ENGINEERING INDEX PROPERTIES
Hyde County, South Dakota

Engineering Index Properties table gives the engineering classifications and the range of index properties for the layers of each soil in the survey area. Depth to the upper and lower boundaries of each layer is indicated. Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. Loam, for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, gravelly. Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998). The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection. If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest. The AASHTO classification for soils tested, with group index numbers in parentheses, is given in Engineering Index Properties table.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

ENGINEERING INDEX PROPERTIES--Continued
Hyde County, South Dakota

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticit index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
BdA:												
Bend----------	0-8	Loam	CL, ML	A-4, A-6, A-7	0	0	100	100	90-100	60-80	30-45	5-20
	8-13	Clay loam	CL, ML	A-7, A-6	0	0	100	100	95-100	85-100	35-50	10-25
	13-38	Loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	30-45	5-20
	38-60	Stratified very fine sand to clay	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	95-100	80-100	25-50	3-25
Edwin----------	0-9	Silt loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	75-100	30-40	5-15
	9-27	Silt loam	CL, ML	A-4, A-6	0	0	100	95-100	90-100	85-100	30-40	5-15
	27-37	Silt loam	CL, ML	A-4, A-6	0	0	100	95-100	90-100	80-100	30-40	5-15
	37-60	Stratified very fine sand to clay	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	95-100	80-100	20-50	3-25
BkE:												
Betts----------	0-3	Loam	CL, CL-ML	A-4, A-6	0-1	0-5	90-100	80-100	75-100	60-75	20-38	5-15
	3-32	Clay loam	CL	A-6, A-7	0-1	0-5	90-100	85-100	75-100	50-85	30-45	10-25
	32-60	Clay loam	CL	A-6, A-7	0-1	0-5	90-100	85-100	75-100	50-85	30-45	10-25
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
BkF:												
Betts----------	0-3	Loam	CL, CL-ML	A-4, A-6	0-1	0-5	90-100	80-100	75-100	60-75	20-38	5-15
	3-32	Clay loam	CL	A-6, A-7	0-1	0-5	90-100	85-100	75-100	50-85	30-45	10-25
	32-60	Clay loam	CL	A-6, A-7	0-1	0-5	90-100	85-100	75-100	50-85	30-45	10-25
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
Bn:												
Bon----------	0-12	Loam	CL, CL-ML	A-4, A-6	0	0	100	90-100	80-95	60-85	25-40	5-15
	12-27	Stratified silty clay loam to fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	23-40	3-15
	27-60	Stratified silty clay loam to fine sandy loam	CL, CL-ML, ML, SM	A-4, A-6, A-7	0	0	95-100	95-100	75-95	45-95	25-45	3-22
BuA:												
Bullcreek------	0-2	Clay	CH, MH	A-7	0	0	95-100	95-100	90-100	85-100	60-100	28-60
	2-8	Clay	CH, MH	A-7	0	0	95-100	95-100	90-100	85-100	70-100	35-60
	8-13	Clay	CH, MH	A-7	0	0	95-100	95-100	90-100	85-100	70-100	35-60
	13-60	Clay	CH	A-7	0	0	95-100	95-100	90-100	85-100	70-100	40-60
CcA:												
Capa----------	0-2	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	90-100	70-90	25-40	7-20
	2-15	Clay	CH, MH	A-7	0	0	100	100	95-100	90-100	60-85	25-50
	15-60	Clay	CH, MH	A-7	0	0	100	100	95-100	90-100	60-85	25-50
Carter---------	0-6	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-20
	6-18	Clay	CH, MH	A-7	0	0	100	100	90-100	90-100	60-85	25-50
	18-60	Silty clay	CH, MH	A-7	0	0	100	100	90-100	90-100	55-80	25-50
ClA:												
Capa----------	0-2	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-90	25-40	7-20
	2-15	Clay	CH, MH	A-7	0	0	100	100	95-100	90-100	60-85	25-50
	15-60	Clay	CH, MH	A-7	0	0	100	100	95-100	90-100	60-85	25-50
Slickspots, Dry	0-40		CH, CL, MH, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-55	10-30
	40-60				---	---	---	---	---	---	---	---
CpA:												
Carter---------	0-6	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-20
	6-18	Clay	CH, MH	A-7	0	0	100	100	90-100	90-100	60-85	25-50
	18-60	Silty clay	CH, MH	A-7	0	0	100	100	90-100	90-100	55-80	25-50
Promise--------	0-8	Silty clay	CH, MH	A-7	0	0	100	100	90-100	80-100	55-90	25-55
	8-43	Clay	CH, MH	A-7	0	0	100	100	90-100	85-100	60-85	25-50
	43-60	Silty clay	CH, MH	A-7	0	0	100	100	95-100	85-95	51-76	29-49
CrA:												
Cavo----------	0-7	Loam	CL-ML, CL	A-4, A-6	0	0	100	95-100	85-100	60-85	25-40	5-20
	7-18	Clay loam	CH, CL	A-7	0	0	100	95-100	90-100	70-95	40-65	15-35
	18-60	Clay loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	85-100	60-95	36-55	15-30
Jerauld--------	0-5	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	60-100	25-40	5-15
	5-10	Clay loam	CH, CL	A-7	0	0	95-100	95-100	90-100	55-95	45-70	20-40
	10-60	Clay loam	CH, CL, MH, ML	A-7	0	0	95-100	95-100	85-100	55-90	40-85	20-45
Cs:												
Cavo----------	0-7	Loam	CL-ML, CL	A-4, A-6	0	0	100	95-100	85-100	60-85	25-40	5-20
	7-18	Clay loam	CH, CL	A-7	0	0	100	95-100	90-100	70-95	40-65	15-35
	18-60	Clay loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	85-100	60-95	36-55	15-30
Stickney-------	0-6	Loam	CL	A-4, A-6	0	0	95-100	95-100	85-100	60-85	28-35	9-15
	6-32	Silty clay loam	CH, CL, MH, ML	A-7	0	0	95-100	95-100	85-100	65-95	40-60	14-34
	32-60	Clay loam	CH, CL, MH, ML	A-6, A-7	0	0-5	95-100	90-100	80-100	55-90	35-60	10-35

ENGINEERING INDEX PROPERTIES--Continued
Hyde County, South Dakota

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Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticit index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Df:												
Degrey---------	0-8	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	70-100	24-40	3-15
	8-18	Silty clay	CH, CL	A-7	0	0	100	100	90-100	80-100	40-65	15-35
	18-44	Silty clay	CH, CL	A-7	0	0	100	95-100	90-100	80-100	40-65	15-35
	44-60	Clay loam	CH, CL, MH, ML	A-6, A-7	0	0	100	95-100	90-100	80-100	30-65	12-32
Walke----------	0-7	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	80-100	24-40	3-15
	7-33	Silty clay loam	CH, CL	A-7	0	0	100	100	95-100	85-100	40-55	15-28
	33-60	Clay loam	CH, CL, MH, ML	A-7	0	0	95-100	95-100	90-100	70-90	40-65	15-30
DnB:												
Delmont--------	0-5	Loam	CL	A-4, A-6	0	0	90-100	90-100	80-95	60-75	28-40	8-20
	5-17	Loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	80-100	70-100	50-100	35-70	20-40	5-18
	17-60	Very gravelly sand	SC-SM, SM, SW, SW-SM	A-1, A-2	0	0-5	60-100	40-80	15-50	3-30	15-25	NP-5
Oahe----------	0-7	Loam	CL, ML	A-4, A-6, A-7	0	0	90-100	85-100	60-95	50-80	30-45	5-20
	7-23	Loam	CL, ML	A-4, A-6, A-7	0	0	80-100	80-100	60-95	50-75	30-45	5-20
	23-33	Loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6, A-7	0	0	80-95	70-95	50-95	30-75	20-45	5-20
	33-60	Gravelly sand	GW, SC-SM, SM, SW	A-1, A-2, A-3	0	0	30-85	30-75	10-60	0-30	15-25	NP-7
Du:												
Durrstein------	0-6	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	60-90	20-35	3-15
	6-19	Silty clay	CH, MH	A-7	0	0	95-100	95-100	85-100	65-95	50-85	20-50
	19-60	Silty clay	CH, CL	A-7	0	0	95-100	95-100	85-100	60-95	40-75	15-50
Egas----------	0-4	Silty clay	CH, MH	A-7	0	0	100	100	95-100	90-100	50-90	21-55
	4-60	Silty clay loam	CH, MH	A-7	0	0	100	100	90-100	85-100	50-90	22-50
EpC:												
Eakin----------	0-7	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	90-100	30-45	5-20
	7-29	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	80-100	35-50	10-25
	29-60	Clay loam	CH, CL	A-7	0	0	95-100	85-100	75-100	60-95	40-70	16-42
Peno----------	0-5	Loam	CL, ML	A-4, A-6, A-7	0-5	0-5	95-100	95-100	85-95	60-75	30-45	5-20
	5-8	Clay loam	CH, CL	A-7	0-5	0-5	95-100	95-100	85-95	70-85	40-65	15-35
	8-60	Clay loam	CL, CH	A-7	0-5	0-5	95-100	95-100	85-95	70-85	45-80	20-45
ErA:												
Eakin----------	0-7	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	90-100	30-45	5-20
	7-29	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	80-100	35-50	10-25
	29-60	Clay loam	CH, CL	A-7	0	0	95-100	85-100	75-100	60-95	40-70	16-42
Raber----------	0-5	Loam	CL	A-6	0	0	100	100	85-95	60-75	30-40	10-20
	5-17	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-95	35-60	11-35
	17-60	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-90	30-60	11-35
ErB:												
Eakin----------	0-7	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	90-100	30-45	5-20
	7-29	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	80-100	35-50	10-25
	29-60	Clay loam	CH, CL	A-7	0	0	95-100	85-100	75-100	60-95	40-70	16-42
Raber----------	0-5	Loam	CL	A-6	0	0	100	100	85-95	60-75	30-40	10-20
	5-17	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-95	35-60	11-35
	17-60	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-90	30-60	11-35
GfF:												
Gettys---------	0-3	Clay loam	CH, CL	A-7	0	0	95-100	90-100	85-100	70-85	40-60	15-30
	3-24	Clay loam	CH, CL	A-7	0	0	95-100	90-100	85-100	60-80	40-60	15-30
	24-60	Clay loam	CH, CL, MH, ML	A-7	0	0	95-100	90-100	85-100	60-80	40-60	10-30
Sansarc--------	0-4	Clay	CH, MH	A-7	0	0	100	95-100	90-100	75-100	60-90	25-55
	4-18	Clay	CH, MH	A-7	0	0	95-100	95-100	95-100	85-100	60-90	25-55
	18-60	Weathered bedrock	CH, MH	A-7	0	0	100	95-100	90-100	85-100	50-90	20-55
GmB:												
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
GnA:												
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
Cavo----------	0-7	Loam	CL-ML, CL	A-4, A-6	0	0	100	95-100	85-100	60-85	25-40	5-20
	7-18	Clay loam	CH, CL	A-7	0	0	100	95-100	90-100	70-95	40-65	15-35
	18-60	Clay loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	85-100	60-95	36-55	15-30
GrA:												
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
Prosper--------	0-13	Loam	CL	A-4, A-6	0	0	95-100	95-100	80-100	50-90	28-35	9-15
	13-28	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	85-100	60-90	35-50	10-25
	28-36	Clay loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
	36-60	Loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25

ENGINEERING INDEX PROPERTIES--Continued
Hyde County, South Dakota

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
GrB:												
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
Prosper--------	0-13	Loam	CL	A-4, A-6	0	0	95-100	95-100	85-100	60-80	28-35	9-15
	13-28	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	85-100	60-90	35-50	10-25
	28-36	Clay loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
	36-60	Loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
GsA:												
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
Prosper--------	0-13	Loam	CL	A-4, A-6	0	0	95-100	95-100	80-100	50-90	28-35	9-15
	13-28	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	85-100	60-90	35-50	10-25
	28-36	Clay loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
	36-60	Loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
Hoven----------	0-3	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	27-45	5-20
	3-7	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	7-25	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	25-60	Clay loam	CH, CL	A-6, A-7	0	0	95-100	90-100	80-100	60-100	35-75	11-45
GtB:												
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
Prosper--------	0-13	Loam	CL	A-4, A-6	0	0	95-100	95-100	85-100	60-80	28-35	9-15
	13-28	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	85-100	60-90	35-50	10-25
	28-36	Clay loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
	36-60	Loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
Java----------	0-4	Loam	CL, ML	A-6, A-7, A-4	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
GuA:												
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
Stickney-------	0-6	Loam	CL	A-4, A-6	0	0	95-100	95-100	85-100	60-85	28-35	9-15
	6-32	Silty clay	CH, CL, MH, ML	A-7	0	0	95-100	95-100	85-100	65-95	40-60	14-34
	32-60	Clay loam	CH, CL, MH, ML	A-6, A-7	0	0-5	95-100	90-100	80-100	55-90	35-60	10-35
Hoven----------	0-3	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	27-45	5-20
	3-7	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	7-25	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	25-60	Clay loam	CH, CL	A-6, A-7	0	0	95-100	90-100	80-100	60-100	35-75	11-45
HaA:												
Henkin---------	0-15	Fine sandy loam	CL, ML, SC, SM	A-4	0	0-5	90-100	80-100	65-100	35-55	15-30	NP-10
	15-29	Fine sandy loam	CL, ML, SC, SM	A-4	0	0-5	90-100	80-100	65-100	35-60	15-30	NP-10
	29-60	Stratified fine sand to clay loam	SC, SC-SM, SM, SP-SM	A-1, A-2, A-3, A-4	0	0-5	90-100	80-100	35-95	5-50	15-35	NP-10
Blendon--------	0-16	Fine sandy loam	SM	A-4	0	0	100	90-100	60-100	35-50	20-30	NP-5
	16-40	Sandy loam	CL, ML, SC, SM	A-2, A-4	0	0	100	85-100	60-100	20-60	20-33	NP-10
	40-48	Loamy sand	SM	A-2, A-4	0	0	100	85-100	60-100	20-45	20-30	NP-5
	48-60	Loamy sand	SC, SC-SM, SM, SP-SM	A-2, A-4	0	0	85-100	75-100	50-100	10-45	15-30	NP-10
HdA:												
Highmore-------	0-7	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	95-100	95-100	90-100	30-45	5-20
	7-24	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-100	35-50	10-25
	24-60	Silt loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-100	35-50	10-25
Degrey---------	0-8	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	70-100	24-40	3-15
	8-18	Silty clay	CH, CL	A-7	0	0	100	100	90-100	80-100	40-65	15-35
	18-44	Silty clay	CH, CL	A-7	0	0	100	95-100	90-100	80-100	40-65	15-35
	44-60	Clay loam	CH, CL, MH, ML	A-6, A-7	0	0	100	95-100	90-100	80-100	30-65	12-32
HdB:												
Highmore-------	0-7	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	95-100	95-100	90-100	30-45	5-20
	7-24	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-100	35-50	10-25
	24-60	Silt loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-100	35-50	10-25
Degrey---------	0-8	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	70-100	24-40	3-15
	8-18	Silty clay	CH, CL	A-7	0	0	100	100	90-100	80-100	40-65	15-35
	18-44	Silty clay	CH, CL	A-7	0	0	100	95-100	90-100	80-100	40-65	15-35
	44-60	Clay loam	CH, CL, MH, ML	A-6, A-7	0	0	100	95-100	90-100	80-100	30-65	12-32

ENGINEERING INDEX PROPERTIES--Continued
Hyde County, South Dakota

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
HeA:												
Highmore-------	0-7	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	95-100	95-100	90-100	30-45	5-20
	7-24	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-100	35-50	10-25
	24-60	Silt loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-100	35-50	10-25
Eakin----------	0-7	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	90-100	30-45	5-20
	7-29	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	80-100	35-50	10-25
	29-60	Clay loam	CH, CL	A-7	0	0	95-100	85-100	75-100	60-95	40-70	16-42
HeB:												
Highmore-------	0-7	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	95-100	95-100	90-100	30-45	5-20
	7-24	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-100	35-50	10-25
	24-60	Silt loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-100	35-50	10-25
Eakin----------	0-7	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	90-100	30-45	5-20
	7-29	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	80-100	35-50	10-25
	29-60	Clay loam	CH, CL	A-7	0	0	95-100	85-100	75-100	60-95	40-70	16-42
Ho:												
Hoven----------	0-3	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	27-45	5-20
	3-7	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	7-25	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	25-60	Clay loam	CH, CL	A-6, A-7	0	0	95-100	90-100	80-100	60-100	35-75	11-45
HuB:												
Hurley---------	0-2	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-40	5-15
	2-30	Clay	CH, MH	A-7	0	0	100	100	85-100	80-100	60-90	30-50
	30-60	Weathered bedrock			---	---	---	---	---	---	50-100	20-65
JaC:												
Java----------	0-4	Loam	CL, CL-ML	A-4, A-6	0-10	20-30	85-100	70-90	65-85	55-80	25-40	5-15
	4-9	Clay loam	CL	A-6, A-7	0-5	0-5	95-100	90-100	85-100	55-80	30-45	10-25
	9-30	Clay loam	CL	A-6, A-7	0-5	0-5	95-100	90-100	85-100	55-80	30-50	10-25
	30-60	Clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	85-100	55-80	30-50	10-25
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
Prosper--------	0-13	Loam	CL	A-4, A-6	0	0	95-100	95-100	85-100	60-80	28-35	9-15
	13-28	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	85-100	60-90	35-50	10-25
	28-36	Clay loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
	36-60	Loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
JbD:												
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
Betts----------	0-3	Loam	CL, CL-ML	A-4, A-6	0-1	0-5	90-100	80-100	75-100	60-75	20-38	5-15
	3-32	Clay loam	CL	A-6, A-7	0-1	0-5	90-100	85-100	75-100	50-85	30-45	10-25
	32-60	Clay loam	CL	A-6, A-7	0-1	0-5	90-100	85-100	75-100	50-85	30-45	10-25
JcD:												
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
Betts----------	0-3	Stony loam	CL, CL-ML	A-4, A-6	0-10	10-25	100	90-100	85-100	60-75	25-40	5-15
	3-32	Clay loam	CL	A-6, A-7	0-5	5-20	100	90-100	85-100	50-85	30-45	10-20
	32-60	Clay loam	CL	A-6, A-7	0-5	5-20	100	90-100	85-100	50-85	30-45	10-20
JgB:												
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
JgC:												
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
Glenham--------	0-3	Loam	CL, ML	A-7, A-4, A-6	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30

ENGINEERING INDEX PROPERTIES--Continued
Hyde County, South Dakota

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticit index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
JhC:												
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
Glenham--------	0-3	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-85	30-50	8-20
	3-13	Clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	50-85	30-50	10-25
	13-60	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	80-95	50-85	30-50	10-30
Prosper--------	0-13	Loam	CL	A-4, A-6	0	0	95-100	95-100	85-100	60-80	28-35	9-15
	13-28	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	85-100	60-90	35-50	10-25
	28-36	Clay loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
	36-60	Loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
JsA:												
Jerauld--------	0-5	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	60-100	25-40	5-15
	5-10	Clay loam	CH, CL	A-7	0	0	95-100	95-100	90-100	55-95	45-70	20-40
	10-60	Clay loam	CH, CL, MH, ML	A-7	0	0	95-100	95-100	85-100	55-90	40-85	20-45
Slickspots, Dry	0-40		CH, CL, MH, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-55	10-30
	40-60				---	---	---	---	---	---	---	---
Ko:												
Kolls----------	0-16	Clay	CH, MH	A-7	0	0	100	100	95-100	85-100	50-90	25-50
	16-39	Clay	CH, MH	A-7	0	0	100	100	95-100	85-100	60-90	25-55
	39-60	Clay	CH, MH	A-7	0	0	100	100	95-100	85-100	60-90	25-55
Lc:												
Lawet----------	0-13	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	50-75	20-40	5-15
	13-60	Sandy clay loam	CL, SC	A-4, A-6	0	0	100	100	70-100	35-75	20-35	8-20
M-W:												
Miscellaneous Water---------	---	---	---	---	---	---	---	---	---	---	---	---
Ma:												
Macken---------	0-4	Silty clay loam	CH, MH	A-7	0	0	100	100	95-100	85-100	50-75	20-45
	4-34	Silty clay	CH, MH	A-7	0	0	100	100	95-100	85-100	50-80	20-45
	34-60	Silty clay loam	CH, MH	A-7	0	0	100	100	95-100	85-100	50-80	20-45
Mb:												
Macken---------	0-4	Silty clay loam	CH, CL	A-6, A-7	---	0	100	100	95-100	85-100	35-55	20-40
	4-34	Silty clay	CH, MH	A-7	---	0	100	100	95-100	85-100	50-70	20-40
	34-60	Silty clay loam	CH, CL	A-6, A-7	---	0	100	100	95-100	85-100	35-60	20-45
OaA:												
Oahe----------	0-7	Loam	CL, ML	A-4, A-6, A-7	0	0	90-100	85-100	60-95	50-80	30-45	5-20
	7-23	Loam	CL, ML	A-4, A-6, A-7	0	0	80-100	80-100	60-95	50-75	30-45	5-20
	23-33	Loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6, A-7	0	0	80-95	70-95	50-95	30-75	20-45	5-20
	33-60	Gravelly sand	GW, SC-SM, SM, SW	A-1, A-2, A-3	0	0	30-85	30-75	10-60	0-30	15-25	NP-7
OdA:												
Oahe----------	0-7	Loam	CL, ML	A-4, A-6, A-7	0	0	90-100	85-100	60-95	50-80	30-45	5-20
	7-23	Loam	CL, ML	A-4, A-6, A-7	0	0	80-100	80-100	60-95	50-75	30-45	5-20
	23-33	Loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6, A-7	0	0	80-95	70-95	50-95	30-75	20-45	5-20
	33-60	Gravelly sand	GW, SC-SM, SM, SW	A-1, A-2, A-3	0	0	30-85	30-75	10-60	0-30	15-25	NP-7
Delmont--------	0-5	Loam	CL	A-4, A-6	0	0	90-100	90-100	80-95	60-75	28-40	8-20
	5-17	Loam	SC-SM, CL, CL-ML, SC	A-4, A-6	0	0	80-100	70-100	50-100	35-70	20-40	5-18
	17-60	Very gravelly sand	SC-SM, SM, SW, SW-SM	A-1, A-2	0	0-5	60-100	40-80	15-50	3-30	15-25	NP-5
OkB:												
Oko----------	0-4	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	85-100	70-95	35-50	12-25
	4-10	Clay	CH, CL	A-7	0-3	0-5	95-100	90-100	75-100	65-95	40-65	15-35
	10-41	Clay	CH	A-7	0-3	0-5	95-100	90-100	75-100	65-95	50-70	25-40
	41-60	Weathered bedrock			---	---	---	---	---	---	60-95	25-60
OkC:												
Oko----------	0-4	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	85-100	70-95	35-50	12-25
	4-10	Clay	CH, CL	A-7	0-3	0-5	95-100	90-100	75-100	65-95	40-65	15-35
	10-41	Clay	CH	A-7	0-3	0-5	95-100	90-100	75-100	65-95	50-70	25-40
	41-60	Weathered bedrock			---	---	---	---	---	---	60-95	25-60
OkD:												
Oko----------	0-4	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	85-100	70-95	35-50	12-25
	4-10	Clay	CH, CL	A-7	0-3	0-5	95-100	90-100	75-100	65-95	40-65	15-35
	10-41	Clay	CH	A-7	0-3	0-5	95-100	90-100	75-100	65-95	50-70	25-40
	41-60	Weathered bedrock			---	---	---	---	---	---	60-95	25-60
OnA:												
Onita----------	0-15	Silt loam	CL, ML	A-4, A-6, A-7-6	0	0	100	95-100	90-100	70-100	30-45	5-20
	15-33	Silty clay loam	CH, CL, MH, ML	A-7	0	0	100	95-100	90-100	75-100	40-60	10-30
	33-60	Silt loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	85-100	65-100	30-55	10-30

ENGINEERING INDEX PROPERTIES--Continued
Hyde County, South Dakota

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Os:												
Onita----------	0-15	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	95-100	90-100	70-100	30-45	7-20
	15-33	Silty clay loam	CH, CL, MH, ML	A-7	0	0	100	95-100	90-100	75-100	40-60	10-30
	33-60	Silt loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	85-100	65-100	30-55	10-30
Hoven----------	0-3	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	27-45	5-20
	3-7	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	7-25	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	25-60	Silty clay	CH, CL	A-6, A-7	0	0	95-100	90-100	80-100	60-100	35-75	11-45
OtB:												
Opal----------	0-5	Clay	CH, MH	A-7	0	0-2	100	100	90-100	80-100	60-80	25-45
	5-19	Clay	CH, MH	A-7	0	0-2	100	100	90-100	80-100	65-85	30-50
	19-28	Clay	MH, CH	A-7	0	0-2	100	95-100	90-100	80-100	65-85	30-50
	28-60	Weathered bedrock			---	---	---	---	---	---	60-95	25-60
OtC:												
Opal----------	0-5	Clay	CH, MH	A-7	0	0-2	100	100	90-100	80-100	60-80	25-45
	5-19	Clay	CH, MH	A-7	0	0-2	100	100	90-100	80-100	65-85	30-50
	19-28	Clay	MH, CH	A-7	0	0-2	100	95-100	90-100	80-100	65-85	30-50
	28-60	Weathered bedrock			---	---	---	---	---	---	60-95	25-60
OuD:												
Opal----------	0-5	Clay	CH, MH	A-7	0	0-2	100	100	90-100	80-100	60-80	25-45
	5-19	Clay	MH, CH	A-7	0	0-2	100	100	90-100	80-100	65-85	30-50
	19-28	Clay	CH, MH	A-7	0	0-2	100	95-100	90-100	80-100	65-85	30-50
	28-60	Weathered bedrock			---	---	---	---	---	---	60-95	25-60
Sansarc--------	0-4	Clay	CH, MH	A-7	0	0	100	95-100	90-100	75-100	60-90	25-55
	4-18	Clay	CH, MH	A-7	0	0	95-100	95-100	95-100	85-100	60-90	25-55
	18-60	Weathered bedrock	CH, MH	A-7	0	0	100	95-100	90-100	85-100	50-90	20-55
Ow:												
Orthents, Gravelly------	0-4	Gravelly loam	GM, SM	A-2, A-4	0	0-5	60-90	50-80	45-70	25-50	20-35	NP-7
	4-60		SM, SW, SW-SM	A-1	0	0-10	60-85	45-70	15-45	0-15	15-25	NP-5
OxD:												
Orton----------	0-4	Loam	CL, ML	A-4, A-6	0	0	95-100	85-100	75-90	55-75	30-40	5-15
	4-12	Loam	CL-ML, ML, SC-SM, SM	A-4	0	0	95-100	85-100	70-95	35-75	18-35	NP-10
	12-26	Loam, sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	95-100	85-95	60-90	35-75	18-35	NP-10
	26-60	Gravelly sand	GM, GW, SM, SW	A-1, A-2	0-3	0-5	30-60	25-60	15-40	0-30	15-25	NP-5
Talmo----------	0-7	Loam	CL, ML	A-4, A-6	0	0-5	95-100	90-100	85-100	55-75	30-40	5-15
	7-60	Very gravelly sand	GM, GW, SM, SW	A-1, A-2	0	0-10	40-95	20-65	15-35	0-35	15-25	NP-5
PgD:												
Peno----------	0-5	Loam	CL, ML	A-4, A-6, A-7	0-5	0-5	95-100	95-100	85-95	60-75	30-45	5-20
	5-8	Clay loam	CH, CL	A-7	0-5	0-5	95-100	95-100	85-95	70-85	40-65	15-35
	8-60	Clay loam	CH, CL	A-7	0-5	0-5	95-100	95-100	85-95	70-85	45-80	20-45
Gettys---------	0-3	Clay loam	CH, CL	A-7	0	0	95-100	90-100	85-100	70-85	40-60	15-30
	3-24	Clay loam	CH, CL	A-7	0	0	95-100	90-100	85-100	60-80	40-60	15-30
	24-60	Clay loam	CH, CL, MH, ML	A-7	0	0	95-100	90-100	85-100	60-80	40-60	10-30
Pk:												
Plankinton-----	0-8	Silt loam	CL, ML	A-4, A-6	0	0	100	100	90-100	80-100	27-40	5-15
	8-29	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	90-100	70-100	40-70	15-35
	29-60	Clay loam	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	65-100	30-60	15-30
PrA:												
Promise--------	0-8	Silty clay	CH, MH	A-7	0	0	100	100	90-100	80-100	55-90	25-55
	8-43	Clay	CH, MH	A-7	0	0	100	100	90-100	85-100	60-85	25-50
	43-60	Silty clay	CH, MH	A-7	0	0	100	100	95-100	85-95	51-76	29-49
PrB:												
Promise--------	0-8	Silty clay	CH, MH	A-7	0	0	100	100	90-100	80-100	55-90	25-55
	8-43	Clay	CH, MH	A-7	0	0	100	100	90-100	85-100	60-85	25-50
	43-60	Silty clay	CH, MH	A-7	0	0	100	100	95-100	85-95	51-76	29-49
Ps:												
Prosper--------	0-13	Loam	CL	A-4, A-6	0	0	95-100	95-100	80-100	50-90	28-35	9-15
	13-28	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	85-100	60-90	35-50	10-25
	28-36	Clay loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
	36-60	Loam	CL	A-6, A-7	0	0-5	95-100	95-100	80-95	55-85	30-50	10-25
RaA:												
Raber----------	0-5	Loam	CL	A-6	0	0	100	100	85-95	60-75	30-40	10-20
	5-17	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-95	35-60	11-35
	17-60	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-90	30-60	11-35
RaB:												
Raber----------	0-5	Loam	CL	A-6	0	0	100	100	85-95	60-75	30-40	10-20
	5-17	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-95	35-60	11-35
	17-60	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-90	30-60	11-35

ENGINEERING INDEX PROPERTIES--Continued
Hyde County, South Dakota

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
RcA:												
Raber----------	0-5	Loam	CL	A-6	0	0	100	100	85-95	60-75	30-40	10-20
	5-17	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-95	35-60	11-35
	17-60	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-90	30-60	11-35
Cavo----------	0-7	Loam	CL-ML, CL	A-4, A-6	0	0	100	95-100	85-100	60-85	25-40	5-20
	7-18	Clay loam	CH, CL	A-7	0	0	100	95-100	90-100	70-95	40-65	15-35
	18-60	Clay loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	85-100	60-95	36-55	15-30
RcB:												
Raber----------	0-5	Loam	CL	A-6	0	0	100	100	85-95	60-75	30-40	10-20
	5-17	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-95	35-60	11-35
	17-60	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-90	30-60	11-35
Cavo----------	0-7	Loam	CL-ML, CL	A-4, A-6	0	0	100	95-100	85-100	60-85	25-40	5-20
	7-18	Clay loam	CH, CL	A-7	0	0	100	95-100	90-100	70-95	40-65	15-35
	18-60	Clay loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	85-100	60-95	36-55	15-30
RpB:												
Raber----------	0-5	Loam	CL	A-6	0	0	100	100	85-95	60-75	30-40	10-20
	5-17	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-95	35-60	11-35
	17-60	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-90	30-60	11-35
Peno----------	0-5	Loam	CL, ML	A-4, A-6, A-7	0-5	0-5	95-100	95-100	85-95	60-75	30-45	5-20
	5-8	Clay loam	CH, CL	A-7	0-5	0-5	95-100	95-100	85-95	70-85	40-65	15-35
	8-60	Clay loam	CH, CL	A-7	0-5	0-5	95-100	95-100	85-95	70-85	45-80	20-45
RpC:												
Raber----------	0-5	Loam	CL	A-6	0	0	100	100	85-95	60-75	30-40	10-20
	5-17	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-95	35-60	11-35
	17-60	Clay loam	CH, CL	A-6, A-7	0	0	100	100	90-100	70-90	30-60	11-35
Peno----------	0-5	Loam	CL, ML	A-4, A-6, A-7	0-5	0-5	95-100	95-100	85-95	60-75	30-45	5-20
	5-8	Clay loam	CH, CL	A-7	0-5	0-5	95-100	95-100	85-95	70-85	40-65	15-35
	8-60	Clay loam	CH, CL	A-7	0-5	0-5	95-100	95-100	85-95	70-85	45-80	20-45
RrA:												
Ree----------	0-4	Loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	95-100	90-100	80-100	70-95	24-45	3-20
	4-43	Silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	70-100	65-85	30-45	10-20
	43-60	Stratified fine sandy loam to clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-7	0	0	95-100	85-100	70-100	35-85	25-45	5-22
RsF:												
Rock Outcrop, Soft----------	0-60	Weathered bedrock	CH, MH	A-7-5	0	0-15	95-100	95-100	90-100	85-100	50-90	20-55
Sansarc--------	0-4	Clay	CH, MH	A-7	0	0	100	95-100	90-100	75-100	60-90	25-55
	4-18	Clay	CH, MH	A-7	0	0	95-100	95-100	95-100	85-100	60-90	25-55
	18-60	Weathered bedrock	CH, MH	A-7	0	0	100	95-100	90-100	85-100	50-90	20-55
SbF:												
Sansarc--------	0-4	Clay	CH, MH	A-7	0	0	100	95-100	90-100	75-100	60-90	25-55
	4-18	Clay	CH, MH	A-7	0	0	95-100	95-100	95-100	85-100	60-90	25-55
	18-60	Weathered bedrock	CH, MH	A-7	0	0	100	95-100	90-100	85-100	50-90	20-55
Opal----------	0-5	Clay	CH, MH	A-7	0	0-2	100	100	90-100	80-100	60-80	25-45
	5-19	Clay	CH, MH	A-7	0	0-2	100	100	90-100	80-100	65-85	30-50
	19-28	Clay	CH, MH	A-7	0	0-2	100	95-100	90-100	80-100	65-85	30-50
	28-60	Weathered bedrock			---	---	---	---	---	---	60-95	25-60
StA:												
Stickney-------	0-6	Loam	CL	A-4, A-6	0	0	95-100	95-100	85-100	60-85	28-35	9-15
	6-32	Silty clay loam	CH, CL, MH, ML	A-7	0	0	95-100	95-100	85-100	65-95	40-60	14-34
	32-60	Clay loam	CH, CL, MH, ML	A-6, A-7	0	0-5	95-100	90-100	80-100	55-90	35-60	10-35
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
SvA:												
Stickney-------	0-6	Loam	CL	A-4, A-6	0	0	95-100	95-100	85-100	60-85	28-35	9-15
	6-32	Silty clay loam	CH, CL, MH, ML	A-7	0	0	95-100	95-100	85-100	65-95	40-60	14-34
	32-60	Clay loam	CH, CL, MH, ML	A-6, A-7	0	0-5	95-100	90-100	80-100	55-90	35-60	10-35
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-60	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
Hoven----------	0-3	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	27-45	5-20
	3-7	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	7-25	Silty clay	CH, CL, MH, ML	A-7	0	0	100	95-100	95-100	80-100	45-80	20-40
	25-60	Silty clay	CH, CL	A-6, A-7	0	0	95-100	90-100	80-100	60-100	35-75	11-45
TaE:												
Talmo----------	0-7	Loam	CL, ML	A-4, A-6	0	0-5	95-100	90-100	85-100	55-75	30-40	5-15
	7-60	Very gravelly sand	GM, GW, SM, SW	A-1, A-2	0	0-10	40-95	20-65	15-35	0-35	15-25	NP-5
TbA:												
Talmo----------	0-7	Sandy loam	SC-SM, SM	A-4	0	0-5	95-100	90-100	85-100	40-50	15-25	NP-7
	7-60	Very gravelly sand	GM, GW, SM, SW	A-1, A-2	0	0-10	40-95	20-65	15-35	0-35	15-25	NP-5

ENGINEERING INDEX PROPERTIES--Continued
Hyde County, South Dakota

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
TcF:												
Talmo----------	0-7	Very stony loam	CL, ML	A-4, A-6	0-15	10-50	95-100	90-100	85-100	55-75	30-40	5-15
	7-60	Very gravelly sand	SM, SW, GM, GW	A-1, A-2	0-2	5-25	40-95	30-65	15-35	0-35	0-25	NP-5
Java----------	0-4	Loam	CL, ML	A-4, A-6, A-7	0	0	95-100	95-100	80-95	60-85	30-45	5-20
	4-9	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	90-100	80-95	60-85	30-45	10-20
	9-30	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	80-95	60-85	30-45	10-20
	30-40	Clay loam	CL	A-6, A-7	0-3	0-5	95-100	85-100	75-95	60-85	30-45	10-25
TdD:												
Talmo----------	0-7	Loam	CL, ML	A-4, A-6	0	0-5	95-100	90-100	85-100	55-75	30-40	5-15
	7-60	Very gravelly sand	GM, GW, SM, SW	A-1, A-2	0	0-10	40-95	20-65	15-35	0-35	15-25	NP-5
Delmont--------	0-5	Loam	CL	A-4, A-6	0	0	90-100	90-100	80-95	60-75	28-40	8-20
	5-17	Loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	80-100	70-100	50-100	35-70	20-40	5-18
	17-60	Very gravelly sand	SC-SM, SM, SW, SW-SM	A-1, A-2	0	0-5	60-100	40-80	15-50	3-30	15-25	NP-5
Te:												
Tetonka--------	0-10	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	80-100	27-50	8-20
	10-40	Silty clay	CH, CL, MH, ML	A-7	0	0	95-100	95-100	85-100	65-100	40-70	15-35
	40-60	Silty clay loam	CH, CL	A-6, A-7	0	0	95-100	95-100	80-100	55-95	30-60	11-30
W:												
Water----------	---	---	---	---	---	---	---	---	---	---	---	---
Wd:												
Wendte---------	0-5	Silty clay	CH, MH	A-7	0	0	100	100	90-100	80-100	50-80	20-50
	5-60	Stratified clay loam to clay	CH, MH	A-7	0	0	100	100	90-100	70-100	50-80	20-50