASTH D1241)	18.02	MARGINAL	YES	YES	YES		
SUB-BASE F (ASTH D1241)	39.69	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	34.75	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	16.75	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	56.07	MARGINAL	YES	YES	YES		
SEAL COAT A (P. OF H.)	7.76	NOT SUIT					
SEAL COAT B (P. OF H.)	11.11	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (ASTH C33, C404)	21.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	20.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	08.27	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	58.23	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	204.54	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	50.02	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	202.22	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	16.05	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	141.76	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	106.09	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	143.82	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	133.99	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	7.77	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	47.56	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	27.02	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTH C33, C404)	65.56	NOT SUIT					
FINE CONCRETE AGGREGATE (ASTH C33, C404)	78.39	NOT SUIT					
MORTAR (ASTH C144)	24.74	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	140.36	NOT SUIT					
BUILT-UP ROOFS (ASTH D1863)	130.02	NOT SUIT					
GRAVEL RUNWAYS (P. OF H.)	39.07	MARGINAL	YES		YES		
PIT RUN (P. OF H.)	39.07	SUITABLE					
SEPTIC FIELDS (U.M.A.)	25.00	MARGINAL			YES		
SHOULDERS (P. OF H.)	3.02	MARGINAL			YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	2910.00	GMS.	WASHED SAMPLE - WEIGHT BEFORE	764.50	AFTER	752.60	% LOSS	1.56
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[illegible]

TOTALS	764.50	3200.00							
SPLITTING FACTOR	3.81								
FINENESS MODULUS	4.66								
% COBBLES	0.0	% PEBBLES	34.30	% GRANULES	23.87	% SAND	40.41	% SILT/CLAY	1.42

022029 01619W30NEHG025A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	10.22	MARGINAL	YES	YES	YES		
ASPHALT B (P. OF H.)	2.97	MARGINAL	YES	YES			
ASPHALT C (P. OF H.)	63.50	NOT SUIT					
BASAL COURSE (P. OF H.)	16.26	MARGINAL	YES	YES	YES		
BASAL COURSE (P. OF H.)	16.26	MARGINAL	YES	YES		YES	
BASAL COURSE (P. OF H.)	16.26	MARGINAL	YES	YES			
SUB-BASE (ASTH D1241)	228.51	MARGINAL	YES	YES	YES		YES
SUB-BASE (ASTH D1241)	228.51	MARGINAL	YES	YES	YES		
SUB-BASE (ASTH D1241)	14.65	MARGINAL	YES	YES	YES		
SUB-BASE (ASTH D1241)	24.46	MARGINAL	YES	YES		YES	
SUB-BASE (ASTH D1241)	17.46	MARGINAL	YES	YES			
SUB-BASE (ASTH D1241)	422.53	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	14.24	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL (P. OF H.)	14.24	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	8.00	SUITABLE					
SEAL COAT A (P. OF H.)	75.76	NOT SUIT					
SEAL COAT B (P. OF H.)	8.45	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (ASTH C33, C404)	21.25	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	100.00	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	100.00	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	140.91	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	141.61	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	131.25	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	180.00	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	180.00	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	122.49	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	130.47	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	128.79	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	121.82	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	132.02	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	128.76	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	70.00	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C404)	10.00	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (P. OF H.)	21.25	MARGINAL	YES				
FINE CONCRETE AGGREGATE (ASTH C33, C404)	55.50	NOT SUIT					
FINE CONCRETE AGGREGATE (ASTH C33, C404)	55.50	NOT SUIT					
MORTAR (ASTH C144)	23.12	MARGINAL	YES				
PORTLAND CEMENT (P. OF H.)	300.00	NOT SUIT					
BUILT-UP CURBS (ASTH D1863)	120.00	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.)	0.00	SUITABLE	YES				
PIT RUN (P. OF H.)	0.00	SUITABLE					
SEPTIC FIELDS (U.M.A.)	20.94	MARGINAL			YES		
SHOULDERS (P. OF H.)	0.00	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	3038.90	GMS.	WASHED SAMPLE - WEIGHT BEFORE	753.40	AFTER	743.80	% LOSS	1.27
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[illegible]

TOTALS	753.40	3233.60
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SPLITTING FACTOR 4.03

FINENESS MODULUS 4.39

% COBBLES	0.0	% PEBBLES	22.67	% GRANULES	24.61	% SAND	51.52	% SILT/CLAY	1.20
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INDUSTRIAL USAGE ASSESSMENT

022030 01619427SWHG029A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATINGS	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	27.27	MARGINAL	YES	YES	YES		YES
ASPHALT B (P. OF H.)	14.91	MARGINAL	YES	YES	YES		YES
ASPHALT C (P. OF H.)	67.29	NOT SUIT			YES		
BASE COURSE A (P. OF H.)	30.33	NOT SUIT					
BASE COURSE B (P. OF H.)	18.80	MARGINAL	YES	YES	YES		
BASE COURSE C (P. OF H.)	2.80	MARGINAL					
SUB-BASE / BAG COURSE (ASTM D1241)	61.71	NOT SUIT					
SUB-BASE / BAG COURSE (ASTM D1241)	25.72	NOT SUIT					
SUB-BASE / SURFACE COURSE (ASTM D1241)	26.96	MARGINAL	YES	YES			
SUB-BASE / SURFACE COURSE (ASTM D1241)	19.96	MARGINAL	YES	YES			
SUB-BASE / SURFACE COURSE (ASTM D1241)	31.96	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	51.96	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	31.96	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	11.32	MARGINAL	YES		YES		YES
SEAL COAT A (P. OF H.)	88.89	NOT SUIT	YES				
SEAL COAT B (P. OF H.)	15.95	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES		YES		
COARSE AGGREGATE (ASTM C448)	99.97	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	99.97	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	204.93	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	156.74	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	200.80	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	153.85	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	133.45	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	36.18	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	162.50	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	78.87	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	169.71	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	149.71	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	159.71	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	144.82	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	94.82	NOT SUIT					
COARSE AGGREGATE (ASTM C448)	96.70	MARGINAL	YES				
COARSE AGGREGATE (ASTM C448)	8.71	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	20.68	MARGINAL					YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	51.83	NOT SUIT					
FINE CONCRETE AGGREGATE (ASTM C33, C404)	69.61	NOT SUIT					
MORTAR (ASTM C144)	17.44	MARGINAL	YES				
PORTLAND CEMENT (P. C. A.)	30.50	NOT SUIT					
BUILT-UP ROADS (ASTM D1863)	149.81	NOT SUIT					
RIFFIELD ROADS (P. OF H.)	18.81	MARGINAL	YES		YES		YES
PIT RUN (P. OF H.)	55.72	MARGINAL	YES		YES		
SEPTIC FIELDS (U. H. A.)	28.11	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	7.33	MARGINAL			YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

WEIGHT OF SAND	3794.50	GMS.	WASHED SAMPLE - WEIGHT BEFORE	942.00	AFTER	921.30	% LOSS	2.20
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[illegible]

% COBBLES	0.0	% PEBBLES	20.02	% GRANULES	23.90	% SAND	53.97	% SILT/CLAY	2.11
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022031 01620W08NWHG063A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRAZING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	22.78	MARGINAL	YES		YES		YES
ASPHALT B (P. OF H.)	12.78	MARGINAL	YES		YES		YES
ASPHALT C (P. OF H.)	22.27	NOT SUIT					
BASE COURSE (P. OF H.)	22.83	MARGINAL	YES	YES	YES	YES	YES
BASE COURSE (P. OF H.)	6.80	MARGINAL		YES			
SUB-BASE (P. OF H.)	6.91	NOT SUIT					
SUB-BASE (P. OF H.)	54.81	NOT SUIT					
SUB-BASE (P. OF H.)	33.09	NOT SUIT					
SUB-BASE (P. OF H.)	14.22	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	7.22	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.)	1.93	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	18.65	MARGINAL	YES		YES		YES
TRAFFIC GRAVEL (P. OF H.)	12.01	MARGINAL	YES		YES		YES
SEAL COAT A (P. OF H.)	68.11	NOT SUIT					
SEAL COAT B (P. OF H.)	16.27	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (P. OF H.)	21.09	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	19.22	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	105.37	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	70.34	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	112.82	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	163.79	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	124.08	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	124.03	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	108.02	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	167.25	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	178.86	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	155.08	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	178.23	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	159.62	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	108.33	NOT SUIT					
COARSE AGGREGATE (P. OF H.)	7.50	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	2.94	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (P. OF H.)	20.53	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	24.55	MARGINAL	YES				
MORTAR CEMENT (P. OF H.)	17.57	MARGINAL	YES				
PORTLAND CEMENT (P. OF H.)	15.57	NOT SUIT					
BUILT-UP ROOFS (P. OF H.)	17.50	MARGINAL	YES		YES		YES
BUILT-UP ROOFS (P. OF H.)	17.50	MARGINAL	YES				
PIT RUN (P. OF H.)	4.98	MARGINAL					
SEPTIC FIELDS (P. OF H.)	25.85	MARGINAL					
SHOULDERS (P. OF H.)	9.98	MARGINAL					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
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[illegible]

SPLITTING FACTOR 5.92

% COBBLES	0.0	% PEBBLES	28.55	% GRANULES	18.88	% SAND	50.70	% SILT/CLAY	1.87
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022033 01622W01SWH6115

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *****

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	4179.00	GMS.	WASHED SAMPLE - WEIGHT BEFORE	930.20	AFTER	894.30	% LOSS	3.86
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% COBBLES	0.0	% PEBBLES	29.71	% GRANULES	22.67	% SAND	43.92	% SILT/CLAY	3.70
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 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	4958.90	GMS.	WASHED SAMPLE - WEIGHT BEFORE	798.60	AFTER	760.90	% LOSS	4.72
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[illegible]

TOTALS	798.60	5424.88
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SPLITTING FACTOR 6.21

FINENESS MODULUS 4.28

% COBBLES	0.0	% PEBBLES	31.85	% GRANULES	18.54	% SAND	45.29	% SILT/CLAY	4.32
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022036 01721W01NEHG119A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	5.16	MARGINAL	YES		YES		
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.)	48.99	NOT SUIT					
BASE COURSE A (P. OF H.)	0.43	MARGINAL	YES	YES	YES		
BASE COURSE B (P. OF H.)	1.84	MARGINAL	YES				
BASE COURSE C (P. OF H.)	30.00	SUITABLE					
SUB-BASE A (ASTH D1241)	22.00	NOT SUIT					
SUB-BASE B (ASTH D1241)	9.52	MARGINAL	YES	YES	YES		YES
SUB-BASE C (ASTH D1241)	14.78	MARGINAL	YES	YES	YES		YES
SUB-BASE D (ASTH D1241)	7.78	MARGINAL	YES	YES	YES		
SUB-BASE E (ASTH D1241)	23.08	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL A (P. OF H.)	10.27	NOT SUIT					
TRAFFIC GRAVEL B (P. OF H.)	11.00	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL C (P. OF H.)	1.03	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.)	87.55	NOT SUIT					
SEAL COAT B (P. OF H.)	11.55	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.)	1.97	MARGINAL	YES				YES
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33; D448)	24.73	NOT SUIT					
FINE CONCRETE AGGREGATE (P. OF H.)	3.93	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTH C33; C404)	24.92	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE II (ASTH C33; C404)	23.56	MARGINAL	YES				YES
MORTAR (ASTH C144)	15.71	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	7.43	MARGINAL	YES				
BUILT-UP ROOFS (ASTH D1863)	136.77	NOT SUIT					YES
BITUMEN RUNWAYS (P. OF H.)	0.0	MARGINAL	YES		YES		
AIR RUN (P. OF H.)	0.0	SUITABLE					
SEPTIC FIELDS (U.M.A.)	21.41	MARGINAL			YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES									
WEIGHT OF SAND	2471.70	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	711.00	AFTER	645.20	% LOSS	9.25

[illegible]

FINENESS MODULUS	4.03								
% COBBLES	0.0	% PEBBLES	26.31	% GRANULES	20.20	% SAND	45.03	% SILT/CLAY	8.46

022036 01720W06SWHG110A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF CRUSHING MATERIAL ON SITE	CRUSHING REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	18.20	MARGINAL	YES	YES		YES
ASPHALT B (P. OF H.)	10.34	MARGINAL	YES	YES		YES
ASPHALT C (P. OF H.)	40.13	NOT SUIT				
BASE COURSE A (P. OF H.)	14.09	MARGINAL	YES	YES		YES
BASE COURSE B (P. OF H.)	0.00	SUITABLE				
BASE COURSE C (P. OF H.)	0.00	SUITABLE				
SUB-BASE A (P. OF H.)	5.00	NOT SUIT				
SUB-BASE B (P. OF H.)	44.24	NOT SUIT				
SUB-BASE C (P. OF H.)	18.30	MARGINAL	YES	YES		YES
SUB-BASE D (P. OF H.)	8.03	MARGINAL	YES			
SUB-BASE E (P. OF H.)	3.03	MARGINAL	YES			
SUB-BASE F (P. OF H.)	13.03	MARGINAL	YES			
TRAFFIC GRAVEL A (P. OF H.)	21.88	MARGINAL	YES	YES		YES
TRAFFIC GRAVEL B (P. OF H.)	21.88	MARGINAL	YES	YES		YES
TRAFFIC GRAVEL C (P. OF H.)	9.06	MARGINAL	YES	YES		YES
SEAL COAT A (P. OF H.)	36.75	NOT SUIT				
SEAL COAT B (P. OF H.)	21.31	MARGINAL	YES	YES		YES
SEAL COAT C (P. OF H.)	5.46	MARGINAL	YES			YES
COARSE AGGREGATE 1 (ASTH C33, C404)	21.88	NOT SUIT				
COARSE AGGREGATE 2 (ASTH C33, C404)	20.08	NOT SUIT				
COARSE AGGREGATE 3 (ASTH C33, C404)	20.24	NOT SUIT				
COARSE AGGREGATE 4 (ASTH C33, C404)	20.24	NOT SUIT				
COARSE AGGREGATE 5 (ASTH C33, C404)	16.22	NOT SUIT				
COARSE AGGREGATE 6 (ASTH C33, C404)	20.55	NOT SUIT				
COARSE AGGREGATE 7 (ASTH C33, C404)	15.22	NOT SUIT				
COARSE AGGREGATE 8 (ASTH C33, C404)	20.33	NOT SUIT				
COARSE AGGREGATE 9 (ASTH C33, C404)	21.65	NOT SUIT				
COARSE AGGREGATE 10 (ASTH C33, C404)	15.33	NOT SUIT				
COARSE AGGREGATE 11 (ASTH C33, C404)	15.33	NOT SUIT				
COARSE AGGREGATE 12 (ASTH C33, C404)	15.00	NOT SUIT				
COARSE AGGREGATE 13 (ASTH C33, C404)	15.00	NOT SUIT				
COARSE AGGREGATE 14 (ASTH C33, C404)	15.55	NOT SUIT				
COARSE AGGREGATE 15 (ASTH C33, C404)	17.77	NOT SUIT				
COARSE AGGREGATE 16 (ASTH C33, C404)	15.87	NOT SUIT				
COARSE AGGREGATE 17 (ASTH C33, C404)	11.80	NOT SUIT				
COARSE AGGREGATE 18 (ASTH C33, C404)	8.80	NOT SUIT				
COARSE AGGREGATE 19 (ASTH C33, C404)	8.80	MARGINAL	YES	YES		YES
FINE CONCRETE AGGREGATE I (P. OF H.)	9.67	MARGINAL	YES	YES		YES
FINE CONCRETE AGGREGATE II (ASTH C33, C404)	26.59	MARGINAL	YES	YES		YES
FINE CONCRETE AGGREGATE III (ASTH C33, C404)	28.87	MARGINAL	YES	YES		YES
MORTAR (ASTH C144)	17.43	MARGINAL	YES			YES
PORTLAND CEMENT (P. OF H.)	13.20	MARGINAL	YES			YES
BUILT-UP ROOFS (ASTH D1863)	15.91	NOT SUIT				
AIRFIELD RUNWAYS (P. OF H.)	30.85	SUITABLE	YES	YES		
ST RUN (P. OF H.)	21.44	MARGINAL				
SEPTIC FIELDS (U.M.A.)	3.69	MARGINAL				
SHOULDERS (P. OF H.)		MARGINAL				

WEIGHT OF SAND	2647.90	GMS.	WASHED SAMPLE - WEIGHT BEFORE	761.10	AFTER	748.80	% LOSS	1.62
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[illegible]

TOTALS	761.10	2852.30
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SPLITTING FACTOR 3.48

FINENESS MODULUS 3.37

% COBBLES	0.0	% PEBBLES	12.80	% GRANULES	11.55	% SAND	74.15	% SILT/CLAY	1.50
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INDUSTRIAL USAGE ASSESSMENT

022037 01619424N 106044A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE

TOTAL
RESIDUA

RATING

**SCREENING
REQUIRED**

REMOVAL OF
LESS THAN \$200 MATERIAL

CRUSHY
MATERIAL
ON SITE

REQUIRED
MATERIAL
NOT ON SITE

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	2329.90	GMS.	WASHED SAMPLE - WEIGHT BEFORE	832.50	AFTER	783.60	% LOSS	5.87
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[illegible]

TOTALS	833.88	2767.96
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SPLITTING FACTOR 2.80

FINENESS MODULUS 4.67

% COBBLES	0.0	% PEBBLES	36.55	% GRANULES	22.31	% SAND	36.19	% SILT/CLAY	4.95
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INDUSTRIAL USAGE ASSESSMENT

022037 01619W26SEHA041A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <\$200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF M.H.)	5.33	MARGINAL	YES		YES		
ASPHALT B (P. OF M.H.)	4.90	MARGINAL	YES		YES		
ASPHALT C (P. OF M.H.)	4.90	NOT SUIT					
BASE COURSE A (P. OF M.H.)	1.79	MARGINAL	YES	YES	YES		
BASE COURSE B (P. OF M.H.)	0.0	MARGINAL	YES				
BASE COURSE C (P. OF M.H.)	0.0	SUITABLE					
SUB-BASE A (ASTM D1241)	20.54	MARGINAL			YES		YES
SUB-BASE B (ASTM D1241)	6.45	MARGINAL	YES	YES	YES		
SUB-BASE C (ASTM D1241)	5.62	MARGINAL	YES		YES		
SUB-BASE D (ASTM D1241)	1.3	MARGINAL	YES	YES	YES		
SUB-BASE E (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE F (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE G (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE H (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE I (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE J (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE K (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE L (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE M (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE N (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE O (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE P (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE Q (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE R (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE S (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE T (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE U (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE V (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE W (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE X (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE Y (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
SUB-BASE Z (ASTM D1241)	0.22	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL A (P. OF M.H.)	12.07	MARGINAL	YES		YES		YES
TRAFFIC GRAVEL B (P. OF M.H.)	12.07	MARGINAL	YES		YES		
TRAFFIC GRAVEL C (P. OF M.H.)	0.0	SUITABLE					
SEAL COAT A (P. OF M.H.)	81.25	NOT SUIT					
SEAL COAT B (P. OF M.H.)	12.27	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF M.H.)	2.16	MARGINAL	YES				YES
COARSE AGGREGATE A (ASTM C33, D448)	06.62	NOT SUIT					
COARSE AGGREGATE B (ASTM C33, D448)	02.01	NOT SUIT					
COARSE AGGREGATE C (ASTM C33, D448)	03.01	NOT SUIT					
COARSE AGGREGATE D (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE E (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE F (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE G (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE H (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE I (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE J (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE K (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE L (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE M (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE N (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE O (ASTM C33, D448)	03.03	NOT SUIT					
COARSE AGGREGATE P (ASTM C33, D448)	03.03	NOT SU					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

SAMPLE IDENTIFICATION 022037 01619N26SEHG042A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND 2879.60 GMS. WASHED SAMPLE - WEIGHT BEFORE 826.00 AFTER 816.50 % LOSS 1.15

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		161.80	4.71	95.29	4.71
1/2		21.20	2.77	92.52	7.48
1/2		21.20	2.77	89.75	10.25
1/2		21.20	2.77	86.98	13.02
1/2		21.20	2.77	84.21	15.79
1/2		21.20	2.77	81.44	18.56
1/2		21.20	2.77	78.67	21.33
1/2		21.20	2.77	75.90	24.10
1/2		21.20	2.77	73.13	26.87
1/2		21.20	2.77	70.36	29.64
1/2		21.20	2.77	67.59	32.41
1/2		21.20	2.77	64.82	35.18
1/2		21.20	2.77	62.05	37.95
1/2		21.20	2.77	59.28	40.72
1/2		21.20	2.77	56.51	43.49
1/2		21.20	2.77	53.74	46.26
1/2		21.20	2.77	50.97	49.03
1/2		21.20	2.77	48.20	51.80
1/2		21.20	2.77	45.43	54.57
1/2		21.20	2.77	42.66	57.34
1/2		21.20	2.77	39.89	60.11
1/2		21.20	2.77	37.12	62.88
1/2		21.20	2.77	34.35	65.65
1/2		21.20	2.77	31.58	68.42
1/2		21.20	2.77	28.81	71.19
1/2		21.20	2.77	26.04	73.96
1/2		21.20	2.77	23.27	76.73
1/2		21.20	2.77	20.50	79.50
1/2		21.20	2.77	17.73	82.27
1/2		21.20	2.77	14.96	85.04
1/2		21.20	2.77	12.19	87.81
1/2		21.20	2.77	9.42	90.58
1/2		21.20	2.77	6.65	93.35
1/2		21.20	2.77	3.88	96.12
1/2		21.20	2.77	1.11	98.89
1/2		21.20	2.77	0.34	99.66
1/2		21.20	2.77	0.00	100.00

TOTALS 826.00 3438.50

SPLITTING FACTOR 3.49

FINENESS MODULUS 5.03

% COBBLES 0.0 % PEBBLES 40.14 % GRANULES 19.39 % SAND 39.51 % SILT/CLAY 0.96

INDUSTRIAL USAGE ASSESSMENT

022037 01619N26SEHG042A

 * NOTE: SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF M.)	10.57	MARGINAL	YES	YES	YES		
ASPHALT B (P. OF M.)	4.82	MARGINAL	YES	YES	YES		
ASPHALT C (P. OF M.)	16.57	MARGINAL	YES	YES	YES		
BASE COURSE A (P. OF M.)	11.85	MARGINAL	YES	YES	YES		
BASE COURSE B (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE A (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE B (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE C (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE D (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE E (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE F (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE G (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE H (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE I (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE J (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE K (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE L (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE M (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE N (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE O (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE P (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE Q (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE R (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE S (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE T (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE U (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE V (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE W (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE X (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE Y (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SUB-BASE Z (P. OF M.)	2.99	MARGINAL	YES	YES	YES		
SEAL COAT A (P. OF M.)	80.59	MARGINAL	YES	YES	YES		
SEAL COAT B (P. OF M.)	8.38	MARGINAL	YES	YES	YES		
SEAL COAT C (P. OF M.)	0.00	SUITABLE	YES	YES	YES		
COARSE AGGREGATE (P. OF M.)	198.29	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	181.50	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	177.90	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	167.54	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	117.54	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	178.37	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	120.60	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	160.16	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	164.86	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	123.90	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	163.98	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	133.48	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	120.01	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	130.65	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	131.24	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	101.63	NOT SUIT					
COARSE AGGREGATE (P. OF M.)	9.22	MARGINAL	YES	YES	YES		
FINE CONCRETE AGGREGATE (P. OF M.)	20.27	MARGINAL	YES	YES	YES		
FINE CONCRETE AGGREGATE (P. OF M.)	53.07	NOT SUIT					
FINE CONCRETE AGGREGATE (P. OF M.)	58.29	NOT SUIT					
PORTLAND CEMENT (P. OF M.)	15.36	MARGINAL	YES	YES	YES		
BUILD-UP ROOFS (ASTM D1863)	121.01	NOT SUIT					
AIRFIELD RUNWAYS (P. OF M.)	0.13	MARGINAL	YES	YES	YES		
PIT RUN (P. OF M.)	0.00	SUITABLE	YES	YES	YES		
SEPTIC FIELDS (U.M.A.)	20.49	MARGINAL	YES	YES	YES		
SHOULDERS (P. OF M.)	0.00	SUITABLE	YES	YES	YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	2239.40	GMS.	WASHED SAMPLE - WEIGHT BEFORE	826.70	AFTER	773.50	% LOSS	6.44
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[illegible]

TOTALS	826.70	3128.00
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SPLITTING FACTOR 2.71

FINENESS MODULUS 5.44

% COBBLES	0.0	% PEBBLES	55.67	% GRANULES	13.40	% SAND	26.33	% SILT/CLAY	4.61
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INDUSTRIAL USAGE ASSESSMENT

022038 01718W28SWHG213A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
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TOTALS	736.80	3230.90
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SPLITTING FACTOR 3.70

FINENESS MODULUS 4.25

% COBBLES	0.0	% PEBBLES	37.45	% GRANULES	15.62	% SAND	40.13	% SILT/CLAY	6.81
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022039 01717W29SEHG215A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS

**TOTAL
RESIDUAL**

RATING

**SCREENING
REQUIRED**

REMOVAL OF
 <\$200 MATERIAL

**CRUSH
MATERIAL**

REQUIRED MATERIAL

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	3191.10	GMS.	WASHED SAMPLE - WEIGHT BEFORE	833.70	AFTER	797.60	% LOSS	4.33
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[illegible]

TOTALS	833.70	3752.80
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SPLITTING FACTOR 3.83

FINENESS MODULUS 4.52

% COBBLES	0.0	% PEBBLES	37.55	% GRANULES	16.45	% SAND	42.32	% SILT/CLAY	3.68
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INDUSTRIAL USAGE ASSESSMENT

022040 01918W20S#HG170A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.M.)	3.44	MARGINAL	YES		YES		
ASPHALT B (P. OF H.M.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.M.)	44.21	NOT SUIT					
BASE COURSE A (P. OF H.M.)	7.11	MARGINAL	YES	YES	YES		
BASE COURSE B (P. OF H.M.)	0.16	MARGINAL	YES	YES			
SUB-BASE A (P. OF H.M.)	20.25	MARGINAL		YES			
SUB-BASE B (P. OF H.M.)	5.51	MARGINAL		YES	YES	YES	YES
SUB-BASE C (P. OF H.M.)	10.59	MARGINAL	YES	YES	YES	YES	YES
SUB-BASE D (P. OF H.M.)	3.59	MARGINAL	YES	YES	YES		
SUB-BASE E (P. OF H.M.)	21.23	MARGINAL	YES	YES	YES		
SUB-BASE F (P. OF H.M.)	28.47	MARGINAL	YES	YES	YES		
SUB-BASE G (P. OF H.M.)	9.26	MARGINAL	YES	YES	YES		
SUB-BASE H (P. OF H.M.)	0.0	SUITABLE	YES				
SEAL COAT A (P. OF H.M.)	88.50	NOT SUIT					
SEAL COAT B (P. OF H.M.)	16.55	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.M.)	0.69	MARGINAL	YES				YES
COARSE AGGREGATE A (ASTH D1241)	94.07	NOT SUIT					
COARSE AGGREGATE B (ASTH D1241)	94.07	NOT SUIT					
COARSE AGGREGATE C (ASTH D1241)	97.07	NOT SUIT					
COARSE AGGREGATE D (ASTH D1241)	98.53	NOT SUIT					
COARSE AGGREGATE E (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE F (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE G (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE H (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE I (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE J (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE K (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE L (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE M (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE N (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE O (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE P (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE Q (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE R (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE S (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE T (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE U (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE V (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE W (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE X (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE Y (ASTH D1241)	99.00	NOT SUIT					
COARSE AGGREGATE Z (ASTH D1241)	99.00	NOT SUIT					
FINE CONCRETE AGGREGATE A (P. OF H.M.)	7.10	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE B (ASTH C33, C404)	21.20	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE C (ASTH C33, C404)	15.98	MARGINAL	YES				YES
MORTAR (ASTH C144)	15.09	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	6.60	MARGINAL	YES				YES
BUILT-UP ROOFS (ASTH D1863)	133.01	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.M.)	0.0	SUITABLE	YES				
PIT RUN (P. OF H.M.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	18.25	MARGINAL	YES		YES		
SHOULDERS (P. OF H.M.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

[illegible]

SPLITTING FACTOR 3.31

% COBBLES	0.0	% PEBBLES	13.94	% GRANULES	10.74	% SAND	73.57	% SILT/CLAY	1.75
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022042 01919N12NEHG149A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF M.H.)	54.54	NOT SUIT					
ASPHALT B (P. OF M.H.)	44.54	NOT SUIT					
ASPHALT C (P. OF M.H.)	35.55	NOT SUIT					
BASE COURSE A (P. OF M.H.)	44.74	NOT SUIT					
BASE COURSE B (P. OF M.H.)	28.96	MARGINAL	YES	YES	YES	YES	YES
SUB-BASE A (P. OF M.H.)	109.05	NOT SUIT					
SUB-BASE B (P. OF M.H.)	80.81	NOT SUIT					
SUB-BASE C (P. OF M.H.)	68.54	NOT SUIT					
SUB-BASE D (P. OF M.H.)	17.96	MARGINAL	YES	YES	YES		YES
SUB-BASE E (P. OF M.H.)	4.19	MARGINAL	YES	YES	YES		
SUB-BASE F (P. OF M.H.)	6.19	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF M.H.)	68.54	NOT SUIT					
TRAFFIC GRAVEL (P. OF M.H.)	48.05	NOT SUIT					
TRAFFIC GRAVEL (P. OF M.H.)	24.28	MARGINAL	YES		YES		YES
SEAL COAT A (P. OF M.H.)	116.45	NOT SUIT					
SEAL COAT B (P. OF M.H.)	42.76	NOT SUIT					
SEAL COAT C (P. OF M.H.)	10.38	MARGINAL	YES				YES
COARS AGGREGATE (ASTH C33, D448)	122.98	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	102.98	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	111.72	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	107.72	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	109.43	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	168.73	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	220.26	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	249.9	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	206.53	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	67.19	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	332.61	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	78.81	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	227.22	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	207.52	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	167.7	NOT SUIT					
COARS AGGREGATE (ASTH C33, D448)	8.37	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF M.)	0.0	SUITABLE	YES				YES
FINE CONCRETE AGGREGATE (ASTH C33, C404)	0.90	MARGINAL	YES				
FINE CONCRETE AGGREGATE (ASTH C33, C404)	5.31	MARGINAL	YES				
MORTAR (ASTH C144)	4.00	MARGINAL	YES				
PORTLAND CEMENT (ASTH D1663)	172.96	MARGINAL	YES				YES
BIT-UP ROOTS (P. OF M.H.)	52.23	NOT SUIT					
BIRFIELD RUNWAYS (P. OF M.H.)	13.93	MARGINAL	YES		YES		
PIT RUN (P. OF M.H.)	28.66	MARGINAL	YES		YES		
SEPTIC FIELDS (U.M.A.)	16.06	MARGINAL				YES	
SHOULDERS (P. OF M.H.)							

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	4233.00 GMS.	WASHED SAMPLE - WEIGHT BEFORE	771.40	AFTER	753.10	% LOSS	2.37
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[illegible]

TOTALS	768.22	4534.86
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SPLITTING FACTOR 5.49

FINENESS MODULUS 4.48

% COBBLES	0.0	% PEBBLES	42.35	% GRANULES	18.79	% SAND	36.65	% SILT/CLAY	2.21
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INDUSTRIAL USAGE ASSESSMENT

022043 01819W36NW HG171A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.M.)	0.0	SUITABLE	YES				
ASPHALT B (P. OF H.M.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.M.)	40.89	NOT SUIT					
BASE COURSE A (P. OF H.M.)	1.93	MARGINAL	YES	YES			
BASE COURSE B (P. OF H.M.)	1.79	MARGINAL		YES			
BASE COURSE C (P. OF H.M.)	17.19	MARGINAL		YES		YES	YES
SUB-BASE A (ASTM D1241)	8.37	MARGINAL		YES		YES	
SUB-BASE B (ASTM D1241)	2.74	MARGINAL	YES	YES		YES	
SUB-BASE C (ASTM D1241)	8.85	MARGINAL	YES	YES			
SUB-BASE D (ASTM D1241)	3.70	MARGINAL	YES	YES			
SUB-BASE E (ASTM D1241)	10.74	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	8.28	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.M.)	0.0	SUITABLE	YES				
TRAFFIC GRAVEL (P. OF H.M.)	0.0	SUITABLE	YES				
SEAL COAT A (P. OF H.M.)	63.67	NOT SUIT					
SEAL COAT B (P. OF H.M.)	9.97	MARGINAL	YES				YES
SEAL COAT C (P. OF H.M.)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	24.16	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.16	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	54.28	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	137.82	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	34.74	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	124.85	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	100.34	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	99.99	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	155.68	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	114.15	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	114.66	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	103.27	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	115.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	115.27	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	75.80	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	16.93	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.M.)	31.75	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	52.04	NOT SUIT					
FINE CONCRETE AGGREGATE (ASTM C33, C404)	30.94	MARGINAL	YES				
MORTAR (ASTM C144)	30.94	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	27.04	MARGINAL	YES				
BUILT-UP ROADS (ASTM D1863)	103.77	NOT SUIT					
FIELD RUNWAYS (P. OF H.M.)	0.0	SUITABLE	YES				
PIT RUN (P. OF H.M.)	0.0	SUITABLE					
SEPTIC FIELDS (U.M.A.)	22.96	MARGINAL				YES	
SHOULDERS (P. OF H.M.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
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[illegible]

SPLITTING FACTOR 4.44

FINENESS MODULUS 4.24

% COBBLES	0.0	% PEBBLES	28.61	% GRANULES	21.76	% SAND	47.71	% SILT/CLAY	1.92
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022044 01918W05SEHG154A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <#200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	8.72	MARGINAL	YES		YES	
ASPHALT B (P. OF H.)	0.56	MARGINAL	YES		YES	
ASPHALT C (P. OF H.)	57.58	NOT SUIT				
BAS. COURSE A (P. OF H.)	14.31	MARGINAL	YES	YES	YES	
BAS. COURSE B (P. OF H.)	59.78	MARGINAL	YES	YES		
BAS. COURSE C (P. OF H.)	2.08	MARGINAL		YES		
CL. BAS. COURSE D (P. OF H.)	34.56	NOT SUIT				
CL. BAS. COURSE E (P. OF H.)	15.17	MARGINAL	YES	YES	YES	YES
CL. BAS. COURSE F (P. OF H.)	15.53	MARGINAL	YES	YES		
CL. BAS. COURSE G (P. OF H.)	12.53	MARGINAL	YES	YES		
CL. BAS. COURSE H (P. OF H.)	28.96	MARGINAL	YES	YES		
CL. BAS. COURSE I (P. OF H.)	11.95	NOT SUIT				
CL. BAS. COURSE J (P. OF H.)	1.63	MARGINAL	YES	YES	YES	
CL. BAS. COURSE K (P. OF H.)	3.74	MARGINAL	YES	YES	YES	
CL. BAS. COURSE L (P. OF H.)	2.50	NOT SUIT				
CL. BAS. COURSE M (P. OF H.)	10.56	MARGINAL	YES	YES	YES	
CL. BAS. COURSE N (P. OF H.)	0.00	SUITABLE	YES		YES	
CL. BAS. COURSE O (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE P (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE Q (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE R (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE S (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE T (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE U (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE V (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE W (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE X (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE Y (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE Z (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AA (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AB (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AC (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AD (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AE (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AF (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AG (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AH (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AI (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AJ (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AK (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AL (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AM (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AN (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AO (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AP (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AQ (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AR (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AS (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AT (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AU (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AV (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AW (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AX (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AY (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE AZ (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BA (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BB (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BC (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BD (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BE (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BF (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BG (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BH (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BI (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BJ (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BK (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BL (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BM (P. OF H.)	0.00	NOT SUIT				
CL. BAS. COURSE BN (P. OF H.)	0.00	NOT SUIT				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	3451.80	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	836.20	AFTER	760.30	% LOSS	9.08
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STIEVE SIZE	FINE FRACTION (GMS.)	STIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
1 1/2	0.0000	0.0000	0.0000	100.0000	0.0000
1 1/2	0.0000	0.0000	0.0000	100.0000	0.0000
1 1/2	0.0000	0.0000	0.0000	100.0000	0.0000
20	0.0000	0.0000	0.0000	100.0000	0.0000
30	0.0000	0.0000	0.0000	100.0000	0.0000
40	0.0000	0.0000	0.0000	100.0000	0.0000
50	0.0000	0.0000	0.0000	100.0000	0.0000
60	0.0000	0.0000	0.0000	100.0000	0.0000
70	0.0000	0.0000	0.0000	100.0000	0.0000
80	0.0000	0.0000	0.0000	100.0000	0.0000
100	0.0000	0.0000	0.0000	100.0000	0.0000
120	0.0000	0.0000	0.0000	100.0000	0.0000
140	0.0000	0.0000	0.0000	100.0000	0.0000
160	0.0000	0.0000	0.0000	100.0000	0.0000
180	0.0000	0.0000	0.0000	100.0000	0.0000
200	0.0000	0.0000	0.0000	100.0000	0.0000
250	0.0000	0.0000	0.0000	100.0000	0.0000
300	0.0000	0.0000	0.0000	100.0000	0.0000
350	0.0000	0.0000	0.0000	100.0000	0.0000
400	0.0000	0.0000	0.0000	100.0000	0.0000
450	0.0000	0.0000	0.0000	100.0000	0.0000
500	0.0000	0.0000	0.0000	100.0000	0.0000
560	0.0000	0.0000	0.0000	100.0000	0.0000
630	0.0000	0.0000	0.0000	100.0000	0.0000
710	0.0000	0.0000	0.0000	100.0000	0.0000
800	0.0000	0.0000	0.0000	100.0000	0.0000
900	0.0000	0.0000	0.0000	100.0000	0.0000
1000	0.0000	0.0000	0.0000	100.0000	0.0000
1100	0.0000	0.0000	0.0000	100.0000	0.0000
1250	0.0000	0.0000	0.0000	100.0000	0.0000
1400	0.0000	0.0000	0.0000	100.0000	0.0000
1600	0.0000	0.0000	0.0000	100.0000	0.0000
1800	0.0000	0.0000	0.0000	100.0000	0.0000
2000	0.0000	0.0000	0.0000	100.0000	0.0000
2250	0.0000	0.0000	0.0000	100.0000	0.0000
2500	0.0000	0.0000	0.0000	100.0000	0.0000
2800	0.0000	0.0000	0.0000	100.0000	0.0000
3150	0.0000	0.0000	0.0000	100.0000	0.0000
3550	0.0000	0.0000	0.0000	100.0000	0.0000
4000	0.0000	0.0000	0.0000	100.0000	0.0000
4500	0.0000	0.0000	0.0000	100.0000	0.0000
5000	0.0000	0.0000	0.0000	100.0000	0.0000
5600	0.0000	0.0000	0.0000	100.0000	0.0000
6300	0.0000	0.0000	0.0000	100.0000	0.0000
7100	0.0000	0.0000	0.0000	100.0000	0.0000
8000	0.0000	0.0000	0.0000	100.0000	0.0000
9000	0.0000	0.0000	0.0000	100.0000	0.0000
10000	0.0000	0.0000	0.0000	100.0000	0.0000
11000	0.0000	0.0000	0.0000	100.0000	0.0000
12500	0.0000	0.0000	0.0000	100.0000	0.0000
14000	0.0000	0.0000	0.0000	100.0000	0.0000
16000	0.0000	0.0000	0.0000	100.0000	0.0000
18000	0.0000	0.0000	0.0000	100.0000	0.0000
20000	0.0000	0.0000	0.0000	100.0000	0.0000
22500	0.0000	0.0000	0.0000	100.0000	0.0000
25000	0.0000	0.0000	0.0000	100.0000	0

TOTALS	836.20	3730.60
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SPLITTING FACTOR 4.13

FINENESS MODULUS 3.77

% COBBLES	0.0	% PEBBLES	29.11	% GRANULES	13.81	% SAND	48.69	% SILT/CLAY	8.40
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INDUSTRIAL USAGE ASSESSMENT

022044 01918W05SWHG152A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL ≤200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL ≤#4)
ASPHALT A (P. OF H.M.)	14.39	MARGINAL	YES		YES		YES
ASPHALT B (P. OF H.M.)	9.39	MARGINAL	YES		YES		YES
ASPHALT C (P. OF H.M.)	26.08	MARGINAL	YES				
BASE COURSE (P. OF H.M.)	133.32	MARGINAL	YES		YES		YES
BASE COURSE (P. OF H.M.)	0.00	SUITABLE					
BASE COURSE (P. OF H.M.)	0.00	SUITABLE					
SUB-BASE BAG COURSE (ASTH D1241)	56.13	NOT SUIT					
SUB-BASE BAG COURSE (ASTH D1241)	29.28	MARGINAL				YES	YES
SUB-BASE BAG COURSE (ASTH D1241)	21.09	MARGINAL	YES		YES		YES
SUB-BASE BAG COURSE (ASTH D1241)	0.00	SUITABLE	YES				
SUB-BASE BAG COURSE (ASTH D1241)	0.00	SUITABLE	YES				
SUB-BASE BAG COURSE (ASTH D1241)	0.00	SUITABLE	YES				
SUB-BASE BAG COURSE (ASTH D1241)	0.00	MARGINAL	YES				
TRAFFIC GRAVEL (P. OF H.M.)	1.74	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	1.74	MARGINAL	YES		YES		YES
TRAFFIC GRAVEL (P. OF H.M.)	1.74	MARGINAL	YES		YES		YES
TRAFFIC GRAVEL (P. OF H.M.)	5.25	MARGINAL	YES		YES		YES
SEAL COAT A (P. OF H.M.)	10.68	NOT SUIT					
SEAL COAT B (P. OF H.M.)	35.90	NOT SUIT					
SEAL COAT C (P. OF H.M.)	12.95	MARGINAL	YES				YES
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	12.95	NOT SUIT					
FINE CONCRETE AGGREGATE (P. OF H.M.)	8.67	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTH C33, C404)	21.25	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE II (ASTH C33, C404)	17.84	MARGINAL	YES				YES
HORTAR (ASTH C144)	11.31	MARGINAL	YES				YES
PORTLAND CEMENT (P.C.A.)	20.68	MARGINAL	YES				YES
BUILT-UP ROADS (ASTH D1863)	14.39	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.M.)	9.00	MARGINAL	YES		YES		YES
PIT RUN (P. OF H.M.)	0.00	SUITABLE					
SEPTIC FIELDS (U.H.A.)	22.53	MARGINAL				YES	
SHOULDERS (P. OF H.M.)	0.89	MARGINAL				YES	

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
8	7.50	0.0	0.0	99.99	0.01
10	0.00	0.0	0.0	99.99	0.01
20	0.00	0.0	0.0	99.99	0.01
40	0.00	0.0	0.0	99.99	0.01
60	0.00	0.0	0.0	99.99	0.01
80	0.00	0.0	0.0	99.99	0.01
100	0.00	0.0	0.0	99.99	0.01
200	0.00	0.0	0.0	99.99	0.01
400	0.00	0.0	0.0	99.99	0.01
600	0.00	0.0	0.0	99.99	0.01
800	0.00	0.0	0.0	99.99	0.01
1000	0.00	0.0	0.0	99.99	0.01
2000	0.00	0.0	0.0	99.99	0.01
4000	0.00	0.0	0.0	99.99	0.01
8000	0.00	0.0	0.0	99.99	0.01
16000	0.00	0.0	0.0	99.99	0.01
32000	0.00	0.0	0.0	99.99	0.01
64000	0.00	0.0	0.0	99.99	0.01
128000	0.00	0.0	0.0	99.99	0.01
256000	0.00	0.0	0.0	99.99	0.01
512000	0.00	0.0	0.0	99.99	0.01
1024000	0.00	0.0	0.0	99.99	0.01
2048000	0.00	0.0	0.0	99.99	0.01
4096000	0.00	0.0	0.0	99.99	0.01
8192000	0.00	0.0	0.0	99.99	0.01
16384000	0.00	0.0	0.0	99.99	0.01
32768000	0.00	0.0	0.0	99.99	0.01
65536000	0.00	0.0	0.0	99.99	0.01
131072000	0.00	0.0	0.0	99.99	0.01
262144000	0.00	0.0	0.0	99.99	0.01
524288000	0.00	0.0	0.0	99.99	0.01
1048576000	0.00	0.0	0.0	99.99	0.01
2097152000	0.00	0.0	0.0	99.99	0.01
4194304000	0.00	0.0	0.0	99.99	0.01
8388608000	0.00	0.0	0.0	99.99	0.01
16777216000	0.00	0.0	0.0	99.99	0.01
33554432000	0.00	0.0	0.0	99.99	0.01
67108864000	0.00	0.0	0.0	99.99	0.01
134217728000	0.00	0.0	0.0	99.99	0.01
268435456000	0.00	0.0	0.0	99.99	0.01
536870912000	0.00	0.0	0.0	99.99	0.01
1073741824000	0.00	0.0	0.0	99.99	0.01
2147483648000	0.00	0.0	0.0	99.99	0.01
4294967296000	0.00	0.0	0.0	99.99	0.01
8589934592000	0.00	0.0	0.0	99.99	0.01
17179869184000	0.00	0.0	0.0	99.99	0.01
34359738368000	0.00	0.0	0.0	99.99	0.01
68719476736000	0.00	0.0	0.0	99.99	0.01
137438953472000	0.00	0.0	0.0	99.99	0.01
274877906944000	0.00	0.0	0.0	99.99	0.01
549755813888000	0.00	0.0	0.0	99.99	0.01
1099511627776000	0.00	0.0	0.0	99.99	0.01
2199023255552000	0.00	0.0	0.0	99.99	0.01
4398046511104000	0.00	0.0	0.0	99.99	0.01
8796093022208000	0.00	0.0	0.0	99.99	0.01
17592186044416000	0.00	0.0	0.0	99.99	0.01
35184372088832000	0.00	0.0	0.0	99.99	0.01
70368744177664000	0.00	0.0	0.0	99.99	0.01
140737488355328000	0.00				

% COBBLES	0.0	% PEBBLES	17.82	% GRANULES	14.62	% SAND	66.27	% SILT/CLAY	1.29
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022044 01918W06SEHG151A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	37.46	NOT SUIT					
ASPHALT B (P. OF H.)	28.98	MARGINAL	YES	YES	YES		YES
ASPHALT C (P. OF H.)	49.90	NOT SUIT					
BAS. COURSE (P. OF H.)	39.98	NOT SUIT					
BAS. COURSE (P. OF H.)	16.10	MARGINAL	YES	YES	YES		YES
BAS. COURSE (P. OF H.)	4.39	MARGINAL		YES		YES	
SUB-BASE (ASTM D1241)	78.66	NOT SUIT					
SUB-BASE (ASTM D1241)	63.68	NOT SUIT					
SUB-BASE (ASTM D1241)	49.63	NOT SUIT					
SUB-BASE (ASTM D1241)	11.40	MARGINAL	YES	YES			
SUB-BASE (ASTM D1241)	4.67	MARGINAL	YES	YES			
SUB-BASE (ASTM D1241)	16.40	MARGINAL	YES	YES			
TRAFFIC SURF. COURSE (ASTM D1241)	67.21	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	34.91	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	15.14	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.)	109.36	NOT SUIT					
SEAL COAT B (P. OF H.)	25.38	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	21.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.48	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.96	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	96.05	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	66.52	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	05.09	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	60.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	12.30	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	39.50	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	97.68	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	80.50	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	05.09	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	66.50	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	00.13	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	00.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	02.04	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	02.04	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	08.03	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (P. OF H.)	0.00	SUITABLE	YES				
FINE CONCRETE AGGREGATE (ASTM C33, C404)	2.05	MARGINAL	YES				
FINE CONCRETE AGGREGATE (ASTM C33, C404)	7.83	MARGINAL	YES				
FINE CONCRETE AGGREGATE (ASTM C33, C404)	7.83	MARGINAL	YES				
PORTLAND (ASTM C144)	0.00	SUITABLE	YES				
BUILT-UP COFS (ASTM D1863)	167.00	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.)	5.20	NOT SUIT					
PIT RUN (P. OF H.)	26.89	MARGINAL	YES		YES		
SEPTIC FIELDS (U.M.A.)	12.18	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)						YES	

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	3142.70	GMS.	WASHED SAMPLE - WEIGHT BEFORE	744.70	AFTER	722.00	% LOSS	3.05
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.0	0.0
1/2		0.0	0.0	100.0	0.0
1/2		0.0	0.0	100.0	0.0
1/2		0.0	0.0	100.0	0.0
4		17.76	10.0	89.0	10.0
8		43.38	24.5	75.5	24.5
16		109.9	61.4	38.6	61.4
30		193.0	108.2	22.2	108.2
60		379.8	211.3	11.1	211.3
100		611.1	343.0	6.6	343.0
200		178.0	100.0	2.2	100.0
400		43.38	24.5	0.6	24.5
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6
200		13.3	7.6	0.1	7.6
400		13.3	7.6	0.1	7.6
800		13.3	7.6	0.1	7.6
100		13.3	7.6	0.1	7.6

TOTALS	744.70	4132.70
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SPLITTING FACTOR 4.22

FINENESS MODULUS 5.43

% COBBLES	0.0	% PEBBLES	51.58	% GRANULES	19.05	% SAND	27.05	% SILT/CLAY	2.32
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022045 01918W03SWHG188A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <#200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	8.07	MARGINAL	YES				
ASPHALT B (P. OF H.)	1.71	MARGINAL	YES				
ASPHALT C (P. OF H.)	59.14	NOT SUIT					
BAS COURSE (P. OF H.)	11.67	MARGINAL	YES	YES			
BAS COURSE (P. OF H.)	10.00	MARGINAL	YES	YES			
BAS COURSE (P. OF H.)	1.58	MARGINAL		YES			
SUB-BASE (P. OF H.) (ASTM D1241)	1.70	MARGINAL	YES				
SUB-BASE (P. OF H.) (ASTM D1241)	11.58	MARGINAL	YES	YES			
SUB-BASE (P. OF H.) (ASTM D1241)	10.05	MARGINAL	YES	YES			
SUB-BASE (P. OF H.) (ASTM D1241)	29.16	MARGINAL	YES	YES			
SUB-BASE (P. OF H.) (ASTM D1241)	22.16	MARGINAL	YES	YES			
SUB-BASE (P. OF H.) (ASTM D1241)	63.59	NOT SUIT					
TRAFFIC GRAV (P. OF H.)	10.54	MARGINAL	YES	YES	YES		
TRAFFIC GRAV (P. OF H.)	8.98	MARGINAL	YES	YES			
TRAFFIC GRAV (P. OF H.)	0.0	SUITABLE	YES				
SEAL COAT A (P. OF H.)	64.71	NOT SUIT					
SEAL COAT B (P. OF H.)	1.16	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.0	SUITABLE	YES				
COARS AGGR GAT (ASTM C448)	124.09	NOT SUIT					
COARS AGGR GAT (ASTM C448)	124.09	NOT SUIT					
COARS AGGR GAT (ASTM C448)	102.64	NOT SUIT					
COARS AGGR GAT (ASTM C448)	61.55	NOT SUIT					
COARS AGGR GAT (ASTM C448)	99.45	NOT SUIT					
COARS AGGR GAT (ASTM C448)	151.75	NOT SUIT					
COARS AGGR GAT (ASTM C448)	83.51	NOT SUIT					
COARS AGGR GAT (ASTM C448)	147.48	NOT SUIT					
COARS AGGR GAT (ASTM C448)	138.07	NOT SUIT					
COARS AGGR GAT (ASTM C448)	135.71	NOT SUIT					
COARS AGGR GAT (ASTM C448)	100.83	NOT SUIT					
COARS AGGR GAT (ASTM C448)	93.71	NOT SUIT					
COARS AGGR GAT (ASTM C448)	102.76	NOT SUIT					
COARS AGGR GAT (ASTM C448)	109.53	NOT SUIT					
COARS AGGR GAT (ASTM C448)	111.37	NOT SUIT					
COARS AGGR GAT (ASTM C448)	169.24	NOT SUIT					
COARS AGGR GAT (ASTM C448)	135.50	MARGINAL	YES				YES
FINE CONCRETE AGGR GAT (P. OF H.)	24.84	MARGINAL	YES				YES
FINE CONCRETE AGGR GAT (ASTM C33, C404)	69.56	NOT SUIT					
FINE CONCRETE AGGR GAT (ASTM C33, C404)	58.99	NOT SUIT					
MORTAR (ASTM C144)	25.85	MARGINAL	YES				
PORTLAND CEMENT (P. OF H.)	144.56	NOT SUIT					
BUILT-UP ROOFS (ASTM D1863)	103.26	NOT SUIT					
STREET FIELDS (P. OF H.)	0.0	SUITABLE	YES				
PIT RUN (P. OF H.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	9.44	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	2185.50	GMS.	WASHED SAMPLE - WEIGHT BEFORE	830.70	AFTER	762.90	% LOSS	8.16
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[illegible]

TOTALS	830.70	2619.20
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SPLITTING FACTOR 2.63

FINENESS MODULUS 4.76

% COBBLES	0.0	% PEBBLES	44.29	% GRANULES	15.19	% SAND	33.71	% SILT/CLAY	6.81
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INDUSTRIAL USAGE ASSESSMENT

022048 01918W02NW HG200A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	0.16	MARGINAL	YES				YES
ASPHALT B (P. OF H.)	0.16	MARGINAL	YES				YES
ASPHALT C (P. OF H.)	35.73	NOT SUIT					
BASE COURSE A (P. OF H.)	0.0	SUITABLE	YES				
BASE COURSE B (P. OF H.)	0.0	SUITABLE	YES				
BASE COURSE C (P. OF H.)	0.0	SUITABLE	YES				
BASE COURSE D (P. OF H.)	0.0	SUITABLE	YES				
BASE COURSE E (P. OF H.)	0.0	SUITABLE	YES				
BASE COURSE F (P. OF H.)	17.08	MARGINAL	YES		YES		YES
BASE COURSE G (P. OF H.)	0.01	MARGINAL	YES		YES		
BASE COURSE H (P. OF H.)	0.0	SUITABLE	YES				
BASE COURSE I (P. OF H.)	4.41	MARGINAL	YES	YES			
BASE COURSE J (P. OF H.)	0.0	SUITABLE	YES				
BASE COURSE K (P. OF H.)	0.0	MARGINAL	YES	YES			
BASE COURSE L (P. OF H.)	24.57	MARGINAL	YES	YES			
BASE COURSE M (P. OF H.)	10.32	MARGINAL	YES		YES		YES
BASE COURSE N (P. OF H.)	0.0	SUITABLE	YES				
BASE COURSE O (P. OF H.)	0.0	SUITABLE	YES				
BASE COURSE P (P. OF H.)	0.0	SUITABLE	YES				
SEAL COAT A (P. OF H.)	20.15	NOT SUIT					
SEAL COAT B (P. OF H.)	20.64	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.)	5.25	MARGINAL	YES				YES
COARSE AGGREGATE (ASTH C33, D448)	201.77	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	179.99	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	149.92	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	123.98	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	120.85	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	90.68	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	125.98	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	180.50	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	181.10	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	129.59	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	126.54	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	131.89	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	118.47	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	135.47	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	155.58	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	110.28	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	74.68	MARGINAL	YES				
COARSE AGGREGATE (ASTH C33, D448)	13.23	MARGINAL	YES				YES
COARSE AGGREGATE (ASTH C33, D448)	35.23	NOT SUIT	YES				YES
COARSE AGGREGATE (ASTH C33, D448)	25.88	MARGINAL	YES				YES
COARSE AGGREGATE (ASTH C33, D448)	19.08	MARGINAL	YES				YES
COARSE AGGREGATE (ASTH C33, D448)	21.93	NOT SUIT	YES				YES
COARSE AGGREGATE (ASTH C33, D448)	118.97	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTH C33, D448)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTH C33, D448)	20.78	MARGINAL	YES		YES		
COARSE AGGREGATE (ASTH C33, D448)	0.0	SUITABLE	YES				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

TOTALS	907.20	5103.79
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SPLITTING FACTOR 5.24

FINENESS MODULUS 4.09

% COBBLES	0.0	% PEBBLES	32.24	% GRANULES	15.89	% SAND	49.87	% SILT/CLAY	2.00
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022049 01818W33NEHG157A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

[illegible]

- 98 -

WEIGHT OF SAND	4237.10	GMS.	WASHED SAMPLE - WEIGHT BEFORE	872.30	AFTER	795.00	% LOSS	8.86
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% COBBLES	0.0	% PEBBLES	44.50	% GRANULES	15.19	% SAND	32.85	% SILT/CLAY	7.47
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 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

WEIGHT OF SAND	4031.60	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	837.50	AFTER	818.00	% LOSS	2.33
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% COBBLES	0.0	% PEBBLES	54.59	% GRANULES	18.68	% SAND	24.55	% SILT/CLAY	2.18
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022051 01818W08NEHG194A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	5500.00	GMS.	WASHED SAMPLE - WEIGHT BEFORE	697.70	AFTER	683.20	% LOSS	2.08
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[illegible]

TOTALS	695.35	5760.77
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SPLITTING FACTOR 7.88

FINENESS MODULUS 4.51

% COBBLES	0.0	% PEBBLES	37.58	% GRANULES	18.20	% SAND	42.24	% SILT/CLAY	1.98
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022052 01818W05SEHG016A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	1.06	MARGINAL	YES				
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.)	54.96	NOT SUIT					
BASIN COURSE A (P. OF H.)	6.96	MARGINAL	YES	YES			
BASIN COURSE B (P. OF H.)	3.51	MARGINAL	YES	YES			
BASIN COURSE C (P. OF H.)	2.06	MARGINAL	YES	YES			
SUB-BASE A (ASTM D1241)	12.04	MARGINAL				YES	YES
SUB-BASE B (ASTM D1241)	4.91	MARGINAL	YES			YES	
SUB-BASE C (ASTM D1241)	17.41	MARGINAL	YES				
SUB-BASE D (ASTM D1241)	10.41	MARGINAL	YES				
SUB-BASE E (ASTM D1241)	38.42	NOT SUIT					
TRAFFIC GRAVEL (ASTM D1241)	15.01	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL (ASTM D1241)	7.96	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (ASTM D1241)	0.0	SUITABLE	YES				
SEAL COAT A (P. OF H.)	74.93	NOT SUIT					
SEAL COAT B (P. OF H.)	1.46	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	214.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	204.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	207.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	139.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	143.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	138.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	132.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	136.79	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	100.17	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	127.40	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	160.06	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	132.00	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	110.55	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	121.69	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	122.01	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	76.49	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	67.67	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	13.58	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (P. OF H.)	41.32	MARGINAL	YES				
FINE CONCRETE AGGREGATE (ASTM C33, C404)	27.08	NOT SUIT	YES				
FINE CONCRETE AGGREGATE (ASTM C33, C404)	27.08	MARGINAL	YES				
MORTAR (ASTM C144)	17.54	MARGINAL	YES				
PORTLAND CEMENT (P. OF H.)	16.37	MARGINAL	YES				
BUILT-UP ROOFS (ASTM D1863)	111.05	NOT SUIT					
FIELD RUMPS (P. OF H.)	0.0	SUITABLE	YES				
PIT RUM (P. OF H.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	26.62	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

WEIGHT OF SAND	4869.10	GMS.	WASHED SAMPLE - WEIGHT BEFORE	735.20	AFTER	696.50	% LOSS	5.26
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4	IN	0.0	0.0	100.00	0.0
10	IN	0.0	0.0	100.00	0.0
20	IN	0.0	0.0	100.00	0.0
40	IN	0.0	0.0	100.00	0.0
60	IN	0.0	0.0	100.00	0.0
80	IN	0.0	0.0	100.00	0.0
100	IN	0.0	0.0	100.00	0.0
150	IN	0.0	0.0	100.00	0.0
200	IN	0.0	0.0	100.00	0.0
250	IN	0.0	0.0	100.00	0.0
300	IN	0.0	0.0	100.00	0.0
350	IN	0.0	0.0	100.00	0.0
400	IN	0.0	0.0	100.00	0.0
450	IN	0.0	0.0	100.00	0.0
500	IN	0.0	0.0	100.00	0.0
550	IN	0.0	0.0	100.00	0.0
600	IN	0.0	0.0	100.00	0.0
650	IN	0.0	0.0	100.00	0.0
700	IN	0.0	0.0	100.00	0.0
750	IN	0.0	0.0	100.00	0.0
800	IN	0.0	0.0	100.00	0.0
850	IN	0.0	0.0	100.00	0.0
900	IN	0.0	0.0	100.00	0.0
950	IN	0.0	0.0	100.00	0.0
1000	IN	0.0	0.0	100.00	0.0
1050	IN	0.0	0.0	100.00	0.0
1100	IN	0.0	0.0	100.00	0.0
1150	IN	0.0	0.0	100.00	0.0
1200	IN	0.0	0.0	100.00	0.0
1250	IN	0.0	0.0	100.00	0.0
1300	IN	0.0	0.0	100.00	0.0
1350	IN	0.0	0.0	100.00	0.0
1400	IN	0.0	0.0	100.00	0.0
1450	IN	0.0	0.0	100.00	0.0
1500	IN	0.0	0.0	100.00	0.0
1550	IN	0.0	0.0	100.00	0.0
1600	IN	0.0	0.0	100.00	0.0
1650	IN	0.0	0.0	100.00	0.0
1700	IN	0.0	0.0	100.00	0.0
1750	IN	0.0	0.0	100.00	0.0
1800	IN	0.0	0.0	100.00	0.0
1850	IN	0.0	0.0	100.00	0.0
1900	IN	0.0	0.0	100.00	0.0
1950	IN	0.0	0.0	100.00	0.0
2000	IN	0.0	0.0	100.00	0.0
2050	IN	0.0	0.0	100.00	0.0
2100	IN	0.0	0.0	100.00	0.0
2150	IN	0.0	0.0	100.00	0.0
2200	IN	0.0	0.0	100.00	0.0
2250	IN	0.0	0.0	100.00	0.0
2300	IN	0.0	0.0	100.00	0.0
2350	IN	0.0	0.0	100.00	0.0
2400	IN	0.0	0.0	100.00	0.0
2450	IN	0.0	0.0	100.00	0.0
2500	IN	0.0	0.0	100.00	0.0
2550	IN	0.0	0.0	100.00	0.0
2600	IN	0.0	0.0	100.00	0.0
2650	IN	0.0	0.0	100.00	0.0
2700	IN	0.0	0.0	100.00	0.0
2750	IN	0.0	0.0	100.00	0.0
2800	IN	0.0	0.0	100.00	0.0
2850	IN	0.0	0.0	100.00	0.0
2900	IN	0.0	0.0	100.00	0.0
2950	IN	0.0	0.0	100.00	0.0
3000	IN	0.0	0.0	100.00	0.0
3050	IN	0.0	0.0	100.00	0.0
3100	IN	0.0	0.0	100.00	0.0
3150	IN	0.0	0.0	100.00	0.0
3200	IN	0.0	0.0	100.00	0.0
3250	IN	0.0	0.0	100.00	0.0
3300	IN	0.0	0.0	100.00	0.0
3350	IN	0.0	0.0	100.00	0.0
3400	IN	0.0	0.0	100.00	0.0
3450	IN	0.0	0.0	100.00	0.0
3500	IN	0.0	0.0	100.00	0.0
3550	IN	0.0	0.0	100.00	0.0
3600	IN	0.0	0.0	100.00	0.0
3650	IN	0.0	0.0	100.00	0.0
3700	IN	0.0	0.0	100.00	0.0
3750	IN	0.0	0.0	100.00	0.0
3800	IN	0.0	0.0	100.00	0.0
3850	IN	0.0	0.0	100.00	0.0
3900	IN	0.0	0.0	100.00	0.0
3950	IN	0.0	0.0	100.00	0.0
4000	IN	0.0	0.0	100.00	0.0
4050	IN	0.0	0.0	100.00	0.0
4100	IN	0.0	0.0	100.00	0.0
4150	IN	0.0	0.0	100.00	0.0
4200	IN	0.0	0.0	100.00	0.0
4250	IN	0.0	0.0	100.00	0.0
4300	IN	0.0	0.0	100.00	0.0
4350	IN	0.0	0.0	100.00	0.0
4400	IN	0.0	0.0	100.00	0.0
4450	IN	0.0	0.0	100.00	0.0
4500	IN	0.0	0.0	100.00	0.0
4550	IN	0.0	0.0	100.00	0.0
4600	IN	0.0	0.0	100.00	0.0
4650	IN	0.0	0.0	100.00	0.0
4700	IN	0.0	0.0	100.00	0.0
4750	IN	0.0	0.0	100.00	0.0
4800	IN	0.0	0.0	100.00	0.0
4850	IN	0.0	0.0	100.00	0.0
4900	IN	0.0	0.0	100.00	0.0
4950	IN	0.0	0.0	100.00	0.0
5000	IN	0.0	0.0	100.00	0.0
5050	IN	0.0	0.0	100.00	0.0
5100	IN	0.0	0.0	100.00	0.0
5150	IN	0.0	0.0	100.00	0.0
5200	IN	0.0	0.0	100.00	0.0
5250	IN	0.0	0.0	100.00	0.0
5300	IN	0.0	0.0	100.00	0.0
5350	IN	0.0	0.0	100.00	0.0
5400	IN	0.0	0.0	100.00	0.0
5450	IN	0.0	0.0	100.00	0.0
5500	IN	0.0	0.0	100.00	0.0
5550	IN	0.0	0.0	100.00	0.0
5600	IN	0.0	0.0	100.00	0.0
5650	IN	0.0	0.0	100.00	0.0
5700	IN	0.0	0.0	100.00	0.0
5750	IN	0.0	0.0	100.00	0.0
5800	IN	0.0	0.0	100.00	0.0
5850	IN	0.0	0.0	100.00	0.0
5900	IN	0.0	0.0	100.00	0.0
5950	IN	0.0	0.0	100.00	0.0
6000	IN	0.0	0.0	100.00	0.0
6050	IN	0.0	0.0	100.00	0.0
6100	IN	0.0	0.0	100.00	0.0
6150	IN	0.0	0.0	100.00	0.0
6200	IN	0.0	0.0	100.00	0.0
6250	IN	0.0	0.0	100.00	0.0
6300	IN	0.0	0.0	100.00	0.0
6350	IN	0.0	0.0	100.00	0.0
6400	IN	0.0	0.0	100.00	0.0
6450	IN	0.0	0.0	100.00	0.0
6500	IN	0.0	0.0	100.00	0.0
6550	IN	0.0	0.0	100.00	0.0
6600	IN	0.0	0.0	100.00	0.0
6650	IN	0.0	0.0	100.00	0.0
6700	IN	0.0	0.0	100.00	0.0
6750	IN	0.0	0.0	100.00	0.0
6800	IN	0.0	0.0	100.00	0.0
6850	IN	0.0	0.0	100.00	0.0
6900	IN	0.0	0.0	100.00	0.0
6950	IN	0.0	0.0	100.00	0.0
7000	IN	0.0	0.0	100.00	0.0
7050	IN	0.0	0.0	100.00	0.0
7100	IN	0.0	0.0	100.00	0.0
7150	IN	0.0	0.0	100.00	0.0
7200	IN	0.0	0.0	100.00	0.0
7250	IN	0.0	0.0	100.00	0.0
7300	IN	0.0	0.0	100.00	0.0
7350	IN	0.0	0.0	100.00	0.0
7400	IN	0.0	0.0	100.00	0.0
7450	IN	0.0	0.0	100.00	0.0
7500	IN	0.0	0.0	100.00	0.0
7550	IN	0.0	0.0	100.00	0.0
7600	IN	0.0	0.0	100.00	0.0
7650	IN	0.0	0.0	100.00	0.0
7700	IN	0.0	0.0	100.00	0.0
7750	IN	0.0	0.0	100.00	0.0
7800	IN	0.0	0.0	100.00	0.0
7850	IN	0.0	0.0	100.00	0.0
7900	IN	0.0	0.0	100.00	0.0
7950	IN	0.0	0.0	100.00	0.0
8000	IN	0.0	0.0	100.00	0.0
8050	IN	0.0	0.0	100.00	0.0
8100	IN	0.0	0.0	100.00	0.0
8150	IN	0.0	0.0	100.00	0.0
8200	IN	0.0	0.0	100.00	0.0
8250	IN	0.0	0.0	100.00	0.0
8300	IN	0.0	0.0	100.00	0.0
8350	IN	0.0	0.0	100.00	0.0
8400	IN	0.0	0.0	100.00	0.0
8450	IN	0.0	0.0	100.00	0.0
8500	IN	0.0	0.0	100.00	0.0
8550	IN	0.0	0.0	100.00	0.0
8600	IN	0.0	0.0	100.00	0.0
8650	IN	0.0	0.0	100.00	0.0
8700	IN	0.0	0.0	100.00	0.0
8750	IN	0.0	0.0	100.00	0.0
8800	IN	0.0	0.0	100.00	0.0
8850	IN	0.0	0.0	100.00	0.0
8900	IN	0.0	0.0	100.00	0.0
8950	IN	0.0	0.0	100.00	0.0
9000	IN	0.0	0.0	100.00	0.0
9050	IN	0.0	0.0	100.00	0.0
9100	IN	0.0	0.0	100.00	0.0
9150	IN	0.0	0.0	100.00	0.0
9200	IN	0.0	0.0	100.00	0.0
9250	IN	0.0	0.0	100.00	0.0
9300	IN	0.0	0.0	100.00	0.0
9350	IN	0.0	0.0	100.00	0.0
9400	IN	0.0	0.0	100.00	0.0
9450	IN	0.0	0.0	100.00	0.0
9500	IN	0.0	0.0	100.00	0.0
9550	IN	0.0	0.0	100.00	0.0
9600	IN	0.0	0.0	100.00	0.0
9650	IN	0.0	0.0	100.00	0.0
9700	IN	0.0	0.0	100.00	0.0
9750	IN	0.0	0.0	100.00	0.0
9800	IN	0.0	0.0	100.00	0.0
9850	IN	0.0	0.0	100.00	0.0
9900	IN	0.0	0.0	100.00	0.0
9950	IN	0.0	0.0	100.00	0.0
10000	IN	0.0	0.0	100.00	0.0
10050	IN	0.0	0.0	100.00	0.0
10100	IN	0.0	0.0	100.00	0.0
10150	IN	0.0	0.0	100.00	0.0
10200	IN	0.0	0.0	100.00	0.0
10250	IN	0.0	0.0	100.00	0.0
10300	IN	0.0	0.0	100.00	0.0
10350	IN	0.0	0.0	100.00	0.0
10400	IN	0.0	0.0	100.00	0.0
10450	IN	0.0	0.0	100.00	0.0
10500	IN	0.0	0.0	100.00	0.0
10550	IN	0.0	0.0	100.00	0.0
10600	IN	0.0	0.0	100.00	0.0
10650	IN	0.0	0.0	100.00	0.0
10700	IN	0.0	0.0	100.00	0.0
10750	IN	0.0	0.0	100.00	0.0
10800	IN	0.0	0.0	100.00	0.0
10850	IN	0.0	0.0	100.00	0.0
10900	IN	0.0	0.0	100.00	0.0
10950	IN	0.0	0.0	100.00	0.0
11000	IN	0.0	0.0	100.00	0.0
11050	IN	0.0	0.0	100.00	0.0
11100	IN	0.0	0.0	100.00	0.0
11150	IN	0.0	0.0	100.00	0.0

% COBBLES	0.0	% PEBBLES	37.93	% GRANULES	17.33	% SAND	40.12	% SILT/CLAY	4.62
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022053A01818W16NWHG192A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <\$4)
ASPHALT A (P. OF H.)	0.78	MARGINAL	YES		YES		
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.)	42.05	NOT SUIT					
BASS COURSE (P. OF H.)	33.32	MARGINAL	YES	YES	YES		
BASS COURSE (P. OF H.)	30.0	SUITABLE	YES				
SUB-BASE (ASTM D1241)	23.94	MARGINAL					
SUB-BASE (ASTM D1241)	4.58	MARGINAL		YES	YES		YES
SUB-BASE (ASTM D1241)	22.03	MARGINAL	YES	YES	YES		
SUB-BASE (ASTM D1241)	10.09	MARGINAL	YES	YES	YES		
SUB-BASE (ASTM D1241)	3.99	MARGINAL	YES	YES	YES		
SUB-BASE (ASTM D1241)	22.77	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	22.90	MARGINAL	YES		YES		YES
TRAFFIC GRAVEL (P. OF H.)	22.90	MARGINAL	YES		YES		
TRAFFIC GRAVEL (P. OF H.)	0.0	SUITABLE	YES				
SEAL COAT A (P. OF H.)	81.46	NOT SUIT					
SEAL COAT B (P. OF H.)	12.73	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.)	1.66	MARGINAL	YES				YES
COARSE AGGREGATE (ASTM C33, C448)	29.92	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	34.52	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	34.52	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	36.49	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	35.17	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	36.05	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	125.50	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	184.42	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	187.50	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	123.02	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	137.64	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	144.55	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	128.84	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	140.63	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	143.23	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	103.02	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	69.84	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	12.01	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	32.04	NOT SUIT	YES				YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	18.55	MARGINAL	YES				YES
MORTAR (ASTM C144)	16.12	MARGINAL	YES				
PORTLAND CEMENT (P. OF H.)	14.11	MARGINAL	YES				YES
BUILT-UP ROOFS (ASTM D1863)	129.24	NOT SUIT					
SURFACE RUNWAYS (P. OF H.)	0.0	SUITABLE	YES				
PIT RUN (P. OF H.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	19.12	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	3063.00 GMS.	WASHED SAMPLE - WEIGHT BEFORE	783.20	AFTER	757.00	% LOSS	3.35
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
8		0.0	0.0	100.00	0.0
16		0.0	0.0	100.00	0.0
30		0.0	0.0	100.00	0.0
40		0.0	0.0	100.00	0.0
50		0.0	0.0	100.00	0.0
60		0.0	0.0	100.00	0.0
70		0.0	0.0	100.00	0.0
80		0.0	0.0	100.00	0.0
100		0.0	0.0	100.00	0.0
200		0.0	0.0	100.00	0.0
400		0.0	0.0	100.00	0.0
800		0.0	0.0	100.00	0.0
1000		0.0	0.0	100.00	0.0
+ M		0.0	0.0	100.00	0.0

TOTALS	790.85	3924.44
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SPLITTING FACTOR 3.91

FINENESS MODULUS 5.52

% COBBLES	0.0	% PEBBLES	54.20	% GRANULES	18.51	% SAND	24.65	% SILT/CLAY	2.64
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022054 01818N10SWHG018A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	5.00	MARGINAL	YES				
ASPHALT B (P. OF H.)	0.37	MARGINAL	YES				
ASPHALT C (P. OF H.)	55.25	NOT SUIT					
BASE COURSE A (P. OF H.)	9.28	MARGINAL	YES	YES			
BASE COURSE B (P. OF H.)	7.98	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	81.36	SUITABLE					
SUB-BASE (P. OF H.)	9.19	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	7.33	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	28.35	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	22.70	MARGINAL	YES	YES			
SUB-BASE (P. OF H.)	64.70	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	3.26	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	3.26	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	0.00	SUITABLE	YES				
SEAL COAT A (P. OF H.)	54.49	NOT SUIT					
SEAL COAT B (P. OF H.)	0.00	SUITABLE	YES				
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (ASTH C33, C448)	191.19	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	181.19	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	159.09	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	99.24	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	155.55	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	89.95	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	156.33	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	159.90	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	139.99	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	38.13	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	83.40	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	92.11	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	89.10	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	90.92	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	43.17	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	46.73	NOT SUIT					
COARSE AGGREGATE (ASTH C33, C448)	24.92	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	89.51	NOT SUIT					YES
FINE CONCRETE AGGREGATE (ASTH C33, C404)	89.51	NOT SUIT					
FINE CONCRETE AGGREGATE (ASTH C33, C404)	65.53	NOT SUIT					
MORTAR (ASTH C144)	26.70	MARGINAL	YES				
PORTLAND CEMENT (P. C. A.)	64.50	NOT SUIT					
BUILT-UP ROOFS (ASTH D1863)	92.71	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.)	0.00	SUITABLE	YES				
RT RUN (P. OF H.)	0.00	SUITABLE	YES				
SEPTIC FIELDS (U.M.A.)	16.85	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.00	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

SAMPLE IDENTIFICATION 022055 01818W10SWHG017A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND 3648.80 GMS. WASHED SAMPLE - WEIGHT BEFORE 704.40 AFTER 679.10 % LOSS 3.59

STIEVE SIZE	FINE FRACTION (GMS.)	STIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		234.70	100.00	94.88	5.12
1/2		460.10	100.00	84.86	15.14
1/2		248.40	100.00	79.44	20.56
1/2		220.20	100.00	74.70	25.30
1/2		249.60	100.00	69.76	30.24
1/2		314.00	100.00	62.80	37.20
1/2		272.99	100.00	56.85	43.15
1/2		222.66	100.00	51.45	48.55
1/2		169.39	100.00	46.44	53.56
1/2		142.37	100.00	41.77	58.23
1/2		117.04	100.00	37.48	62.52
1/2		98.02	100.00	33.50	66.50
1/2		60.09	100.00	29.99	70.01
1/2		13.47	100.00	26.99	73.01
1/2		56.98	100.00	24.00	76.00
1/2		11.00	100.00	21.00	79.00
1/2		25.27	100.00	18.00	82.00
1/2		130.92	100.00	15.00	85.00
1/2			100.00	12.00	88.00
1/2			100.00	9.00	91.00
1/2			100.00	6.00	94.00
1/2			100.00	3.00	97.00
1/2			100.00	0.00	100.00

TOTALS 703.67 4588.22

SPLITTING FACTOR 5.18

FINENESS MODULUS 5.42

% COBBLES 0.0 % PEBBLES 53.15 % GRANULES 15.08 % SAND 28.91 % SILT/CLAY 2.85

INDUSTRIAL USAGE ASSESSMENT

022055 01818W10SWHG017A

***** NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *****

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	6.95	MARGINAL	YES			
ASPHALT B (P. OF H.)	7.24	MARGINAL	YES			
ASPHALT C (P. OF H.)	8.12	NOT SUIT				
BASE COURSE A (P. OF H.)	10.64	MARGINAL	YES	YES		
BASE COURSE B (P. OF H.)	8.66	MARGINAL	YES	YES		
BASE COURSE C (P. OF H.)	1.15	MARGINAL	YES	YES		
SUB-BASE A (ASTM D1241)	10.13	MARGINAL	YES	YES		
SUB-BASE B (ASTM D1241)	8.43	MARGINAL	YES	YES		
SUB-BASE C (ASTM D1241)	24.00	MARGINAL	YES	YES		
SUB-BASE D (ASTM D1241)	17.00	MARGINAL	YES	YES		
SUB-BASE E (ASTM D1241)	58.79	NOT SUIT				
TRAPIC GRAVEL A (P. OF H.)	6.64	MARGINAL	YES	YES		
TRAPIC GRAVEL B (P. OF H.)	6.64	MARGINAL	YES	YES		
TRAPIC GRAVEL C (P. OF H.)	6.64	MARGINAL	YES	YES		
SEAL COAT A (P. OF H.)	73.55	NOT SUIT				
SEAL COAT B (P. OF H.)	0.11	MARGINAL	YES			YES
SEAL COAT C (P. OF H.)	0.11	MARGINAL	YES			YES
COARSE AGGREGATE A (ASTM C33, D448)	13.18	NOT SUIT				
COARSE AGGREGATE B (ASTM C33, D448)	11.00	NOT SUIT				
COARSE AGGREGATE C (ASTM C33, D448)	10.64	NOT SUIT				
COARSE AGGREGATE D (ASTM C33, D448)	161.06	NOT SUIT				
COARSE AGGREGATE E (ASTM C33, D448)	98.02	NOT SUIT				
COARSE AGGREGATE F (ASTM C33, D448)	150.02	NOT SUIT				
COARSE AGGREGATE G (ASTM C33, D448)	82.98	NOT SUIT				
COARSE AGGREGATE H (ASTM C33, D448)	12.76	NOT SUIT				
COARSE AGGREGATE I (ASTM C33, D448)	92.53	NOT SUIT				
COARSE AGGREGATE J (ASTM C33, D448)	134.74	NOT SUIT				
COARSE AGGREGATE K (ASTM C33, D448)	99.67	NOT SUIT				
COARSE AGGREGATE L (ASTM C33, D448)	90.74	NOT SUIT				
COARSE AGGREGATE M (ASTM C33, D448)	93.96	NOT SUIT				
COARSE AGGREGATE N (ASTM C33, D448)	108.43	NOT SUIT				
COARSE AGGREGATE O (ASTM C33, D448)	65.76	NOT SUIT				
COARSE AGGREGATE P (ASTM C33, D448)	61.32	NOT SUIT				
COARSE AGGREGATE Q (ASTM C33, D448)	13.40	MARGINAL	YES			YES
COARSE AGGREGATE R (ASTM C33, D448)	13.40	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	100.91	NOT SUIT				
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	100.91	NOT SUIT				
MORTAR (ASTM C144)	100.91	MARGINAL	YES			
PORTLAND CEMENT (P.C.A.)	35.20	NOT SUIT				
BUILT-UP ROOFS (ASTM D1863)	94.36	NOT SUIT				
AIRFIELD RUNWAYS (P. OF H.)	0.0	SUITABLE	YES			
SEPTIC TANKS (U.M.A.)	0.0	SUITABLE	YES			
SHOULDERS (P. OF H.)	13.03	MARGINAL	YES		YES	
SHOULDERS (P. OF H.)	0.0	SUITABLE				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
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TOTALS	758.48	4749.24
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SPLITTING FACTOR 5.09

FINENESS MODULUS 4.59

% COBBLES	0.0	% PEBBLES	39.40	% GRANULES	15.01	% SAND	43.04	% SILT/CLAY	2.55
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INDUSTRIAL USAGE ASSESSMENT

022057A01817W07SEHB206A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE

**TOTAL
RESIDUAL**

RATING

**SCREENING
REQUIRED**

REMOVAL OF
 <\$200 MATERIAL

CRUSHED
MATERIAL

REQUIRED MATERIAL

ADDITION
OF FINES
(MATERIAL <84)

ASPHALT A (P. OF H.)		5.72	MARGINAL	YES		YES
ASPHALT B (P. OF H.)		40.47	MARGINAL	YES		YES
ASPHALT C (P. OF H.)		10.58	NOT SUIT			YES
BASE COURSE I (P. OF OFF. H.M.)		1.93	MARGINAL	YES	YES	YES
BASE COURSE II (P. OF OFF. H.M.)		1.93	MARGINAL	YES	YES	YES
BASE COURSE III (P. OF OFF. H.M.)		1.93	MARGINAL	YES	YES	YES
SUB-BASE I (ASTM D1241)		17.72	MARGINAL		YES	YES
SUB-BASE II (ASTM D1241)		2.32	MARGINAL	YES	YES	YES
SUB-BASE III (ASTM D1241)		9.37	MARGINAL	YES	YES	YES
SUB-BASE IV (ASTM D1241)		3.11	MARGINAL	YES	YES	YES
SUB-BASE V (ASTM D1241)		18.76	MARGINAL	YES	YES	YES
TRAFFIC GRAVEL I (P. OF OFF. H.M.)		13.97	NOT SUIT			
TRAFFIC GRAVEL II (P. OF OFF. H.M.)		13.97	MARGINAL	YES	YES	YES
TRAFFIC GRAVEL III (P. OF OFF. H.M.)		6.09	MARGINAL	YES	YES	YES
SEAL COAT A (P. OF OFF. H.M.)		88.69	NOT SUIT			
SEAL COAT B (P. OF OFF. H.M.)		19.68	MARGINAL	YES	YES	YES
SEAL COAT C (P. OF OFF. H.M.)		0.00	SUITABLE	YES		
COARSE AGGREGATE I (ASTM C33; D448)		196.92	NOT SUIT			
COARSE AGGREGATE II (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE III (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE IV (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE V (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE VI (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE VII (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE VIII (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE IX (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE X (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XI (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XII (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XIII (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XIV (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XV (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XVI (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XVII (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XVIII (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XIX (ASTM C33; D448)		148.92	NOT SUIT			
COARSE AGGREGATE XX (ASTM C33; D448)		148.92	NOT SUIT			
FINE CONCRETE AGGREGATE I (P. OF M.)		21.82	MARGINAL	YES		YES
FINE CONCRETE AGGREGATE II (ASTH C33; C404)		13.96	MARGINAL	YES		YES
FINE CONCRETE AGGREGATE III (ASTH C33; C404)		13.96	MARGINAL	YES		YES
MORTAR (ASTH C144)		13.96	MARGINAL	YES		YES
PORTLAND CEMENT (P.C.A.)		136.94	NOT SUIT			
BUILT-UP ROADS (ASTH D1863)		0.00	SUITABLE	YES		
OLD RUMAYS (P. OF H.)		0.00	SUITABLE	YES		
ST. RUN (P. OF M.)		16.29	MARGINAL	YES		
SEPTIC FIELDS (U.M.A.)		0.00	SUITABLE		YES	
SHOULDERS (P. OF U.M.)		0.00	SUITABLE			

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

WEIGHT OF SAND	6071.00 GMS.	WASHED SAMPLE - WEIGHT BEFORE	767.40	AFTER	730.20	% LOSS	4.85
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[illegible]

% COBBLES	0.0	% PEBBLES	16.57	% GRANULES	12.77	% SAND	65.92	% SILT/CLAY	4.74
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022057A01817W18SEHG019A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	37.95	NOT SUIT					
ASPHALT B (P. OF H.)	27.52	MARGINAL	YES		YES		YES
ASPHALT C (P. OF H.)	32.26	NOT SUIT					
BASIN COURSE (P. OF H.)	15.69	NOT SUIT					
BASIN COURSE (P. OF H.)	14.09	MARGINAL				YES	YES
BASIN COURSE (P. OF H.)	3.43	MARGINAL				YES	
SUB-BASE/BASIN COURSE (ASTM D1241)	95.06	NOT SUIT					
SUB-BASE/BASIN COURSE (ASTM D1241)	71.81	NOT SUIT					
SUB-BASE/BASIN COURSE (ASTM D1241)	46.81	NOT SUIT					
SUB-BASE/BASIN COURSE (ASTM D1241)	46.92	MARGINAL		YES			
SUB-BASE/BASIN COURSE (ASTM D1241)	1.26	MARGINAL		YES			YES
SUB-BASE/BASIN COURSE (ASTM D1241)	4.76	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.)	62.24	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	32.24	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	13.58	MARGINAL				YES	
SEAL COAT A (P. OF H.)	108.76	NOT SUIT					
SEAL COAT B (P. OF H.)	33.61	NOT SUIT					
SEAL COAT C (P. OF H.)	5.94	MARGINAL	YES				YES
COARSE AGGREGATE (ASTM C33, C448)	21.56	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	21.56	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	08.69	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	77.32	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	19.03	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	172.46	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	19.18	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	42.61	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	19.89	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	84.12	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	09.16	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	69.81	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	006.18	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	08.03	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	112.09	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C448)	6.52	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (P. OF H.)	1.63	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	4.91	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	6.40	MARGINAL	YES				YES
MORTAR (ASTM C144)	5.72	MARGINAL	YES				YES
PORTLAND CEMENT (P.C.A.)	71.77	MARGINAL					
BITUM (ASTM D1863)	170.31	NOT SUIT					YES
BIRFIELD RUNWAYS (P. OF H.)	8.43	MARGINAL				YES	
PIT RUN (P. OF H.)	27.82	MARGINAL				YES	
SEPTIC FIELDS (U.N.A.)	13.43	MARGINAL				YES	
SHOULDERS (P. OF H.)						YES	

- 106 -

WEIGHT OF SAND	4035.40	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	785.00	AFTER	774.30	% LOSS	1.36
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STEVE SIZE	FINE FRACTION (GMS.)	STEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4	IN	0.0	0.0	100.00	0.0
1/2	IN	0.0	0.0	100.00	0.0
1/2	IN	0.0	0.0	100.00	0.0
1/2	IN	0.0	0.0	100.00	0.0
1/2	IN	0.0	0.0	100.00	0.0
1/2	IN	14.5	4.4	95.60	4.4
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3
1/2	IN	18.7	5.5	94.5	5.5
1/2	IN	16.8	5.0	95.0	5.0
1/2	IN	17.2	5.1	94.9	5.1
1/2	IN	20.5	6.3	93.7	6.3

TOTALS	785.00	4536.19
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SPLITTING FACTOR 5.14

FINENESS MODULUS 4.34

% COBBLES	0.0	% PEBBLES	32.61	% GRANULES	18.10	% SAND	48.08	% SILT/CLAY	1.21
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INDUSTRIAL USAGE ASSESSMENT

022057B01817W06SEHG205A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	3270.10	GMS.	WASHED SAMPLE - WEIGHT BEFORE	735.00	AFTER	701.80	% LOSS	4.52
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[illegible]

TOTALS	735.00	3987.30
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SPLITTING FACTOR 4.45

FINENESS MODULUS 4.56

% COBBLES	0.0	% PEBBLES	42.52	% GRANULES	15.55	% SAND	38.22	% SILT/CLAY	3.70
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INDUSTRIAL USAGE ASSESSMENT

022062 01817W16SEHG185A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <#200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	0.08	MARGINAL	YES		YES		
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.)	30.02	NOT SUIT					
BASE COURSE A (P. OF H.)	36.56	MARGINAL	YES	YES	YES		
BASE COURSE B (P. OF H.)	36.56	MARGINAL	YES	YES			
BASE COURSE C (P. OF H.)	0.0	MARGINAL		YES			
SUB-BASE A (ASTH D1241)	13.01	MARGINAL			YES		YES
SUB-BASE B (ASTH D1241)	1.30	MARGINAL		YES			
SUB-BASE C (ASTH D1241)	0.83	MARGINAL	YES	YES			
SUB-BASE D (ASTH D1241)	1.83	MARGINAL	YES	YES			
SUB-BASE E (ASTH D1241)	0.66	MARGINAL	YES	YES			
SUB-BASE F (ASTH D1241)	22.49	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL A (P. OF H.)	0.0	SUITABLE					
TRAFFIC GRAVEL B (P. OF H.)	83.83	NOT SUIT					
TRAFFIC GRAVEL C (P. OF H.)	22.13	MARGINAL	YES		YES		YES
TRAFFIC GRAVEL D (P. OF H.)	6.61	MARGINAL	YES				YES
COARS AGGREGATE A (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE B (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE C (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE D (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE E (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE F (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE G (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE H (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE I (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE J (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE K (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE L (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE M (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE N (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE O (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE P (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE Q (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE R (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE S (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE T (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE U (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE V (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE W (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE X (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE Y (ASTH C33, D448)	30.01	NOT SUIT					
COARS AGGREGATE Z (ASTH C33, D448)	30.01	NOT SUIT					
FINE CONCRETE AGGREGATE A (P. OF H.)	30.01	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE B (ASTH C33, C404)	30.01	NOT SUIT	YES				YES
FINE CONCRETE AGGREGATE C (ASTH C33, C404)	30.01	MARGINAL	YES				YES
HORTAR (ASTH C144)	16.61	MARGINAL	YES				YES
PORLAND CEMENT (P. OF H.)	124.66	NOT SUIT					
PORTLAND CEMENT (ASTH D1863)	124.66	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.)	0.0	SUITABLE	YES				
PIT RUN (P. OF H.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	14.04	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

WEIGHT OF SAND	3409.50	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	737.40	AFTER	719.00	% LOSS	2.50
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
3/4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
2		0.0	0.0	100.00	0.0
2 1/2		0.0	0.0	100.00	0.0
3		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
5		14.75	4.03	95.97	4.03
6		17.55	4.84	95.16	4.84
8		80.00	22.00	78.00	22.00
10	3.40	97.44	27.00	73.00	27.00
12	42.70	97.44	27.00	73.00	27.00
14	49.90	72.22	20.75	79.25	20.75
16	31.30	34.42	9.66	90.34	9.66
20	115.10	32.11	9.07	90.93	9.07
25	40.40	18.63	5.11	94.89	5.11
30	80.70	13.13	3.75	96.25	3.75
35	194.40	8.84	2.44	97.56	2.44
40	58.20	7.77	2.15	97.85	2.15
45	35.40	4.24	1.16	98.84	1.16
50	15.20	3.33	0.92	99.08	0.92
60	8.20	1.99	0.55	99.45	0.55
70	5.20	1.22	0.34	99.66	0.34
80	11.90	0.85	0.23	99.77	0.23
100	18.40	0.08	0.02	99.98	0.02
200				100.00	0.00
420				100.00	0.00
840				100.00	0.00
1060				100.00	0.00
1400				100.00	0.00
1750				100.00	0.00
2000				100.00	0.00
2500				100.00	0.00
3000				100.00	0.00
3500				100.00	0.00
4000				100.00	0.00
4500				100.00	0.00
5000				100.00	0.00
5600				100.00	0.00
6300				100.00	0.00
7000				100.00	0.00
7800				100.00	0.00
8600				100.00	0.00
9500				100.00	0.00
10500				100.00	0.00
11600				100.00	0.00
12800				100.00	0.00
14000				100.00	0.00
15300				100.00	0.00
16700				100.00	0.00
18200				100.00	0.00
19800				100.00	0.00
21500				100.00	0.00
23300				100.00	0.00
25200				100.00	0.00
27200				100.00	0.00
29300				100.00	0.00
31500				100.00	0.00
33800				100.00	0.00
36200				100.00	0.00
38700				100.00	0.00
41300				100.00	0.00
44000				100.00	0.00
46800				100.00	0.00
49700				100.00	0.00
52700				100.00	0.00
55800				100.00	0.00
59000				100.00	0.00
62300				100.00	0.00
65700				100.00	0.00
69200				100.00	0.00
72800				100.00	0.00
76500				100.00	0.00
80300				100.00	0.00
84200				100.00	0.00
88200				100.00	0.00
92300				100.00	0.00
96500				100.00	0.00
100800				100.00	0.00
105200					

TOTALS	737.40	3652.20
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SPLITTING FACTOR 4.62

FINENESS MODULUS 4.08

% COBBLES	0.0	% PEBBLES	24.96	% GRANULES	19.69	% SAND	53.02	% SILT/CLAY	2.33
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INDUSTRIAL USAGE ASSESSMENT

022063 01918W10SWHG173A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE

**TOTAL
RESIDUAL**

RATING

**SCREENING
REQUIRED**

REMOVAL OF
LESS THAN \$200 MATERIAL

CRUSHED
MATERIAL

**REQUIRED
MATERIAL
NOT ON SITE**

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

[illegible]

% COBBLES	0.0	% PEBBLES	39.93	% GRANULES	18.18	% SAND	38.71	% SILT/CLAY	3.19
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022063 01918W10SWHG174A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	CRUSHING REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	0.99	MARGINAL	YES		YES		
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.)	48.73	NOT SUIT					
BASE COURSE (P. OF H.)	4.91	MARGINAL	YES	YES	YES		
BASE COURSE (P. OF H.)	0.80	MARGINAL	YES	YES			
BASE COURSE (P. OF H.)	0.81	MARGINAL		YES			
SUB-BASE/BASIS COURSE (ASTM D1241)	14.02	MARGINAL			YES	YES	YES
SUB-BASE/BASIS COURSE (ASTM D1241)	2.88	MARGINAL	YES	YES	YES		
SUB-BASE/BASIS SURFACE COURSE (ASTM D1241)	1.71	MARGINAL	YES	YES			
SUB-BASE/BASIS SURFACE COURSE (ASTM D1241)	14.71	MARGINAL	YES	YES			
SUB-BASE/BASIS SURFACE COURSE (ASTM D1241)	7.71	MARGINAL	YES	YES			
SUB-BASE/BASIS SURFACE COURSE (ASTM D1241)	36.28	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	19.18	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL (P. OF H.)	4.18	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL (P. OF H.)	4.59	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.)	0.0	SUITABLE	YES				
SEAL COAT A (P. OF H.)	82.95	NOT SUIT					
SEAL COAT B (P. OF H.)	12.48	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF H.)	0.18	MARGINAL	YES				YES
COARSE AGGREGATE (ASTM C33, C404)	27.21	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	13.71	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	28.51	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	82.39	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	27.45	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	1.78	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	114.34	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	165.41	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	165.48	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	120.85	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	21.62	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	124.97	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	222.50	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	139.91	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	144.64	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	101.81	NOT SUIT					
COARSE AGGREGATE (ASTM C33, C404)	76.87	MARGINAL	YES				
FINE CONCRETE AGGREGATE (P. OF H.)	9.55	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	28.00	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	20.60	MARGINAL	YES				YES
MORTAR (ASTM C144)	18.70	MARGINAL	YES				
PORTLAND CEMENT (P. C. A.)	8.42	MARGINAL	YES				YES
BURIED ROADS (ASTM D1863)	123.00	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.)	0.0	SUITABLE	YES				
PIT RUN (P. OF H.)	0.0	SUITABLE					
SEPTIC FIELDS (U.M.A.)	15.03	MARGINAL			YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

SAMPLE IDENTIFICATION 022063 01918W16SEHG162A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND 2898.60 GMS. WASHED SAMPLE - WEIGHT BEFORE 714.00 AFTER 676.90 % LOSS 5.20

STIEVE SIZE	FINE FRACTION (GMS.)	STIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4 IN		0.0	0.0	100.00	0.0
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		260.90	4.71	95.29	4.71
1/2 IN		163.10	2.80	97.20	2.80
1/2 IN		362.80	6.34	93.66	6.34
1/2 IN		200.80	3.51	96.49	3.51
1/2 IN		28.79	0.51	99.49	0.51
1/2 IN	6.60	162.39	2.83	97.17	2.83
1/2 IN	40.00	74.00	1.30	98.70	1.30
1/2 IN	74.00	208.42	3.63	96.37	3.63
1/2 IN	89.10	268.66	4.74	95.26	4.74
1/2 IN	97.90	197.44	3.46	96.54	3.46
1/2 IN	11.70	128.69	2.22	97.78	2.22
1/2 IN	39.50	160.36	2.81	97.19	2.81
1/2 IN	135.80	551.30	9.82	90.18	9.82
1/2 IN	45.40	184.31	3.28	96.72	3.28
1/2 IN	35.40	143.73	2.57	97.43	2.57
1/2 IN	35.70	144.93	2.58	97.42	2.58
1/2 IN	39.20	33.23	0.59	99.41	0.59
1/2 IN	39.20	82.67	1.45	98.55	1.45
1/2 IN	37.10	150.61	2.67	97.33	2.67

TOTALS 714.00 3886.20

SPLITTING FACTOR 4.06

FINENESS MODULUS 5.12

% COBBLES 0.0 % PEBBLES 48.85 % GRANULES 13.54 % SAND 33.73 % SILT/CLAY 3.88

INDUSTRIAL USAGE ASSESSMENT

022063 01918W16SEHG162A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	0.0	SUITABLE	YES			
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES			
ASPHALT C (P. OF H.)	0.0	SUITABLE	YES			
BASE COURSE A (P. OF H.)	0.0	MARGINAL	YES	YES		
BASE COURSE B (P. OF H.)	0.0	SUITABLE	YES			
BASE COURSE C (P. OF H.)	0.0	SUITABLE	YES			
SUB-BASE/BASE COURSE A (ASTM D1241)	1.76	MARGINAL	YES	YES	YES	YES
SUB-BASE/BASE COURSE B (ASTM D1241)	0.62	MARGINAL	YES	YES		
SUB-BASE/BASE COURSE C (ASTM D1241)	0.62	MARGINAL	YES	YES		
SUB-BASE/BASE COURSE D (ASTM D1241)	0.62	MARGINAL	YES	YES		
SUB-BASE/BASE COURSE E (ASTM D1241)	0.62	MARGINAL	YES	YES		
SUB-BASE/BASE COURSE F (ASTM D1241)	0.62	MARGINAL	YES	YES		
TRAFFIC GRAVEL A (P. OF H.)	20.27	MARGINAL	YES	YES		YES
TRAFFIC GRAVEL B (P. OF H.)	6.28	MARGINAL	YES	YES		
TRAFFIC GRAVEL C (P. OF H.)	1.48	SUITABLE	YES			
TRAFFIC GRAVEL D (P. OF H.)	0.0	SUITABLE	YES			
SEAL COAT A (P. OF H.)	8.43	NOT SUIT				
SEAL COAT B (P. OF H.)	10.79	MARGINAL	YES		YES	YES
SEAL COAT C (P. OF H.)	1.56	MARGINAL	YES			YES
COARSE AGGREGATE I (ASTM C33, D448)	186.55	NOT SUIT				
COARSE AGGREGATE II (ASTM C33, D448)	169.84	NOT SUIT				
COARSE AGGREGATE III (ASTM C33, D448)	161.27	NOT SUIT				
COARSE AGGREGATE IV (ASTM C33, D448)	100.24	NOT SUIT				
COARSE AGGREGATE V (ASTM C33, D448)	100.05	NOT SUIT				
COARSE AGGREGATE VI (ASTM C33, D448)	99.39	NOT SUIT				
COARSE AGGREGATE VII (ASTM C33, D448)	165.39	NOT SUIT				
COARSE AGGREGATE VIII (ASTM C33, D448)	162.80	NOT SUIT				
COARSE AGGREGATE IX (ASTM C33, D448)	125.43	NOT SUIT				
COARSE AGGREGATE X (ASTM C33, D448)	120.82	NOT SUIT				
COARSE AGGREGATE XI (ASTM C33, D448)	124.00	NOT SUIT				
COARSE AGGREGATE XII (ASTM C33, D448)	120.74	NOT SUIT				
COARSE AGGREGATE XIII (ASTM C33, D448)	140.62	NOT SUIT				
COARSE AGGREGATE XIV (ASTM C33, D448)	139.93	NOT SUIT				
COARSE AGGREGATE XV (ASTM C33, D448)	101.27	NOT SUIT				
COARSE AGGREGATE XVI (ASTM C33, D448)	90.74	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	10.24	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	17.57	MARGINAL	YES			YES
MORTAR (ASTM C144)	15.00	MARGINAL	YES			YES
PORTLAND CEMENT (P.C.A.)	121.86	MARGINAL	YES			YES
BUILT-UP ROOFS (ASTM D1863)	0.0	NOT SUIT				
PIPE/RUN (P. OF H.)	0.0	SUITABLE	YES			
SEPTIC FIELDS (U.M.A.)	13.72	MARGINAL	YES		YES	
SHOULDERS (P. OF H.)	0.0	SUITABLE	YES			

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	2662.10	GMS.	WASHED SAMPLE - WEIGHT BEFORE	829.20	AFTER	761.00	% LOSS	8.22
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TOTALS	829.20	3049.80
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SPLITTING FACTOR 3.21

FINENESS MODULUS 4.23

% COBBLES	0.0	% PEBBLES	37.16	% GRANULES	13.15	% SAND	42.52	% SILT/CLAY	7.18
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INDUSTRIAL USAGE ASSESSMENT

022064 02020W12SWHG108A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF M.)	4.16	MARGINAL	YES		YES		YES
ASPHALT B (P. OF M.)	2.16	MARGINAL	YES				YES
ASPHALT C (P. OF M.)	30.81	NOT SUIT					
BASE COURSE A (P. OF M.)	33.03	MARGINAL	YES		YES		YES
BASE COURSE B (P. OF M.)	0.0	SUITABLE					
BASE COURSE C (P. OF M.)	0.0	SUITABLE					
SUB-BASE A (ASTM D1241)	28.29	MARGINAL				YES	YES
SUB-BASE B (ASTM D1241)	0.18	MARGINAL				YES	YES
SUB-BASE C (ASTM D1241)	1.45	MARGINAL	YES		YES		YES
SUB-BASE D (ASTM D1241)	2.96	MARGINAL	YES	YES			
SUB-BASE E (ASTM D1241)	0.0	SUITABLE	YES				
SUB-BASE F (ASTM D1241)	16.51	MARGINAL	YES	YES			
TRAFFIC GRAVEL A (P. OF M.)	20.50	MARGINAL			YES		YES
TRAFFIC GRAVEL B (P. OF M.)	2.08	MARGINAL			YES		YES
TRAFFIC GRAVEL C (P. OF M.)	0.0	SUITABLE					
SEAL COAT A (P. OF M.)	99.01	NOT SUIT					
SEAL COAT B (P. OF M.)	25.95	MARGINAL	YES		YES		YES
SEAL COAT C (P. OF M.)	7.32	MARGINAL	YES				YES
COARSE AGGREGATE I (ASTM C33, D448)	213.47	NOT SUIT					
COARSE AGGREGATE II (ASTM C33, D448)	103.47	NOT SUIT					
COARSE AGGREGATE III (ASTM C33, D448)	52.75	NOT SUIT					
COARSE AGGREGATE IV (ASTM C33, D448)	162.75	NOT SUIT					
COARSE AGGREGATE V (ASTM C33, D448)	140.60	NOT SUIT					
COARSE AGGREGATE VI (ASTM C33, D448)	189.01	NOT SUIT					
COARSE AGGREGATE VII (ASTM C33, D448)	125.11	NOT SUIT					
COARSE AGGREGATE VIII (ASTM C33, D448)	177.9	NOT SUIT					
COARSE AGGREGATE IX (ASTM C33, D448)	180.14	NOT SUIT					
COARSE AGGREGATE X (ASTM C33, D448)	156.26	NOT SUIT					
COARSE AGGREGATE XI (ASTM C33, D448)	132.31	NOT SUIT					
COARSE AGGREGATE XII (ASTM C33, D448)	142.51	NOT SUIT					
COARSE AGGREGATE XIII (ASTM C33, D448)	134.57	NOT SUIT					
COARSE AGGREGATE XIV (ASTM C33, D448)	159.14	NOT SUIT					
COARSE AGGREGATE XV (ASTM C33, D448)	162.02	NOT SUIT					
COARSE AGGREGATE XVI (ASTM C33, D448)	129.97	NOT SUIT					
COARSE AGGREGATE XVII (ASTM C33, D448)	107.93	NOT SUIT					
COARSE AGGREGATE XVIII (ASTM C33, D448)	8.93	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (P. OF M.)	11.17	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	28.15	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE III (ASTM C33, C404)	19.96	MARGINAL	YES				YES
PORTLAND CEMENT (ASTM C144)	12.14	MARGINAL	YES				YES
PORTLAND CEMENT (P.C.A.)	20.92	MARGINAL	YES				YES
BUILT-UP ROOFS (ASTM D1863)	135.07	NOT SUIT					
TRIFIELD RUNWAYS (P. OF M.)	0.0	SUITABLE	YES				
PI RUN	0.0	SUITABLE					
SEPTIC FIELDS (U.M.A.)	17.29	MARGINAL				YES	
SHOULDERS (P. OF M.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

HEIGHT OF SAND	3813.40	GMS.	WASHED SAMPLE - WEIGHT BEFORE	799.80	AFTER	777.00	% LOSS	2.85
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4	IN	0.0	0.0	100.00	0.0
1/2	IN	0.0	0.0	100.00	0.0
3/4	IN	0.0	0.0	100.00	0.0
1/2	IN	0.0	0.0	100.00	0.0
3/4	IN	0.0	0.0	100.00	0.0
1/2	IN	0.0	0.0	100.00	0.0
3/4	IN	0.0	0.0	100.00	0.0
1/2	IN	14.99	0.0	100.00	0.0
3/4	IN	50.00	0.0	100.00	0.0
1/2	IN	113.77	0.0	100.00	0.0
3/4	IN	135.36	0.0	100.00	0.0
1/2	IN	149.91	0.0	100.00	0.0
3/4	IN	177.79	0.0	100.00	0.0
1/2	IN	240.61	0.0	100.00	0.0
3/4	IN	266.68	0.0	100.00	0.0
1/2	IN	277.47	0.0	100.00	0.0
3/4	IN	288.99	0.0	100.00	0.0
1/2	IN	307.41	0.0	100.00	0.0
3/4	IN	326.68	0.0	100.00	0.0
1/2	IN	346.99	0.0	100.00	0.0
3/4	IN	367.47	0.0	100.00	0.0
1/2	IN	388.99	0.0	100.00	0.0
3/4	IN	410.61	0.0	100.00	0.0
1/2	IN	432.22	0.0	100.00	0.0
3/4	IN	453.83	0.0	100.00	0.0
1/2	IN	475.44	0.0	100.00	0.0
3/4	IN	497.05	0.0	100.00	0.0
1/2	IN	518.66	0.0	100.00	0.0
3/4	IN	540.27	0.0	100.00	0.0
1/2	IN	561.88	0.0	100.00	0.0
3/4	IN	583.49	0.0	100.00	0.0
1/2	IN	605.10	0.0	100.00	0.0
3/4	IN	626.71	0.0	100.00	0.0
1/2	IN	648.32	0.0	100.00	0.0
3/4	IN	669.93	0.0	100.00	0.0
1/2	IN	691.54	0.0	100.00	0.0
3/4	IN	713.15	0.0	100.00	0.0
1/2	IN	734.76	0.0	100.00	0.0
3/4	IN	756.37	0.0	100.00	0.0
1/2	IN	777.98	0.0	100.00	0.0
3/4	IN	799.59	0.0	100.00	0.0
1/2	IN	821.20	0.0	100.00	0.0
3/4	IN	842.81	0.0	100.00	0.0
1/2	IN	864.42	0.0	100.00	0.0
3/4	IN	886.03	0.0	100.00	0.0
1/2	IN	907.64	0.0	100.00	0.0
3/4	IN	929.25	0.0	100.00	0.0
1/2	IN	950.86	0.0	100.00	0.0
3/4	IN	972.47	0.0	100.00	0.0
1/2	IN	994.08	0.0	100.00	0.0
3/4	IN	1015.69	0.0	100.00	0.0
1/2	IN	1037.30	0.0	100.00	0.0
3/4	IN	1058.91	0.0	100.00	0.0
1/2	IN	1080.52	0.0	100.00	0.0
3/4	IN	1102.13	0.0	100.00	0.0
1/2	IN	1123.74	0.0	100.00	0.0
3/4	IN	1145.35	0.0	100.00	0.0
1/2	IN	1166.96	0.0	100.00	0.0
3/4	IN	1188.57	0.0	100.00	0.0
1/2	IN	1210.18	0.0	100.00	0.0
3/4	IN	1231.79	0.0	100.00	0.0
1/2	IN	1253.40	0.0	100.00	0.0
3/4	IN	1275.01	0.0	100.00	0.0
1/2	IN	1296.62	0.0	100.00	0.0
3/4	IN	1318.23	0.0	100.00	0.0
1/2	IN	1339.84	0.0	100.00	0.0
3/4	IN	1361.45	0.0	100.00	0.0
1/2	IN	1383.06	0.0	100.00	0.0
3/4	IN	1404.67	0.0	100.00	0.0
1/2	IN	1426.28	0.0	100.00	0.0
3/4	IN	1447.89	0.0	100.00	0.0
1/2	IN	1469.50	0.0	100.00	0.0
3/4	IN	1491.11	0.0	100.00	0.0
1/2	IN	1512.72	0.0	100.00	0.0
3/4	IN	1534.33	0.0	100.00	0.0
1/2	IN	1555.94	0.0	100.00	0.0
3/4	IN	1577.55	0.0	100.00	0.0
1/2	IN	1599.16	0.0	100.00	0.0
3/4	IN	1620.77	0.0	100.00	0.0
1/2	IN	1642.38	0.0	100.00	0.0
3/4	IN	1663.99	0.0	100.00	0.0
1/2	IN	1685.60	0.0	100.00	0.0
3/4	IN	1707.21	0.0	100.00	0.0
1/2	IN	1728.82	0.0	100.00	0.0
3/4	IN	1750.43	0.0	100.00	0.0
1/2	IN	1772.04	0.0	100.00	0.0
3/4	IN	1793.65	0.0	100.00	0.0
1/2	IN	1815.26	0.0	100.00	0.0
3/4	IN	1836.87	0.0	100.00	0.0
1/2	IN	1858.48	0.0	100.00	0.0
3/4	IN	1880.09	0.0	100.00	0.0
1/2	IN	1901.70	0.0	100.00	0.0
3/4	IN	1923.31	0.0	100.00	0.0
1/2	IN	1944.92	0.0	100.00	0.0
3/4	IN	1966.53	0.0	100.00	0.0
1/2	IN	1988.14	0.0	100.00	0.0
3/4	IN	2009.75	0.0	100.00	0.0
1/2	IN	2031.36	0.0	100.00	0.0
3/4	IN	2052.97	0.0	100.00	0.0
1/2	IN	2074.58	0.0	100.00	0.0
3/4	IN	2096.19	0.0	100.00	0.0
1/2	IN	2117.80	0.0	100.00	0.0
3/4	IN	2139.41	0.0	100.00	0.0
1/2	IN	2161.02	0.0	100.00	0.0
3/4	IN	2182.63	0.0	100.00	0.0
1/2	IN	2204.24	0.0	100.00	0.0
3/4	IN	2225.85	0.0	100.00	0.0
1/2	IN	2247.46	0.0	100.00	0.0
3/4	IN	2269.07	0.0	100.00	0.0
1/2	IN	2290.68	0.0	100.00	0.0
3/4	IN	2312.29	0.0	100.00	0.0
1/2	IN	2333.90	0.0	100.00	0.0
3/4	IN	2355.51	0.0	100.00	0.0
1/2	IN	2377.12	0.0	100.00	0.0
3/4	IN	2398.73	0.0	100.00	0.0
1/2	IN	2420.34	0.0	100.00	0.0
3/4	IN	2441.95	0.0	100.00	0.0
1/2	IN	2463.56	0.0	100.00	0.0
3/4	IN	2485.17	0.0	100.00	0.0
1/2	IN	2506.78	0.0	100.00	0.0
3/4	IN	2528.39	0.0	100.00	0.0
1/2	IN	2550.00	0.0	100.00	0.0
3/4	IN	2571.61	0.0	100.00	0.0
1/2	IN	2593.22	0.0	100.00	0.0
3/4	IN	2614.83	0.0	100.00	0.0
1/2	IN	2636.44	0.0	100.00	0.0
3/4	IN	2658.05	0.0	100.00	0.0
1/2	IN	2679.66	0.0	100.00	0.0
3/4	IN	2701.27	0.0	100.00	0.0
1/2	IN	2722.88	0.0	100.00	0.0
3/4	IN	2744.49	0.0	100.00	0.0
1/2	IN	2766.10	0.0	100.00	0.0
3/4	IN	2787.71	0.0	100.00	0.0
1/2	IN	2809.32	0.0	100.00	0.0
3/4	IN	2830.93	0.0	100.00	0.0
1/2	IN	2852.54	0.0	100.00	0.0
3/4	IN	2874.15	0.0	100.00	0.0
1/2	IN	2895.76	0.0	100.00	0.0
3/4	IN	2917.37	0.0	100.00	0.0
1/2	IN	2938.98	0.0	100.00	0.0
3/4	IN	2960.59	0.0	100.00	0.0
1/2	IN	2982.20	0.0	100.00	0.0
3/4	IN	3003.81	0.0	100.00	0.0
1/2	IN	3025.42	0.0	100.00	0.0
3/4	IN	3047.03	0.0	100.00	0.0
1/2	IN	3068.64	0.0	100.00	0.0
3/4	IN	3090.25	0.0	100.00	0.0
1/2	IN	3111.86	0.0	100.00	0.0
3/4	IN	3133.47	0.0	100.00	0.0
1/2	IN	3155.08	0.0	100.00	0.0
3/4	IN	3176.69	0.0	100.00	0.0
1/2	IN	3198.30	0.0	100.00	0.0
3/4	IN	3219.91	0.0	100.00	0.0
1/2	IN	3241.52	0.0	100.00	0.0
3/4	IN	3263.13	0.0	100.00	0.0
1/2	IN	3284.74	0.0	100.00	0.0
3/4	IN	3306.35	0.0	100.00	0.0
1/2	IN	3327.96	0.0	100.00	0.0
3/4	IN	3349.57	0.0	100.00	0.0
1/2	IN	3371.18	0.0	100.00	0.0
3/4	IN	3392.79	0.0	100.00	0.0
1/2	IN	3414.40	0.0	100.00	0.0
3/4	IN	3436.01	0.0	100.00	0.0
1/2	IN	3457.62	0.0	100.00	0.0
3/4	IN	3479.23	0.0	100.00	0.0
1/2	IN	3500.84	0.0	100.00	0.0
3/4	IN	3522.45	0.0	100.00	0.0
1/2	IN	3544.06	0.0	100.00	0.0
3/4	IN	3565.67	0.0	100.00	0.0
1/2	IN	3587.28	0.0	100.00	0.0
3/4	IN	3608.89	0.0	100.00	0.0
1/2	IN	3630.50	0.0	100.00	0.0
3/4	IN	3652.11	0.0	100.00	0.0
1/2	IN	3673.72	0.0	100.00	0.0
3/4	IN	3695.33	0.0	100.00	0.0
1/2	IN	3716.94	0.0	100.00	0.0
3/4	IN	3738.55	0.0	100.00	0.0
1/2	IN	3760.16	0.0	100.00	0.0
3/4	IN	3781.77	0.0	100.00	0.0
1/2	IN	3803.38	0.0	100.00	0.0
3/4	IN	3824.99	0.0	100.00	0.0
1/2	IN	3846.60	0.0	100.00	0.0
3/4	IN	3868.21	0.0	100.00	0.0
1/2	IN	3889.82	0.0	100.00	0.0
3/4	IN	3911.43	0.0	100.00	0.0
1/2	IN	3933.04	0.0	100.00	0.0
3/4	IN	3954.65	0.0	100.00	0.0
1/2	IN	3976.26	0.0	100.00	0.0
3/4	IN	3997.87	0.0	100.00	0.0
1/2	IN	4019.48	0.0	100.00	0.0
3/4	IN	4041.09	0.0	100.00	0.0
1/2	IN	4062.70	0.0	100.00	0.0
3/4	IN	4084.31	0.0	100.00	0.0
1/2	IN	4105.92	0.0	100.00	0.0
3/4	IN	4127.53	0.0	100.00	0.0
1/2	IN	4149.14	0.0	100.00	0.0
3/4	IN	4170.75	0.0	100.00	0.0
1/2	IN	4192.36	0.0	100.00	0.0
3/4	IN	4213.97	0.0	100.00	0.0
1/2	IN	4235.58	0.0	100.00	0.0
3/4	IN	4257.19	0.0	100.00	0.0
1/2	IN	4278.80	0.0	100.00	0.0
3/4	IN	4300.41	0.0	100.00	0.0
1/2	IN	4322.02	0.0	100.00	0.0
3/4	IN	4343.63	0.0	100.00	0.0
1/2	IN	4365.24	0.0	100.00	0.0
3/4	IN	4386.85	0.0	100.00	0.0
1/2	IN	4408.46	0.0	100.00	0.0
3/4	IN	4430.07	0.0	100.00	0.0
1/2	IN	4451.68	0.0	100.00	0.0
3/4	IN	4473.29	0.0	100.00	0.0
1/2	IN	4494.90	0.0	100.00	0.0
3/4	IN	4516.51	0.0	100.00	0.0
1/2	IN	4538.12	0.0	100.00	0.0
3/4	IN	4559.73	0.0	100.00	0.0
1/2	IN	4581.34	0.0	100.00	0.0
3/4	IN	4602.95	0.0	100.00	0.0
1/2	IN</				

% COBBLES	0.0	% PEBBLES	40.53	% GRANULES	22.21	% SAND	34.62	% SILT/CLAY	2.63
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022067 01618420SWHG309A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	CRUSHING REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #24)
ASPHALT A (P. OF H.)	2.40	MARGINAL	YES				
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.)	55.26	NOT SUIT					
BASE COURSE A (P. OF H.)	7.55	MARGINAL	YES	YES			
BASE COURSE B (P. OF H.)	4.18	MARGINAL	YES	YES			
BASE COURSE C (P. OF H.)	17.99	MARGINAL					
SUB-BASE / BASE COURSE D (ASTM D1241)	8.41	MARGINAL				YES	
SUB-BASE / BASE COURSE E (ASTM D1241)	4.99	MARGINAL	YES	YES		YES	
SUB-BASE / BASE SURFACE COURSE F (ASTM D1241)	18.65	MARGINAL	YES	YES			
SUB-BASE / BASE SURFACE COURSE G (ASTM D1241)	11.95	MARGINAL	YES	YES			
SUB-BASE / BASE SURFACE COURSE H (ASTM D1241)	46.36	NOT SUIT					
TRAFFIC GRAVEL I (P. OF H.)	18.30	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL J (P. OF H.)	0.0	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL K (P. OF H.)	0.0	SUITABLE					
SEAL COAT A (P. OF H.)	65.18	NOT SUIT					
SEAL COAT B (P. OF H.)	0.0	SUITABLE	YES				
SEAL COAT C (P. OF H.)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	20.44	NOT SUIT					
FINE CONCRETE AGGREGATE (P. OF H.)	20.44	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTM C33, C404)	20.44	NOT SUIT	YES				
FINE CONCRETE AGGREGATE (ASTM C33, C404)	20.44	NOT SUIT					
HORTAR (ASTM C144)	23.90	MARGINAL					
PORTLAND CEMENT (P.C.A.)	23.90	NOT SUIT	YES				
BUILT-UP RUNWAYS (ASTM D1863)	106.31	NOT SUIT					
PIT RUN (P. OF H.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.M.A.)	25.69	MARGINAL	YES				
SHOULDERS (P. OF M.)	0.0	SUITABLE			YES		

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	4097.60	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	757.60	AFTER	740.80	% LOSS	2.22
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
2		0.0	0.0	100.00	0.0
4		0.0	0.0	100.00	0.0
10		0.0	0.0	100.00	0.0
20		0.0	0.0	100.00	0.0
40		0.0	0.0	100.00	0.0
60		0.0	0.0	100.00	0.0
80		0.0	0.0	100.00	0.0
100		0.0	0.0	100.00	0.0
150		0.0	0.0	100.00	0.0
200		0.0	0.0	100.00	0.0
250		0.0	0.0	100.00	0.0
300		0.0	0.0	100.00	0.0
350		0.0	0.0	100.00	0.0
400		0.0	0.0	100.00	0.0
450		0.0	0.0	100.00	0.0
500		0.0	0.0	100.00	0.0
550		0.0	0.0	100.00	0.0
600		0.0	0.0	100.00	0.0
650		0.0	0.0	100.00	0.0
700		0.0	0.0	100.00	0.0
750		0.0	0.0	100.00	0.0
800		0.0	0.0	100.00	0.0
850		0.0	0.0	100.00	0.0
900		0.0	0.0	100.00	0.0
950		0.0	0.0	100.00	0.0
1000		0.0	0.0	100.00	0.0
1050		0.0	0.0	100.00	0.0
1100		0.0	0.0	100.00	0.0
1150		0.0	0.0	100.00	0.0
1200		0.0	0.0	100.00	0.0
1250		0.0	0.0	100.00	0.0
1300		0.0	0.0	100.00	0.0
1350		0.0	0.0	100.00	0.0
1400		0.0	0.0	100.00	0.0
1450		0.0	0.0	100.00	0.0
1500		0.0	0.0	100.00	0.0
1550		0.0	0.0	100.00	0.0
1600		0.0	0.0	100.00	0.0
1650		0.0	0.0	100.00	0.0
1700		0.0	0.0	100.00	0.0
1750		0.0	0.0	100.00	0.0
1800		0.0	0.0	100.00	0.0
1850		0.0	0.0	100.00	0.0
1900		0.0	0.0	100.00	0.0
1950		0.0	0.0	100.00	0.0
2000		0.0	0.0	100.00	0.0
2050		0.0	0.0	100.00	0.0
2100		0.0	0.0	100.00	0.0
2150		0.0	0.0	100.00	0.0
2200		0.0	0.0	100.00	0.0
2250		0.0	0.0	100.00	0.0
2300		0.0	0.0	100.00	0.0
2350		0.0	0.0	100.00	0.0
2400		0.0	0.0	100.00	0.0
2450		0.0	0.0	100.00	0.0
2500		0.0	0.0	100.00	0.0
2550		0.0	0.0	100.00	0.0
2600		0.0	0.0	100.00	0.0
2650		0.0	0.0	100.00	0.0
2700		0.0	0.0	100.00	0.0
2750		0.0	0.0	100.00	0.0
2800		0.0	0.0	100.00	0.0
2850		0.0	0.0	100.00	0.0
2900		0.0	0.0	100.00	0.0
2950		0.0	0.0	100.00	0.0
3000		0.0	0.0	100.00	0.0
3050		0.0	0.0	100.00	0.0
3100		0.0	0.0	100.00	0.0
3150		0.0	0.0	100.00	0.0
3200		0.0	0.0	100.00	0.0
3250		0.0	0.0	100.00	0.0
3300		0.0	0.0	100.00	0.0
3350		0.0	0.0	100.00	0.0
3400		0.0	0.0	100.00	0.0
3450		0.0	0.0	100.00	

TOTALS	757.60	4272.49
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SPLITTING FACTOR 5.41

FINENESS MODULUS 4.40

FINENESS MODULUS	4.46								
% COBBLES	0.0	% PEBBLES	30.15	% GRANULES	25.56	% SAND	42.17	% SILT/CLAY	2.13

INDUSTRIAL USAGE ASSESSMENT

022068 0161841654HG319A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	12.15	MARGINAL	YES		YES		
ASPHALT B (P. OF H.)	0.69	MARGINAL	YES				
ASPHALT C (P. OF H.)	60.45	NOT SUIT					
BASIN COURSE A (P. OF H.)	14.31	MARGINAL	YES	YES	YES		
BASIN COURSE B (P. OF H.)	7.87	MARGINAL	YES	YES			
BASIN COURSE C (P. OF H.)	8.7	MARGINAL		YES			
SUB-BASE / BASE COURSE A (ASTM D1241)	43.94	NOT SUIT					
SUB-BASE / BASE COURSE B (ASTM D1241)	36.15	NOT SUIT					
SUB-BASE / BASE COURSE C (ASTM D1241)	22.32	MARGINAL	YES	YES	YES		
SUB-BASE / BASE SURFACE COURSE (ASTM D1241)	31.67	MARGINAL	YES	YES			
SUB-BASE / BASE SURFACE COURSE (ASTM D1241)	14.67	MARGINAL	YES	YES			
SUB-BASE / BASE SURFACE COURSE (ASTM D1241)	36.27	NOT SUIT					
TRAFFIC GRAVEL A (P. OF H.)	19.9	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL B (P. OF H.)	8.74	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL C (P. OF H.)	2.69	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.)	67.13	NOT SUIT					
SEAL COAT B (P. OF H.)	4.37	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.0	SUITABLE	YES				
COARSE AGGREGATE I (ASTM C33, D448)	26.33	NOT SUIT					
COARSE AGGREGATE II (ASTM C33, D448)	15.72	NOT SUIT					
COARSE AGGREGATE III (ASTM C33, D448)	21.91	NOT SUIT					
COARSE AGGREGATE IV (ASTM C33, D448)	11.91	NOT SUIT					
COARSE AGGREGATE V (ASTM C33, D448)	12.47	NOT SUIT					
COARSE AGGREGATE VI (ASTM C33, D448)	19.38	NOT SUIT					
COARSE AGGREGATE VII (ASTM C33, D448)	11.68	NOT SUIT					
COARSE AGGREGATE VIII (ASTM C33, D448)	12.55	NOT SUIT					
COARSE AGGREGATE IX (ASTM C33, D448)	13.16	NOT SUIT					
COARSE AGGREGATE X (ASTM C33, D448)	11.62	NOT SUIT					
COARSE AGGREGATE XI (ASTM C33, D448)	16.11	NOT SUIT					
COARSE AGGREGATE XII (ASTM C33, D448)	16.11	NOT SUIT					
COARSE AGGREGATE XIII (ASTM C33, D448)	14.3	NOT SUIT					
COARSE AGGREGATE XIV (ASTM C33, D448)	14.3	NOT SUIT					
COARSE AGGREGATE XV (ASTM C33, D448)	13.21	NOT SUIT					
COARSE AGGREGATE XVI (ASTM C33, D448)	13.78	NOT SUIT					
COARSE AGGREGATE XVII (ASTM C33, D448)	117.62	NOT SUIT					
COARSE AGGREGATE XVIII (ASTM C33, D448)	67.95	NOT SUIT					
COARSE AGGREGATE XIX (ASTM C33, D448)	15.43	NOT SUIT					
COARSE AGGREGATE XX (ASTM C33, D448)	45.43	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (P. OF H.)	31.74	NOT SUIT					
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	68.19	NOT SUIT					
FINE CONCRETE AGGREGATE III (ASTM C33, C404)	58.44	NOT SUIT					
MORTAR (ASTM C144)	22.87	MARGINAL	YES				
PORTLAND CEMENT (P.C.A.)	43.17	NOT SUIT					
BUILT-UP ROOF (ASTM D1863)	130.93	MARGINAL	YES		YES		
RIFFLED RUNWAYS (P. OF H.)	0.0	SUITABLE	YES				
PIT RUN (P. OF H.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U.M.A.)	26.58	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	3812.20 GMS.	WASHED SAMPLE -	WEIGHT BEFORE	755.70	AFTER	732.60	% LOSS	3.06
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WEIGHT OF SAND	3812.20 GMS.	WASHED SAMPLE - WEIGHT BEFORE	755.70	AFTER	732.60	% LOSS	3.06
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[illegible]

TOTALS	755.70	4671.68
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SPLITTING FACTOR 5.04

FINENESS MODULUS 5.08

% COBBLES	0.0	% PEBBLES	39.82	% GRANULES	19.49	% SAND	38.19	% SILT/CLAY	2.49
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INDUSTRIAL USAGE ASSESSMENT

022069 01618W04NWHG298A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF PINES (MATERIAL #4)
ASPHALT A (P. OF H.)	11.61	MARGINAL	YES		YES	
ASPHALT B (P. OF H.)	2.87	MARGINAL	YES			
ASPHALT C (P. OF H.)	60.35	NOT SUIT				
BASE COURSE A (P. OF H.)	16.56	MARGINAL	YES	YES	YES	
BASE COURSE B (P. OF H.)	9.75	MARGINAL	YES	YES		
BASE COURSE C (P. OF H.)	1.51	MARGINAL	YES	YES		
SUB-BASE (ASTH D1241)	11.77	MARGINAL	YES	YES	YES	YES
SUB-BASE (ASTH D1241)	15.09	MARGINAL	YES	YES	YES	
SUB-BASE (ASTH D1241)	23.22	MARGINAL	YES	YES	YES	
SUB-BASE (ASTH D1241)	16.22	MARGINAL	YES	YES		
SUB-BASE (ASTH D1241)	35.37	NOT SUIT				
TRAFFIC GRAVEL A (P. OF H.)	16.42	MARGINAL	YES	YES	YES	YES
TRAFFIC GRAVEL B (P. OF H.)	1.56	MARGINAL	YES	YES		
TRAFFIC GRAVEL C (P. OF H.)	0.77	MARGINAL	YES		YES	
SEAL COAT A (P. OF H.)	86.12	NOT SUIT				
SEAL COAT B (P. OF H.)	12.66	MARGINAL	YES		YES	
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES			
COARSE AGGREGATE I (ASTH C33; D448)	193.00	NOT SUIT				
COARSE AGGREGATE II (ASTH C33; D448)	93.00	NOT SUIT				
COARSE AGGREGATE III (ASTH C33; D448)	79.89	NOT SUIT				
COARSE AGGREGATE IV (ASTH C33; D448)	79.89	NOT SUIT				
COARSE AGGREGATE V (ASTH C33; D448)	114.51	NOT SUIT				
COARSE AGGREGATE VI (ASTH C33; D448)	162.54	NOT SUIT				
COARSE AGGREGATE VII (ASTH C33; D448)	112.69	NOT SUIT				
COARSE AGGREGATE VIII (ASTH C33; D448)	110.92	NOT SUIT				
COARSE AGGREGATE IX (ASTH C33; D448)	127.52	NOT SUIT				
COARSE AGGREGATE X (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XI (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XII (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XIII (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XIV (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XV (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XVI (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XVII (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XVIII (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XIX (ASTH C33; D448)	126.60	NOT SUIT				
COARSE AGGREGATE XX (ASTH C33; D448)	126.60	NOT SUIT				
FINE CONCRETE AGGREGATE I (P. OF H.)	17.61	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE II (ASTH C33; C404)	26.63	NOT SUIT	YES			YES
FINE CONCRETE AGGREGATE III (ASTH C33; C404)	59.24	NOT SUIT				
HORTAR (ASTH C144)	18.08	MARGINAL	YES			
PORTLAND CEMENT (P.C.A.)	123.42	MARGINAL	YES			
BUILT UP ROADS (ASTH D1863)	128.75	NOT SUIT				
PIT RUN (P. OF H.)	0.00	MARGINAL	YES		YES	
SEPTIC FIELDS (U.M.A.)	20.77	MARGINAL	YES		YES	
SHOULDERS (P. OF H.)	0.00	SUITABLE				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

SAMPLE IDENTIFICATION 022070 01518W35SMHG296A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND 3207.00 GMS. WASHED SAMPLE - WEIGHT BEFORE 800.90 AFTER 769.60 % LOSS 3.91

STIEVE SIZE	FINE FRACTION (GMS.)	STIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
1/2 IN		0.00	0.00	100.00	0.00
1/2 IN		0.00	0.00	100.00	0.00
1/2 IN		0.00	0.00	100.00	0.00
1/2 IN		505.90	63.17	36.83	63.17
1/2 IN		624.30	77.97	22.03	77.97
1/2 IN		763.40	95.31	4.69	95.31
1/2 IN		100.00	12.50	87.50	12.50
1/2 IN		193.81	24.20	75.80	24.20
1/2 IN		166.38	20.77	79.23	20.77
1/2 IN		60.30	7.53	92.47	7.53
1/2 IN		47.60	5.94	94.06	5.94
1/2 IN		94.50	11.81	88.19	11.81
1/2 IN		35.40	4.42	95.58	4.42
1/2 IN		93.60	11.70	88.30	11.70
1/2 IN		145.70	18.20	81.80	18.20
1/2 IN		72.70	9.09	90.91	9.09
1/2 IN		42.70	5.33	94.67	5.33
1/2 IN		23.80	2.97	97.03	2.97
1/2 IN		4.00	0.50	99.50	0.50
1/2 IN		13.00	1.62	98.38	1.62
1/2 IN		31.30	3.91	96.09	3.91
TOTALS	800.90	5479.49			
SPLITTING FACTOR	4.00				
FINENESS MODULUS	5.91				
% COBBLES	0.0	% PEBBLES	59.17	% GRANULES	9.49
% SAND	29.05	% SILT/CLAY	2.29		

INDUSTRIAL USAGE ASSESSMENT

022070 01518W35SMHG296A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF M.)	1.46	MARGINAL	YES			
ASPHALT B (P. OF M.)	0.00	SUITABLE	YES			
ASPHALT C (P. OF M.)	50.48	NOT SUIT				
BASAL COURSE A (P. OF M.)	14.51	MARGINAL	YES	YES		
BASAL COURSE B (P. OF M.)	1.48	MARGINAL	YES	YES		
BASAL COURSE C (P. OF M.)	0.00	SUITABLE	YES			
SUB-BASE/BASAL COURSE A (ASTM D1241)	10.98	MARGINAL	YES	YES		
SUB-BASE/BASAL COURSE B (ASTM D1241)	3.46	MARGINAL	YES	YES		
SUB-BASE/BASAL COURSE C (ASTM D1241)	16.46	MARGINAL	YES	YES		
SUB-BASE/BASAL COURSE D (ASTM D1241)	37.44	MARGINAL	YES	YES		
SUB-BASE/BASAL COURSE E (ASTM D1241)	22.36	NOT SUIT				
TRAFFIC GRAVEL A (P. OF M.)	22.36	MARGINAL	YES	YES	YES	YES
TRAFFIC GRAVEL B (P. OF M.)	4.09	MARGINAL	YES	YES		
TRAFFIC GRAVEL C (P. OF M.)	5.57	MARGINAL	YES			
TRAFFIC GRAVEL D (P. OF M.)	0.00	SUITABLE	YES			
SEAL COAT A (P. OF M.)	87.80	NOT SUIT				
SEAL COAT B (P. OF M.)	10.42	MARGINAL	YES		YES	YES
SEAL COAT C (P. OF M.)	0.40	MARGINAL	YES			YES
COARSE AGGREGATE 1 (ASTM C33, C404)	159.19	NOT SUIT				
COARSE AGGREGATE 2 (ASTM C33, C404)	139.96	NOT SUIT				
COARSE AGGREGATE 3 (ASTM C33, C404)	116.14	NOT SUIT				
COARSE AGGREGATE 4 (ASTM C33, C404)	108.05	NOT SUIT				
COARSE AGGREGATE 5 (ASTM C33, C404)	163.00	NOT SUIT				
COARSE AGGREGATE 6 (ASTM C33, C404)	173.45	NOT SUIT				
COARSE AGGREGATE 7 (ASTM C33, C404)	140.82	NOT SUIT				
COARSE AGGREGATE 8 (ASTM C33, C404)	133.52	NOT SUIT				
COARSE AGGREGATE 9 (ASTM C33, C404)	99.06	NOT SUIT				
COARSE AGGREGATE 10 (ASTM C33, C404)	129.27	NOT SUIT				
COARSE AGGREGATE 11 (ASTM C33, C404)	129.77	NOT SUIT				
COARSE AGGREGATE 12 (ASTM C33, C404)	127.22	NOT SUIT				
COARSE AGGREGATE 13 (ASTM C33, C404)	143.07	NOT SUIT				
COARSE AGGREGATE 14 (ASTM C33, C404)	149.44	NOT SUIT				
COARSE AGGREGATE 15 (ASTM C33, C404)	184.58	NOT SUIT				
COARSE AGGREGATE 16 (ASTM C33, C404)	79.33	NOT SUIT				
COARSE AGGREGATE 17 (ASTM C33, C404)	8.89	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	24.98	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	15.70	MARGINAL	YES			YES
MORTAR (ASTM C144)	11.91	MARGINAL	YES			YES
PORTLAND CEMENT (P.C.A.)	126.72	NOT SUIT				
BUILT-UP RUBBERS (ASTM D1863)	0.00	SUITABLE	YES			
ATL FIELD RUBBERS (P. OF M.)	0.00	SUITABLE	YES			
PII RUN (P. OF M.)	8.74	SUITABLE	YES			
SEPTIC FIELDS (U.M.A.)	0.00	SUITABLE	YES		YES	
SHOULDERS (P. OF M.)	0.00	SUITABLE	YES			

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

WEIGHT OF SAND	76.70 GMS.	WASHED SAMPLE - WEIGHT BEFORE	76.70	AFTER	73.80	% LOSS	3.78
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% COBBLES	0.0	% PEBBLES	54.95	% GRANULES	16.12	% SAND	26.03	% SILT/CLAY	2.90
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022070 01518W35SWHG296B

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	4386.30	GMS.	WASHED SAMPLE - WEIGHT BEFORE	792.40	AFTER	725.00	% LOSS	8.51
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[illegible]

TOTALS	792.40	5648.58
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SPLITTING FACTOR 5.54

FINENESS MODULUS 5.38

% COBBLES	0.0	% PEBBLES	54.51	% GRANULES	17.88	% SAND	21.00	% SILT/CLAY	6.60
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022072 01617W16NW HG257A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 3

N002

WEIGHT OF SAND	4043.90	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	959.50	AFTER	943.70	% LOSS	1.65
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
4		209.70	6.33	93.67	6.33
8	47.80	221.20	6.44	93.56	6.44
16	35.50	147.80	4.04	96.66	3.34
30	22.30	201.46	5.68	96.32	3.68
40	20.00	148.77	4.14	95.86	4.14
60	15.50	98.20	2.65	97.35	2.65
80	11.50	265.10	7.45	92.55	7.45
100	9.77	131.92	3.71	96.29	3.71
120	7.74	373.41	9.66	90.34	9.66
140	6.60	90.61	2.55	97.45	2.55
160	5.50	485.94	13.43	86.57	13.43
180	4.40	1581.73	41.47	58.53	41.47
200	3.30	411.73	11.11	47.42	52.58
220	2.20	108.52	2.95	44.47	55.53
240	1.10	54.74	1.44	43.03	56.97
260	0.80	74.74	1.94	41.09	58.91
280	0.60	22.34	0.46	40.63	59.37
300	0.50	66.59	1.77	38.86	61.14
320	0.40			37.13	62.87
340	0.30			35.39	64.61
360	0.20			33.65	66.35
380	0.10			31.91	68.09
400	0.00			30.17	69.83
420	0.00			28.43	71.57
440	0.00			26.69	73.31
460	0.00			24.95	75.05
480	0.00			23.21	76.79
500	0.00			21.47	78.53
520	0.00			19.73	80.27
540	0.00			17.99	82.01
560	0.00			16.25	83.75
580	0.00			14.51	85.49
600	0.00			12.77	87.23
620	0.00			11.03	88.97
640	0.00			9.29	90.71
660	0.00			7.55	92.45
680	0.00			5.81	94.19
700	0.00			4.07	95.93
720	0.00			2.33	97.67
740	0.00			0.59	99.41
760	0.00			0.00	100.00
780	0.00			0.00	100.00
800	0.00			0.00	100.00
820	0.00			0.00	100.00
840	0.00			0.00	100.00
860	0.00			0.00	100.00
880	0.00			0.00	100.00
900	0.00			0.00	100.00
920	0.00			0.00	100.00
940	0.00			0.00	100.00
960	0.00			0.00	100.00
980	0.00			0.00	100.00
1000	0.00			0.00	100.00

TOTALS	959.50	4861.59
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SPLITTING FACTOR 4.21

FINENESS MODULUS 4.61

% COBBLES	0.0	% PEBBLES	34.21	% GRANULES	9.54	% SAND	54.88	% SILT/CLAY	1.37
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INDUSTRIAL USAGE ASSESSMENT

021080 01517W28NERL002A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *****

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	REMOVED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #200)
ASPHALT A (P. OF H.)	30.76	NOT SUIT					
ASPHALT B (P. OF H.)	20.76	MARGINAL	YES	YES	YES		YES
ASPHALT C (P. OF H.)	64.68	NOT SUIT					
BASE COURSE A (P. OF H.)	36.76	NOT SUIT					
BASE COURSE B (P. OF H.)	11.90	MARGINAL	YES	YES			
SUB-BASE A (P. OF H.)	2.57	MARGINAL	YES	YES			
SUB-BASE B (P. OF H.)	17.91	NOT SUIT					
SUB-BASE C (P. OF H.)	49.64	NOT SUIT					
SUB-BASE D (P. OF H.)	35.33	MARGINAL	YES	YES			
SUB-BASE E (P. OF H.)	18.33	MARGINAL	YES	YES			
SUB-BASE F (P. OF H.)	30.33	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	53.10	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	33.10	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.)	20.36	MARGINAL	YES		YES		YES
TRAFFIC GRAVEL (P. OF H.)	8.30	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.)	10.01	NOT SUIT					
SEAL COAT B (P. OF H.)	16.59	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.0	SUITABLE	YES		YES		
COARSE AGGREGATE (ASTH C33, D448)	196.74	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	182.53	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	177.72	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	163.46	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	149.76	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	128.41	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	180.61	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	191.20	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	142.53	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	175.79	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	168.06	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	148.51	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	179.11	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	179.75	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	129.75	NOT SUIT					
COARSE AGGREGATE (ASTH C33, D448)	91.36	NOT SUIT					
FINE CONCRETE AGGREGATE (P. OF H.)	6.86	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE (ASTH C33, C404)	19.74	MARGINAL	YES				
FINE CONCRETE AGGREGATE (ASTH C33, C404)	31.13	NOT SUIT					
MORTAR (ASTH C144)	6.67	MARGINAL	YES				
PORTLAND CEMENT (P. C.A.)	13.31	MARGINAL	YES				
BUILT-UP ROAD (ASTH D1863)	149.01	NOT SUIT					
FIELD RUNWAYS (P. OF H.)	15.54	MARGINAL	YES		YES		YES
PIT RUN (P. OF H.)	19.26	MARGINAL	YES		YES		
SEPTIC FIELDS (U.H.A.)	0.0	SUITABLE	YES		YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE	YES				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

SAMPLE IDENTIFICATION 021080 01517W34SEHG293A

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND 957.60 GMS. WASHED SAMPLE - WEIGHT BEFORE 757.10 AFTER 644.60 % LOSS 14.86

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		0.0	0.0	100.00	0.0
1/2 IN		280.10	11.34	88.66	11.34
1/2 IN		212.10	8.58	80.08	19.92
1/2 IN		224.00	9.06	71.02	28.98
1/2 IN		394.30	15.96	55.06	44.04
1/2 IN		98.40	3.94	51.12	48.88
1/2 IN	77.80	60.95	2.43	48.69	51.31
1/2 IN	64.00	60.95	2.43	46.26	53.74
1/2 IN	54.00	60.95	2.43	43.83	56.17
1/2 IN	42.00	60.95	2.43	41.40	58.60
1/2 IN	30.00	60.95	2.43	38.97	61.03
1/2 IN	18.00	60.95	2.43	36.54	63.46
1/2 IN	6.00	60.95	2.43	34.11	65.89
1/2 IN	0.00	60.95	2.43	31.68	68.32
1/2 IN	0.00	60.95	2.43	29.25	70.75
1/2 IN	0.00	60.95	2.43	26.82	73.18
1/2 IN	0.00	60.95	2.43	24.39	75.61
1/2 IN	0.00	60.95	2.43	21.96	78.04
1/2 IN	0.00	60.95	2.43	19.53	80.47
1/2 IN	0.00	60.95	2.43	17.10	82.90
1/2 IN	0.00	60.95	2.43	14.67	85.33
1/2 IN	0.00	60.95	2.43	12.24	87.76
1/2 IN	0.00	60.95	2.43	9.81	90.19
1/2 IN	0.00	60.95	2.43	7.38	92.62
1/2 IN	0.00	60.95	2.43	4.95	95.05
1/2 IN	0.00	60.95	2.43	2.52	97.48
1/2 IN	0.00	60.95	2.43	0.09	99.91
1/2 IN	0.00	60.95	2.43	0.00	100.00

TOTALS 759.45 2471.17

SPLITTING FACTOR 1.26

FINENESS MODULUS 6.65

% COBBLES 0.0 % PEBBLES 76.78 % GRANULES 5.05 % SAND 12.39 % SILT/CLAY 5.78

INDUSTRIAL USAGE ASSESSMENT

021080 01517W34SEHG293A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	12.10	MARGINAL	YES			YES
ASPHALT B (P. OF H.)	26.58	MARGINAL	YES			YES
BASE COURSE A (P. OF H.)	0.00	SUITABLE	YES			YES
BASE COURSE B (P. OF H.)	10.36	MARGINAL	YES			
BASE COURSE C (P. OF H.)	0.00	SUITABLE	YES			
SUB-BASE A (ASTM D1241)	0.00	SUITABLE	YES			
SUB-BASE B (ASTM D1241)	27.75	MARGINAL	YES			
SUB-BASE C (ASTM D1241)	0.00	SUITABLE	YES			
SUB-BASE D (ASTM D1241)	28.01	MARGINAL	YES			
SUB-BASE E (ASTM D1241)	20.60	MARGINAL	YES			
SUB-BASE F (ASTM D1241)	60.60	NOT SUIT				
TRAFFIC GRAVEL A (P. OF H.)	1.74	MARGINAL	YES			YES
TRAFFIC GRAVEL B (P. OF H.)	0.00	SUITABLE	YES			
TRAFFIC GRAVEL C (P. OF H.)	16.44	NOT SUIT				
TRAFFIC GRAVEL D (P. OF H.)	11.44	MARGINAL	YES			
SEAL COAT A (P. OF H.)	100.00	NOT SUIT				
SEAL COAT B (P. OF H.)	35.53	NOT SUIT				
SEAL COAT C (P. OF H.)	32.08	MARGINAL	YES			YES
COARSE AGGREGATE (ASTM C33, D448)	143.73	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	122.34	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	80.34	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	82.01	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	68.7	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	33.91	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	89.23	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	77.83	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	106.24	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	91.75	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	94.77	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	116.18	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	131.38	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	143.93	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	141.19	NOT SUIT				
COARSE AGGREGATE (ASTM C33, D448)	73.50	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE (P. OF H.)	38.55	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	62.77	NOT SUIT				
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	56.51	NOT SUIT				
MORTAR (ASTM C144)	36.89	NOT SUIT				
PORTLAND CEMENT (ASTM D1863)	116.28	NOT SUIT				
AIRFIELD RUNWAYS (P. OF H.)	11.44	MARGINAL	YES			
PIT RUN (P. OF H.)	0.00	SUITABLE	YES			
SEPTIC FIELDS (U.M.A.)	0.00	SUITABLE	YES			
SHOULDERS (P. OF H.)	0.00	SUITABLE	YES			

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND	7461.00	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	1002.30	AFTER	969.00	% LOSS	3.32
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[illegible]

TOTALS	1002.30	8764.28
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SPLITTING FACTOR 7.44

FINENESS MODULUS 4.67

% COBBLES	0.0	% PEBBLES	36.97	% GRANULES	16.55	% SAND	43.66	% SILT/CLAY	2.83
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021080 01517434SERL003A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF #200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL #4)
ASPHALT A (P. OF H.)	6.17	MARGINAL	YES		YES		
ASPHALT B (P. OF H.)	0.0	SUITABLE	YES				
ASPHALT C (P. OF H.)	54.26	NOT SUIT					
BASE COURSE A (P. OF H.)	10.85	MARGINAL	YES	YES	YES		
BASE COURSE B (P. OF H.)	4.51	MARGINAL	YES	YES			
BASE COURSE C (P. OF H.)	29.56	MARGINAL	YES	YES			
SUB-BASE A (P. OF H.)	13.55	MARGINAL	YES	YES	YES		YES
SUB-BASE B (P. OF H.)	13.55	MARGINAL	YES	YES	YES		YES
SUB-BASE C (P. OF H.)	17.49	MARGINAL	YES	YES	YES		YES
SUB-BASE D (P. OF H.)	10.49	MARGINAL	YES	YES	YES		YES
SUB-BASE E (P. OF H.)	25.17	MARGINAL	YES	YES	YES		YES
TRAFFIC GRAVEL A (P. OF H.)	13.55	NOT SUIT					
TRAFFIC GRAVEL B (P. OF H.)	13.55	MARGINAL	YES	YES			
TRAFFIC GRAVEL C (P. OF H.)	0.94	MARGINAL	YES	YES			
SEAL COAT A (P. OF H.)	84.80	NOT SUIT					
SEAL COAT B (P. OF H.)	7.55	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.0	SUITABLE	YES				
COARSE AGGREGATE I (ASTM C33, D448)	202.19	NOT SUIT					
COARSE AGGREGATE II (ASTM C33, D448)	190.21	NOT SUIT					
COARSE AGGREGATE III (ASTM C33, D448)	159.68	NOT SUIT					
COARSE AGGREGATE IV (ASTM C33, D448)	129.98	NOT SUIT					
COARSE AGGREGATE V (ASTM C33, D448)	181.01	NOT SUIT					
COARSE AGGREGATE VI (ASTM C33, D448)	125.57	NOT SUIT					
COARSE AGGREGATE VII (ASTM C33, D448)	186.52	NOT SUIT					
COARSE AGGREGATE VIII (ASTM C33, D448)	132.70	NOT SUIT					
COARSE AGGREGATE IX (ASTM C33, D448)	132.70	NOT SUIT					
COARSE AGGREGATE X (ASTM C33, D448)	143.14	NOT SUIT					
COARSE AGGREGATE XI (ASTM C33, D448)	143.14	NOT SUIT					
COARSE AGGREGATE XII (ASTM C33, D448)	133.02	NOT SUIT					
COARSE AGGREGATE XIII (ASTM C33, D448)	151.16	NOT SUIT					
COARSE AGGREGATE XIV (ASTM C33, D448)	140.59	NOT SUIT					
COARSE AGGREGATE XV (ASTM C33, D448)	92.96	NOT SUIT					
COARSE AGGREGATE XVI (ASTM C33, D448)	70.53	NOT SUIT					
COARSE AGGREGATE XVII (ASTM C33, D448)	10.81	MARGINAL	YES				YES
FINE CONCRETE AGGREGATE I (P. OF H.)	32.08	NOT SUIT	YES				YES
FINE CONCRETE AGGREGATE II (ASTM C33, C404)	30.15	NOT SUIT					
FINE CONCRETE AGGREGATE III (ASTM C33, C404)	16.29	MARGINAL	YES				
MORTAR (ASTM C144)	9.62	MARGINAL	YES				
PORTLAND CEMENT (P. C. A.)	134.62	NOT SUIT					
BUILT-UP ROOFS (ASTM D1863)	0.94	MARGINAL	YES		YES		
AIRFIELD RUNWAYS (P. OF H.)	0.0	SUITABLE	YES				
SEPTIC FIELDS (U. M. A.)	19.39	MARGINAL	YES		YES		
SHOULDERS (P. OF H.)	0.0	SUITABLE	YES				

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

[illegible]

SPLITTING FACTOR 5.50

% COBBLES	0.0	% PEBBLES	16.43	% GRANULES	14.99	% SAND	65.72	% SILT/CLAY	2.86
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021080 01517W34SERL003B

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	41.20	NOT SUIT					
ASPHALT B (P. OF H.)	28.70	MARGINAL	YES		YES		YES
ASPHALT C (P. OF H.)	55.48	NOT SUIT					
BASIN COURSE A (P. OF H.)	41.16	NOT SUIT					
BASIN COURSE B (P. OF H.)	16.30	MARGINAL	YES	YES	YES		YES
BASIN COURSE C (P. OF H.)	4.71	MARGINAL		YES	YES		
SUB-BASE A (ASTM D1241)	93.73	NOT SUIT					
SUB-BASE B (ASTM D1241)	52.56	NOT SUIT					
SUB-BASE C (ASTM D1241)	17.95	MARGINAL	YES	YES	YES		
SUB-BASE D (ASTM D1241)	10.88	MARGINAL	YES	YES	YES		
SUB-BASE E (ASTM D1241)	22.88	MARGINAL	YES	YES	YES		
TRAFFIC GRAVEL A (P. OF H.)	69.74	NOT SUIT					
TRAFFIC GRAVEL B (P. OF H.)	43.74	NOT SUIT					
TRAFFIC GRAVEL C (P. OF H.)	15.07	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.)	106.98	NOT SUIT					
SEAL COAT B (P. OF H.)	19.74	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.0	SUITABLE	YES				
COARSE AGGREGATE (ASTM C33, D448)	217.77	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	207.77	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	205.98	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	203.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	211.78	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.20	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	212.22	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448)	167.33	NOT SUIT					
COARSE AGGREGATE (ASTM C33, D448							

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 5

N BH 29

WEIGHT OF SAND	3509.90 GMS.	WASHED SAMPLE - WEIGHT BEFORE	1154.20	AFTER	1139.10	% LOSS	1.31
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[illegible]

TOTALS	1154.20	3987.00
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SPLITTING FACTOR 3.04

FINENESS MODULUS 4.41

% COBBLES	0.0	% PEBBLES	28.03	% GRANULES	19.32	% SAND	51.50	% SILT/CLAY	1.15
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021080 01617402SWBH-29A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE

TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <\$200	CRUSHING MATERIAL ON SITE	REPAIR MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <\$4)
24.35	MARGINAL	YES	YES	YES		YES
12.28	MARGINAL	YES	YES	YES		YES
55.75	NOT SUIT					
26.23	MARGINAL	YES	YES	YES		YES
7.46	MARGINAL	YES	YES	YES		
7.08	MARGINAL		YES			
46.73	NOT SUIT					
33.87	NOT SUIT					
33.87	NOT SUIT					
30.23	MARGINAL	YES	YES			
11.23	MARGINAL	YES	YES			
11.23	MARGINAL	YES	YES			
11.23	MARGINAL	YES	YES			
11.23	NOT SUIT					
11.23	NOT SUIT					
11.23	MARGINAL	YES		YES		YES
8.27	MARGINAL	YES		YES		
9.40	NOT SUIT					
14.28	MARGINAL	YES		YES		
0.00	SUITABLE	YES				
203.00	NOT SUIT					
193.00	NOT SUIT					
193.00	NOT SUIT					
182.41	NOT SUIT					
144.47	NOT SUIT					
188.00	NOT SUIT					
138.11	NOT SUIT					
200.25	NOT SUIT					
116.08	NOT SUIT					
152.00	NOT SUIT					
168.00	NOT SUIT					
168.29	NOT SUIT					
168.29	NOT SUIT					
151.93	NOT SUIT					
170.72	NOT SUIT					
152.54	NOT SUIT					
108.00	NOT SUIT					
70.58	NOT SUIT					
7.88	MARGINAL	YES				
7.88	MARGINAL	YES				YES
2.07	MARGINAL	YES				
39.12	NOT SUIT					
14.58	MARGINAL	YES				
10.44	MARGINAL	YES				
15.44	NOT SUIT					
11.83	MARGINAL	YES		YES		YES
2.76	MARGINAL	YES		YES		
1.97	MARGINAL				YES	

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

WEIGHT OF SAND	4234.50	GMS.	WASHED SAMPLE - WEIGHT BEFORE	1498.20	AFTER	1463.90	% LOSS	2.29
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[illegible]

% COBBLES	0.0	% PEBBLES	41.92	% GRANULES	22.44	% SAND	33.71	% SILT/CLAY	1.93
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021080 01517W35SWBH-31A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <200	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	6.89	MARGINAL	YES				
ASPHALT B (P. OF H.)	1.89	MARGINAL	YES				
ASPHALT C (P. OF H.)	60.90	NOT SUIT					
BASE COURSE A (P. OF H.)	16.60	MARGINAL	YES	YES			
BASE COURSE B (P. OF H.)	16.60	MARGINAL	YES	YES			
BASE COURSE C (P. OF H.)	16.60	MARGINAL	YES	YES			
SUB-BASE A (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE B (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE C (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE D (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE E (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE F (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE G (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE H (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE I (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE J (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE K (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE L (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE M (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE N (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE O (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE P (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE Q (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE R (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE S (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE T (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE U (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE V (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE W (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE X (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE Y (P. OF H.)	12.10	MARGINAL	YES		YES		
SUB-BASE Z (P. OF H.)	12.10	MARGINAL	YES		YES		
SEAL COAT A (P. OF H.)	69.60	NOT SUIT					
SEAL COAT B (P. OF H.)	5.60	MARGINAL	YES		YES		
SEAL COAT C (P. OF H.)	0.00	SUITABLE	YES				
COARSE AGGREGATE A (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE B (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE C (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE D (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE E (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE F (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE G (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE H (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE I (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE J (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE K (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE L (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE M (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE N (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE O (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE P (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE Q (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE R (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE S (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE T (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE U (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE V (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE W (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE X (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE Y (ASTM C33, D448)	12.10	NOT SUIT					
COARSE AGGREGATE Z (ASTM C33, D448)	12.10	NOT SUIT					
FINE CONCRETE AGGREGATE A (P. OF H.)	67.90	NOT SUIT	YES				YES
FINE CONCRETE AGGREGATE B (ASTM C33, C404)	67.90	NOT SUIT	YES				
FINE CONCRETE AGGREGATE C (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE D (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE E (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE F (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE G (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE H (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE I (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE J (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE K (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE L (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE M (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE N (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE O (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE P (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE Q (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE R (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE S (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE T (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE U (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE V (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE W (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE X (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE Y (ASTM C33, C404)	67.90	NOT SUIT					
FINE CONCRETE AGGREGATE Z (ASTM C33, C404)	67.90	NOT SUIT					
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES				
PORTLAND CEMENT (ASTM C150)	24.05	MARGINAL	YES	</			

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

N BH 32

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

WEIGHT OF SAND	2908.40	GMS.	WASHED SAMPLE -	WEIGHT BEFORE	880.20	AFTER	820.90	% LOSS	6.74
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
1/2	0.0	0.0	0.0	100.0	0.0
1/2	0.0	0.0	0.0	100.0	0.0
1/2	0.0	0.0	0.0	100.0	0.0
4	20.0	4.2	1.0	99.0	1.0
8	96.0	22.2	2.3	97.7	2.3
16	60.0	15.5	1.6	98.4	1.6
30	60.0	15.5	1.6	98.4	1.6
40	60.0	15.5	1.6	98.4	1.6
60	60.0	15.5	1.6	98.4	1.6
80	60.0	15.5	1.6	98.4	1.6
100	60.0	15.5	1.6	98.4	1.6
120	60.0	15.5	1.6	98.4	1.6
140	60.0	15.5	1.6	98.4	1.6
160	60.0	15.5	1.6	98.4	1.6
180	60.0	15.5	1.6	98.4	1.6
200	60.0	15.5	1.6	98.4	1.6
220	60.0	15.5	1.6	98.4	1.6
240	60.0	15.5	1.6	98.4	1.6
260	60.0	15.5	1.6	98.4	1.6
280	60.0	15.5	1.6	98.4	1.6
300	60.0	15.5	1.6	98.4	1.6
320	60.0	15.5	1.6	98.4	1.6
340	60.0	15.5	1.6	98.4	1.6
360	60.0	15.5	1.6	98.4	1.6
380	60.0	15.5	1.6	98.4	1.6
400	60.0	15.5	1.6	98.4	1.6
420	60.0	15.5	1.6	98.4	1.6
440	60.0	15.5	1.6	98.4	1.6
460	60.0	15.5	1.6	98.4	1.6
480	60.0	15.5	1.6	98.4	1.6
500	60.0	15.5	1.6	98.4	1.6
520	60.0	15.5	1.6	98.4	1.6
540	60.0	15.5	1.6	98.4	1.6
560	60.0	15.5	1.6	98.4	1.6
580	60.0	15.5	1.6	98.4	1.6
600	60.0	15.5	1.6	98.4	1.6
620	60.0	15.5	1.6	98.4	1.6
640	60.0	15.5	1.6	98.4	1.6
660	60.0	15.5	1.6	98.4	1.6
680	60.0	15.5	1.6	98.4	1.6
700	60.0	15.5	1.6	98.4	1.6
720	60.0	15.5	1.6	98.4	1.6
740	60.0	15.5	1.6	98.4	1.6
760	60.0	15.5	1.6	98.4	1.6
780	60.0	15.5	1.6	98.4	1.6
800	60.0	15.5	1.6	98.4	1.6
820	60.0	15.5	1.6	98.4	1.6
840	60.0	15.5	1.6	98.4	1.6
860	60.0	15.5	1.6	98.4	1.6
880	60.0	15.5	1.6	98.4	1.6
900	60.0	15.5	1.6	98.4	1.6
920	60.0	15.5	1.6	98.4	1.6
940	60.0	15.5	1.6	98.4	1.6
960	60.0	15.5	1.6	98.4	1.6
980	60.0	15.5	1.6	98.4	1.6
1000	60.0	15.5	1.6	98.4	1.6
1020	60.0	15.5	1.6	98.4	1.6
1040	60.0	15.5	1.6	98.4	1.6
1060	60.0	15.5	1.6	98.4	1.6
1080	60.0	15.5	1.6	98.4	1.6
1100	60.0	15.5	1.6	98.4	1.6
1120	60.0	15.5	1.6	98.4	1.6
1140	60.0	15.5	1.6	98.4	1.6
1160	60.0	15.5	1.6	98.4	1.6
1180	60.0	15.5	1.6	98.4	1.6
1200	60.0	15.5	1.6	98.4	1.6
1220	60.0	15.5	1.6	98.4	1.6
1240	60.0	15.5	1.6	98.4	1.6
1260	60.0	15.5	1.6	98.4	1.6
1280	60.0	15.5	1.6	98.4	1.6
1300					

TOTALS	881.27	3886.44
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SPLITTING FACTOR 3.30

FINENESS MODULUS 5.37

% COBBLES	0.0	% PEBBLES	52.51	% GRANULES	16.44	% SAND	26.00	% SILT/CLAY	5.05
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INDUSTRIAL USAGE ASSESSMENT

021080 01517W26SNBH-32A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE

**TOTAL
RESIDUAL**

RATING

**SCREENING
REQUIRED**

**REMOVAL OF
\$200 MATERIAL**

CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

SAMPLE IDENTIFICATION 021081 01517W35SERL024A N020

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND 6038.60 GMS. WASHED SAMPLE - WEIGHT BEFORE 1122.10 AFTER 1097.30 % LOSS 2.21

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		0.0	0.0	100.00	0.0
1/2		2190.80	16.85	83.15	16.85
1/2		2071.90	15.93	67.22	32.07
1/2		884.40	6.80	60.42	39.58
1/2		1152.50	8.80	51.62	48.38
1/2		654.60	4.94	46.68	53.32
1/2		478.78	3.55	43.13	56.87
1/2		479.40	3.56	39.57	60.43
1/2		355.06	2.68	36.89	63.11
1/2		358.94	2.70	34.19	65.81
1/2		276.74	2.07	32.12	67.88
1/2		263.16	1.99	30.13	69.87
1/2		194.06	1.46	28.67	71.33
1/2		105.00	0.80	27.87	72.13
1/2		48.90	0.37	27.50	72.50
1/2		176.30	1.30	26.20	73.80
1/2		124.20	0.93	25.27	74.73
1/2		59.90	0.45	24.82	75.18
1/2		25.90	0.19	24.63	75.37
1/2		4.10	0.03	24.60	75.40
1/2		11.60	0.09	24.51	75.49
1/2		62.43	0.48	24.03	75.97
1/2		24.80	1.03	23.00	77.00

TOTALS 1122.10 13002.77

SPLITTING FACTOR 5.38

FINENESS MODULUS 6.74

% COBBLES 16.85 % PEBBLES 51.57 % GRANULES 9.54 % SAND 21.02 % SILT/CLAY 1.03

INDUSTRIAL USAGE ASSESSMENT

021081 01517W35SERL024A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING REQUIRED MATERIAL ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.)	6.80	MARGINAL	YES			
ASPHALT B (P. OF H.)	0.60	MARGINAL	YES			
ASPHALT C (P. OF H.)	59.84	NOT SUIT	YES			
BASE COURSE A (P. OF H.)	11.45	MARGINAL	YES	YES		
BASE COURSE B (P. OF H.)	10.12	MARGINAL	YES	YES		
BASE COURSE C (P. OF H.)	2.47	MARGINAL	YES	YES		
SUB-BASE (P. OF H.)	12.02	MARGINAL	YES	YES		
SUB-BASE (ASTH D1241)	16.60	MARGINAL	YES	YES		
SUB-BASE (ASTH D1241)	22.60	MARGINAL	YES	YES		
SUB-BASE (ASTH D1241)	15.60	MARGINAL	YES	YES		
SUB-BASE (ASTH D1241)	48.57	NOT SUIT	YES	YES		
TRAFFIC GRAVEL A (P. OF H.)	16.93	MARGINAL	YES	YES	YES	YES
TRAFFIC GRAVEL B (P. OF H.)	6.45	MARGINAL	YES	YES		
TRAFFIC GRAVEL C (P. OF H.)	8.50	SUITABLE	YES			
SEAL COAT A (P. OF H.)	82.01	NOT SUIT	YES			
SEAL COAT B (P. OF H.)	7.63	MARGINAL	YES		YES	
SEAL COAT C (P. OF H.)	10.00	SUITABLE	YES			
COARSE AGGREGATE (ASTH C33, D448)	110.03	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	78.41	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	102.08	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	166.31	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	127.62	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	173.80	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	142.07	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	164.83	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	139.43	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	112.20	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	105.82	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	134.76	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	120.53	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	81.31	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	58.14	NOT SUIT				
COARSE AGGREGATE (ASTH C33, D448)	9.10	MARGINAL	YES			
FINE CONCRETE AGGREGATE (P. OF H.)	20.06	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE (ASTH C33, C404)	48.55	NOT SUIT				
FINE CONCRETE AGGREGATE (ASTH C33, C404)	52.19	NOT SUIT				
MORTAR (ASTH C144)	24.55	MARGINAL	YES			
PORTLAND CEMENT (P. C. A.)	115.26	NOT SUIT				
BUILT-UP ROOFS (ASTH D1863)	0.0	SUITABLE	YES			
AIRFIELD RUNWAYS (P. OF H.)	0.0	SUITABLE	YES			
PIT RUN (P. OF H.)	0.0	SUITABLE	YES			
SEPTIC FIELDS (U.N.A.)	6.87	MARGINAL	YES		YES	
SHOULDERS (P. OF H.)	0.0	SUITABLE	YES			

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

SAMPLE IDENTIFICATION 021081 01517M25NRL026A N022

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

WEIGHT OF SAND 5024.40 GMS. WASHED SAMPLE - WEIGHT BEFORE 795.30 AFTER 747.30 % LOSS 6.04

STEVE SIZE	FINE FRACTION (GMS.)	STEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
4		0.0	0.0	100.00	0.0
1/2 IN		890.40	10.50	89.50	10.50
1/2 IN		1181.00	14.83	74.67	25.33
1/2 IN		106.60	1.33	73.33	26.67
1/2 IN		217.10	2.72	70.58	29.42
1/2 IN		266.00	3.33	67.25	32.75
1/2 IN		266.00	3.33	63.92	36.08
1/2 IN		266.00	3.33	60.59	39.41
1/2 IN		266.00	3.33	57.26	42.74
1/2 IN		266.00	3.33	53.93	46.07
1/2 IN		266.00	3.33	50.60	49.40
1/2 IN		266.00	3.33	47.27	52.73
1/2 IN		266.00	3.33	43.94	56.06
1/2 IN		266.00	3.33	40.61	59.39
1/2 IN		266.00	3.33	37.28	62.72
1/2 IN		266.00	3.33	33.95	66.05
1/2 IN		266.00	3.33	30.62	69.38
1/2 IN		266.00	3.33	27.29	72.71
1/2 IN		266.00	3.33	23.96	76.04
1/2 IN		266.00	3.33	20.63	79.37
1/2 IN		266.00	3.33	17.30	82.70
1/2 IN		266.00	3.33	13.97	86.03
1/2 IN		266.00	3.33	10.64	89.36
1/2 IN		266.00	3.33	7.31	92.69
1/2 IN		266.00	3.33	3.98	96.02
1/2 IN		266.00	3.33	0.65	99.35
1/2 IN		266.00	3.33	0.00	100.00

TOTALS 795.41 8479.14

SPLITTING FACTOR 6.32

FINESS MODULUS 6.31

% COBBLES 24.43 % PEBBLES 37.91 % GRANULES 12.88 % SAND 21.20 % SILT/CLAY 3.58

INDUSTRIAL USAGE ASSESSMENT

021081 01517M25NRL026A

* NOTE SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF <#200 MATERIAL	CRUSHING REQUIRED ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF M.)	4.69	MARGINAL	YES			
ASPHALT B (P. OF M.)	0.0	SUITABLE	YES			
ASPHALT C (P. OF M.)	51.98	NOT SUIT				
BASE COURSE A (P. OF M.)	6.61	MARGINAL	YES	YES		
BASE COURSE B (P. OF M.)	6.44	MARGINAL	YES			
BASE COURSE C (P. OF M.)	0.0	SUITABLE	YES			
SUB-BASE A (P. OF M.)	1.60	MARGINAL	YES		YES	
SUB-BASE B (P. OF M.)	6.52	MARGINAL	YES	YES		
SUB-BASE C (P. OF M.)	1.75	MARGINAL	YES	YES		
SUB-BASE D (P. OF M.)	1.75	MARGINAL	YES	YES		
SUB-BASE E (P. OF M.)	51.61	NOT SUIT				
TRAFFIC GRAVEL A (P. OF M.)	5.52	MARGINAL	YES	YES	YES	
TRAFFIC GRAVEL B (P. OF M.)	4.96	MARGINAL	YES	YES		
TRAFFIC GRAVEL C (P. OF M.)	0.0	SUITABLE	YES			
SEAL COAT A (P. OF M.)	70.39	NOT SUIT				
SEAL COAT B (P. OF M.)	4.26	MARGINAL	YES		YES	
SEAL COAT C (P. OF M.)	6.79	MARGINAL	YES			YES
COARSE AGGREGATE (P. OF M.)	129.67	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	148.93	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	164.14	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	104.03	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	162.33	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	138.84	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	155.00	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	151.49	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	142.49	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	111.29	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	101.57	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	107.39	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	111.70	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	112.80	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	124.97	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	50.85	NOT SUIT				
COARSE AGGREGATE (P. OF M.)	16.31	MARGINAL	YES			YES
FINE CONCRETE AGGREGATE (P. OF M.)	34.81	NOT SUIT				
FINE CONCRETE AGGREGATE (P. OF M.)	72.02	NOT SUIT				
FINE CONCRETE AGGREGATE (P. OF M.)	98.71	NOT SUIT				
PORTLAND CEMENT (P. OF M.)	28.86	MARGINAL	YES			
BUILT-UP ROADS (ASTM D1863)	109.85	NOT SUIT				
AIRFIELD RUNWAYS (P. OF M.)	0.0	SUITABLE	YES			
PIT RUN (P. OF M.)	0.0	SUITABLE	YES			
SEPTIC FIELDS (U.M.A.)	12.59	MARGINAL	YES		YES	
SHOULDERS (P. OF M.)	0.0	SUITABLE	YES			

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - NONE

SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
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TOTALS	713.00	4435.59
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SPLITTING FACTOR 4.73

FINENESS MODULUS 5.09

% COBBLES	0.0	% PEBBLES	41.48	% GRANULES	20.02	% SAND	36.54	% SILT/CLAY	1.96
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021081 01517H36NERL027A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

AVAILABILITY OF CRUSHABLE MATERIAL ON SITE - YES

TOTALS	800.60	3481.10
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SPLITTING FACTOR 3.16

FINENESS MODULUS 5.89

% COBBLES	0.0	% PEBBLES	68.30	% GRANULES	12.48	% SAND	13.92	% SILT/CLAY	5.30
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021081 01617W01SEHG262A

 * NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE

**TOTAL
RESIDUAL**

RATING

**SCREENING
REQUIRED**

REMOVAL OF
K#200 MATERIAL

**CRUSHED
MATERIAL**

REQUIRED MATERIALS

ADDITION
OF FINES
(MATERIAL <#4)

[illegible]

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4

N057

WEIGHT OF SAND	3958.60	GMS.	WASHED SAMPLE - WEIGHT BEFORE	1011.20	AFTER	994.10	% LOSS	1.69
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SIEVE SIZE	FINE FRACTION (GMS.)	SIEVE WEIGHTS (GMS.)	PERCENT	PERCENT PASSING	PERCENT RETAINED
1/2	0.00	0.00	0.00	100.00	0.00
1/2	0.00	0.00	0.00	100.00	0.00
1/2	0.00	0.00	0.00	100.00	0.00
4	0.00	0.00	0.00	100.00	0.00
8	0.00	0.00	0.00	100.00	0.00
16	0.00	0.00	0.00	100.00	0.00
30	0.00	0.00	0.00	100.00	0.00
44	0.00	0.00	0.00	100.00	0.00
60	0.00	0.00	0.00	100.00	0.00
75	0.00	0.00	0.00	100.00	0.00
100	0.00	0.00	0.00	100.00	0.00
150	0.00	0.00	0.00	100.00	0.00
200	0.00	0.00	0.00	100.00	0.00
250	0.00	0.00	0.00	100.00	0.00
300	0.00	0.00	0.00	100.00	0.00
350	0.00	0.00	0.00	100.00	0.00
400	0.00	0.00	0.00	100.00	0.00
450	0.00	0.00	0.00	100.00	0.00
500	0.00	0.00	0.00	100.00	0.00
550	0.00	0.00	0.00	100.00	0.00
600	0.00	0.00	0.00	100.00	0.00
650	0.00	0.00	0.00	100.00	0.00
700	0.00	0.00	0.00	100.00	0.00
750	0.00	0.00	0.00	100.00	0.00
800	0.00	0.00	0.00	100.00	0.00
850	0.00	0.00	0.00	100.00	0.00
900	0.00	0.00	0.00	100.00	0.00
950	0.00	0.00	0.00	100.00	0.00
1000	0.00	0.00	0.00	100.00	0.00
1050	0.00	0.00	0.00	100.00	0.00
1100	0.00	0.00	0.00	100.00	0.00
1150	0.00	0.00	0.00	100.00	0.00
1200	0.00	0.00	0.00	100.00	0.00
1250	0.00	0.00	0.00	100.00	0.00
1300	0.00	0.00	0.00	100.00	0.00
1350	0.00	0.00	0.00	100.00	0.00
1400	0.00	0.00	0.00	100.00	0.00
1450	0.00	0.00	0.00	100.00	0.00
1500	0.00	0.00	0.00	100.00	0.00
1550	0.00	0.00	0.00	100.00	0.00
1600	0.00	0.00	0.00	100.00	0.00
1650	0.00	0.00	0.00	100.00	0.00
1700	0.00	0.00	0.00	100.00	0.00
1750	0.00	0.00	0.00	100.00	0.00
1800	0.00	0.00	0.00	100.00	0.00
1850	0.00	0.00	0.00	100.00	0.00
1900	0.00	0.00	0.00	100.00	0.00
1950	0.00	0.00	0.00	100.00	0.00
2000	0.00	0.00	0.00	100.00	0.00
2050	0.00	0.00	0.00	100.00	0.00
2100	0.00	0.00	0.00	100.00	0.00
2150	0.00	0.00	0.00	100.00	0.00
2200	0.00	0.00	0.00	100.00	0.00
2250	0.00	0.00	0.00	100.00	0.00
2300	0.00	0.00	0.00	100.00	0.00
2350	0.00	0.00	0.00	100.00	0.00
2400	0.00	0.00	0.00	100.00	0.00
2450	0.00	0.00	0.00	100.00	0.00
2500	0.00	0.00	0.00	100.00	0.00
2550	0.00	0.00	0.00	100.00	0.00
2600	0.00	0.00	0.00	100.00	0.00
2650	0.00	0.00	0.00	100.00	0.00
2700	0.00	0.00	0.00	100.00	0.00
2750	0.00	0.00	0.00	100.00	0.00
2800	0.00	0.00	0.00	100.00	0.00
2850					

TOTALS	1017.30	5159.08
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SPLITTING FACTOR 3.91

FINENESS MODULUS 5.52

% COBBLES	0.0	% PEBBLES	54.83	% GRANULES	15.07	% SAND	28.80	% SILT/CLAY	1.31
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021082 01517W25NERL073A

* NOTE - SUITABILITY OF SAMPLE IS BASED ONLY ON GRADING SPECIFICATIONS *

INDUSTRIAL USE	TOTAL RESIDUAL	RATING	SCREENING REQUIRED	REMOVAL OF MATERIAL <#200 MATERIAL	CRUSHING MATERIAL ON SITE	REQUIRED MATERIAL NOT ON SITE	ADDITION OF FINES (MATERIAL <#4)
ASPHALT A (P. OF H.M.)	11.59	MARGINAL	YES	YES			
ASPHALT B (P. OF H.M.)	3.72	MARGINAL	YES	YES			
ASPHALT C (P. OF H.M.)	64.80	NOT SUIT					
BASE COURSE A (P. OF H.M.)	123.70	MARGINAL	YES	YES			
BASE COURSE B (P. OF H.M.)	123.70	MARGINAL	YES	YES			
SUB-BASE A (ASTH D1241)	133.61	MARGINAL	YES	YES			
SUB-BASE B (ASTH D1241)	133.61	MARGINAL	YES	YES			
SUB-BASE C (ASTH D1241)	122.51	MARGINAL	YES	YES			
SUB-BASE D (ASTH D1241)	30.22	NOT SUIT					
SUB-BASE E (ASTH D1241)	22.26	MARGINAL	YES	YES			
SUB-BASE F (ASTH D1241)	6.56	NOT SUIT					
TRAFFIC GRAVEL (P. OF H.M.)	9.75	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.M.)	8.54	MARGINAL	YES	YES			
TRAFFIC GRAVEL (P. OF H.M.)	0.00	SUITABLE	YES				
SEAL COAT A (P. OF H.M.)	62.02	NOT SUIT					
SEAL COAT B (P. OF H.M.)	0.00	SUITABLE	YES				
SEAL COAT C (P. OF H.M.)	0.00	SUITABLE	YES				
COARSE AGGREGATE (ASTH C448)	10.73	NOT SUIT					
COARSE AGGREGATE (ASTH C448)	10.73	NOT SUIT					
COARSE AGGREGATE (ASTH C448)	10.73	NOT SUIT					
COARSE AGGREGATE (ASTH C448)	10.73	NOT SUIT					
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COARSE AGGREGATE (ASTH C448)	10.73	NOT SUIT					
COARSE AGGREGATE (ASTH C448)	10.73	NOT SUIT					
COARSE AGGREGATE (ASTH C448)	10.73	NOT SUIT					
COARSE AGGREGATE (ASTH C448)	10.73	NOT SUIT					
COARSE AGGREGATE (ASTH C448)	10.73	NOT SUIT					
FINE CONCRETE AGGREGATE (P. OF M.)	35.30	NOT SUIT					YES
FINE CONCRETE AGGREGATE I (ASTH C33, C404)	76.72	NOT SUIT					
FINE CONCRETE AGGREGATE II (ASTH C33, C404)	56.54	NOT SUIT					
MORTAR (ASTH C144)	22.83	MARGINAL	YES				
PORTLAND CEMENT (P.A.)	91.73	NOT SUIT					
BUILT-UP ROOFS (ASTH D1863)	0.00	NOT SUIT					
AIRFIELD RUNWAYS (P. OF H.M.)	0.00	SUITABLE	YES				
PIT RUN (P. OF H.M.)	0.00	SUITABLE	YES				
SEPTIC FIELDS (U.H.A.)	11.06	MARGINAL	YES		YES		
SHOULDERS (P. OF H.M.)	0.00	SUITABLE					

OVERALL SAMPLE RATING (SCALE 1 - 9) IS 4