

CONSTRUCTION MATERIALS
Stafford County, Kansas

Construction Materials

The following tables give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated good, fair, or poor as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

The soils are rated as a probable or improbable source of sand and gravel. A rating of probable means that the source material is likely to be in or below the soil. The numerical ratings in these columns indicate the degree of probability. The number 0.00 indicates that the soil is an improbable source. A number between 0.00 and 1.00 indicates the degree to which the soil is a probable source of sand or gravel.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In these tables, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the lowest layer of the soil contains sand or gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

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Stafford County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
009DT: Dillwyn-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.18 0.18
Tivoli-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.99 0.99
009TV: Tivoli-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.99 0.99
047CS: Carwile-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Drummond-----	10	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.09
151KP: Kanza-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.57 0.98
Plevna-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09
159DP: Dillwyn-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.18 0.18
Plevna-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09
159DT: Dillwyn-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.18 0.99
Tivoli-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.99 0.99
159DU: Drummond-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
159PE: Plevna-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09
990: Abbyville-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.04
991: Abbyville, rarely flooded-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.04
Kisiwa, occasionally flooded-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.00

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
1005: Albion-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.67 0.90
1011: Albion-----	70	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.67 0.90
Shellabarger-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
1324: Carway-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Carbika-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1359: Clark-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Ost-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1553: Darlow-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.12
Elmer-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10
1555: Dillhut-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.13
Plev-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.41 0.43
1556: Dillhut-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.13
Solvay-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.15 0.56
1725: Farnum-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Funmar-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1726: Farnum-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Funmar-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
1985: Hayes-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1986: Hayes-----	55	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Solvay-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.44
1987: Hayes-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Turon-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.30
1988: Hayes-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
2381: Kanza-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.22 0.90
Ninnescah-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.12
2556: Langdon-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.50 0.50
2958: Ninnescah-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.12
3053: Ost-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3180: Pratt-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.84 0.86
3181: Pratt-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.84 0.86
Turon-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.30
3511: Saltcreek-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Naron, sandy substratum-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.90

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
3512: Saltcreek-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Naron-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.55
3520: Saxman-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.50
3540: Solvay-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.44
3639: Taver-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.00
3640: Tivin-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Good	
3641: Tivin-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Good	
Dillhut-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.13
3644: Turon-----	65	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.30
Carway-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3926: Water-----	100	Not rated		Not rated	
An: Albion-----	100	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.91
At: Attica-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.09
Ba: Blanket-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
BIG: Big Salt Marsh-----	100	Not rated		Not rated	
Ca: Carwile-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Cw: Carwile-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.02

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Cx: Clark-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Dp: Dillwyn-----	65	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.18 0.99
Plevna-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09
Dt: Dillwyn-----	65	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.18 0.99
Tivoli-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.57 0.99
Fa: Farnum-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Fr: Farnum-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
GRP: Gravel Pits-----	100	Not rated		Not rated	
INT: Aguolls-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Kg: Kingman-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.08
M-W: Miscellaneous Water-	100	Not rated		Not rated	
Na: Naron-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.08
NAA: Naron-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.08
NBB: Naron-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.08
Nu: Natrustolls-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Pa: Plevna-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Pc: Plevna-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09
Ph: Pratt-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
Po: Pratt-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
Pr: Pratt-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
Carwile-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.02
Pt: Pratt-----	65	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
Tivoli-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.57 0.99
Ta: Tabler-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
TAA: Tabler-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Tv: Tivoli-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.99 0.99
W: Water-----	100	Not rated		Not rated	
Wa: Waldeck-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09
Za: Zenda-----	80	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Natrustolls-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
ZSS: Drummond-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Zenda-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
009DT: Dillwyn-----	60	Poor Wind erosion Low content of organic matter Too sandy Droughty	0.00 0.00 0.36 0.79	Fair Depth to saturated zone	0.53	Fair Too sandy Depth to saturated zone	0.36 0.53
Tivoli-----	40	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.00	Good		Poor Too sandy Slope	0.00 0.84
009TV: Tivoli-----	100	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.00	Fair Slope	0.82	Poor Too sandy Slope	0.00 0.00
047CS: Carwile-----	90	Poor Low content of organic matter Too clayey Too acid No water erosion limitation	0.00 0.00 0.00 0.97 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.22	Poor Depth to saturated zone Too Clayey	0.00 0.00
Drummond-----	10	Poor Low content of organic matter Too clayey Droughty Water erosion	0.00 0.00 0.11 0.37	Fair Shrink-swell	0.12	Poor Too Clayey Salinity	0.00 0.88
151KP: Kanza-----	50	Poor Wind erosion Low content of organic matter Too sandy Droughty Too acid	0.00 0.00 0.00 0.18 0.95	Fair Depth to saturated zone	0.14	Poor Too sandy Depth to saturated zone	0.00 0.14
Plevna-----	50	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
159DP: Dillwyn-----	60	Poor Wind erosion Low content of organic matter Too sandy Droughty	0.00 0.00 0.36 0.80	Fair Depth to saturated zone	0.53	Fair Too sandy Depth to saturated zone	0.36 0.53
Plevna-----	40	Poor Wind erosion Low content of organic matter	0.00 0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
159DT: Dillwyn-----	60	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.80	Fair Depth to saturated zone	0.53	Poor Too sandy Depth to saturated zone	0.00 0.53

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Tivoli-----	40	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.00	Good		Poor Too sandy Slope	0.00 0.16
159DU: Drummond-----	100	Poor Low content of organic matter Too clayey Water erosion Droughty	0.00 0.00 0.37 0.75	Fair Shrink-swell	0.96	Poor Too Clayey Salinity	0.00 0.88
159PE: Plevna-----	100	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
990: Abbyville-----	95	Poor Low content of organic matter Sodium content Too alkaline Water erosion	0.00 0.00 0.00 0.90	Poor Low strength Shrink-swell	0.00 0.87	Poor Sodium content Salinity	0.00 0.88
991: Abbyville, rarely flooded-----	45	Poor Low content of organic matter Sodium content Too alkaline	0.00 0.00 0.00	Poor Low strength Shrink-swell	0.00 0.87	Poor Sodium content Salinity	0.00 0.88
Kisiwa, occasionally flooded-----	40	Poor Sodium content Too alkaline Too clayey Water erosion Low content of organic matter	0.00 0.00 0.19 0.90 0.91	Poor Depth to saturated zone Shrink-swell	0.00 0.97	Poor Depth to saturated zone Sodium content Too Clayey	0.00 0.00 0.14
1005: Albion-----	75	Poor Low content of organic matter Too sandy Too acid	0.00 0.00 0.95	Good		Poor Too sandy Hard to reclaim Rock fragments	0.00 0.32 0.72
1011: Albion-----	70	Poor Low content of organic matter Too sandy Too acid	0.00 0.00 0.95	Good		Poor Too sandy Hard to reclaim Rock fragments	0.00 0.32 0.72
Shellabarger-----	30	Fair Low content of organic matter Too acid	0.12 0.84	Good		Good	
1324: Carway-----	50	Fair Low content of organic matter Too acid No water erosion limitation	0.12 0.95 0.99	Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.89	Poor Depth to saturated zone	0.00

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Carbika-----	30	Fair Too clayey Low content of organic matter Too acid No water erosion limitation	0.74 0.88 0.95 0.99	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too Clayey	0.00 0.53
1359: Clark-----	70	Poor Carbonate content Low content of organic matter	0.00 0.02	Fair Low strength Shrink-swell	0.22 0.87	Good	
Ost-----	30	Fair Low content of organic matter Carbonate content	0.08 0.68	Good		Fair Carbonate content	0.80
1553: Darlow-----	70	Poor Sodium content Too alkaline Low content of organic matter Too acid Salinity Water erosion	0.00 0.00 0.08 0.16 0.88 0.90	Good		Poor Sodium content Salinity	0.00 0.00
Elmer-----	20	Poor Too alkaline Too acid Low content of organic matter Sodium content No water erosion limitation	0.00 0.16 0.46 0.78 0.99	Fair Shrink-swell	0.99	Poor Sodium content	0.00
1555: Dillhut-----	35	Poor Wind erosion Low content of organic matter Too acid	0.00 0.00 0.99	Good		Good	
Plev-----	35	Poor Too sandy Wind erosion Low content of organic matter Too acid Droughty	0.00 0.00 0.00 0.95 0.99	Poor Depth to saturated zone	0.00	Poor Too sandy Depth to saturated zone	0.00 0.00
1556: Dillhut-----	30	Poor Wind erosion Low content of organic matter Too acid	0.00 0.00 0.99	Good		Good	
Solvay-----	30	Fair Low content of organic matter Too acid	0.04 0.97	Good		Good	
1725: Farnum-----	40	Fair Low content of organic matter Too acid	0.12 0.99	Poor Low strength Shrink-swell	0.00 0.96	Good	
Funmar-----	40	Fair Low content of organic matter No water erosion limitation	0.12 0.99	Poor Low strength	0.00	Good	

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1726: Farnum-----	40	Fair Low content of organic matter Too acid	0.12 0.99	Poor Low strength Shrink-swell	0.00 0.96	Good	
Funmar-----	40	Fair Low content of organic matter No water erosion limitation	0.12 0.99	Poor Low strength	0.00	Good	
1985: Hayes-----	60	Fair Low content of organic matter Too acid	0.12 0.97	Poor Low strength	0.00	Good	
1986: Hayes-----	55	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.97	Poor Low strength	0.00	Good	
Solvay-----	20	Poor Wind erosion Low content of organic matter Too acid	0.00 0.04 0.97	Good		Good	
1987: Hayes-----	40	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.97	Poor Low strength	0.00	Good	
Turon-----	35	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.39 0.88	Good		Poor Too sandy Too acid	0.00 0.92
1988: Hayes-----	70	Fair Low content of organic matter Too acid	0.12 0.97	Poor Low strength	0.00	Good	
2381: Kanza-----	50	Fair Low content of organic matter Too sandy Too acid	0.12 0.22 0.95	Fair Depth to saturated zone	0.14	Fair Depth to saturated zone Too sandy	0.14 0.22
Ninnescah-----	50	Fair Low content of organic matter Too sandy	0.08 0.91	Fair Depth to saturated zone	0.53	Fair Depth to saturated zone Too sandy	0.53 0.91
2556: Langdon-----	50	Poor Wind erosion Low content of organic matter Too sandy Droughty Too acid	0.00 0.00 0.00 0.38 0.61	Good		Poor Too sandy Too acid	0.00 0.99
2958: Ninnescah-----	85	Fair Low content of organic matter Too sandy	0.08 0.91	Fair Depth to saturated zone	0.53	Fair Depth to saturated zone Too sandy	0.53 0.91

CONSTRUCTION MATERIALS--Continued
Stafford County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3053: Ost-----	85	Fair Low content of organic matter Carbonate content	0.08 0.68	Good		Fair Carbonate content	0.80
3180: Pratt-----	85	Poor Wind erosion Too sandy Low content of organic matter Too acid	0.00 0.00 0.00 0.74	Good		Poor Too sandy	0.00
3181: Pratt-----	45	Poor Wind erosion Too sandy Low content of organic matter Too acid	0.00 0.00 0.00 0.74	Good		Poor Too sandy	0.00
Turon-----	30	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.39 0.88	Good		Poor Too sandy Too acid	0.00 0.92
3511: Saltcreek-----	70	Fair Too acid Low content of organic matter No water erosion limitation	0.12 0.12 0.99	Poor Low strength Shrink-swell	0.00 0.95	Good	
Naron, sandy substratum-----	30	Poor Low content of organic matter	0.00	Good		Good	
3512: Saltcreek-----	50	Fair Too acid Low content of organic matter No water erosion limitation	0.12 0.12 0.99	Poor Low strength Shrink-swell	0.00 0.95	Good	
Naron-----	50	Fair Low content of organic matter	0.12	Good		Good	
3520: Saxman-----	85	Poor Wind erosion Low content of organic matter Too sandy Too acid Droughty	0.00 0.00 0.15 0.16 0.89	Fair Depth to saturated zone	0.89	Fair Too sandy Depth to saturated zone	0.15 0.89
3540: Solvay-----	90	Fair Low content of organic matter Too acid	0.04 0.97	Good		Good	
3639: Taver-----	90	Poor Too clayey No water erosion limitation	0.00 0.99	Poor Low strength Shrink-swell	0.00 0.27	Poor Too Clayey	0.00

CONSTRUCTION MATERIALS--Continued
Stafford County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3640: Tivin-----	95	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.00 0.36 0.99	Good		Poor Too sandy Slope	0.00 0.00
3641: Tivin-----	45	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.00 0.36 0.99	Good		Poor Too sandy Slope	0.00 0.84
Dillhut-----	40	Poor Wind erosion Low content of organic matter Too acid	0.00 0.00 0.99	Good		Good	
3644: Turon-----	65	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.39 0.88	Good		Poor Too sandy Too acid	0.00 0.92
Carway-----	20	Poor Wind erosion Low content of organic matter Too acid No water erosion limitation	0.00 0.12 0.95 0.99	Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.89	Poor Depth to saturated zone	0.00
3926: Water-----	100	Not rated		Not rated		Not rated	
An: Albion-----	100	Poor Low content of organic matter Too acid	0.00 0.95	Good		Fair Hard to reclaim Rock fragments	0.68 0.97
At: Attica-----	100	Poor Low content of organic matter Too acid	0.00 0.95	Good		Good	
Ba: Blanket-----	100	Poor Low content of organic matter Too clayey Water erosion	0.00 0.00 0.97 0.90	Fair Shrink-swell	0.87	Poor Too Clayey	0.00
BIG: Big Salt Marsh-----	100	Not rated		Not rated		Not rated	
Ca: Carwile-----	100	Poor Low content of organic matter Too clayey Too acid No water erosion limitation	0.00 0.00 0.97 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.22	Poor Depth to saturated zone Too Clayey	0.00 0.00

CONSTRUCTION MATERIALS--Continued
Stafford County, Kansas

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Cw: Carwile-----	100	Poor Low content of organic matter Too clayey Too acid No water erosion limitation	0.00 0.00 0.97 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.17	Poor Depth to saturated zone Too Clayey	0.00 0.00
Cx: Clark-----	100	Poor Low content of organic matter Carbonate content	0.00 0.68	Fair Shrink-swell	0.87	Fair Carbonate content	0.68
Dp: Dillwyn-----	65	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.79	Fair Depth to saturated zone	0.53	Poor Too sandy Depth to saturated zone	0.00 0.53
Plevna-----	35	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Dt: Dillwyn-----	65	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.79	Fair Depth to saturated zone	0.53	Poor Too sandy Depth to saturated zone	0.00 0.53
Tivoli-----	35	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.04	Good		Poor Too sandy Slope	0.00 0.84
Fa: Farnum-----	100	Poor Low content of organic matter	0.00	Good		Good	
Fr: Farnum-----	100	Poor Low content of organic matter	0.00	Good		Good	
GRP: Gravel Pits-----	100	Not rated		Not rated		Not rated	
INT: Aguolls-----	100	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Kg: Kingman-----	100	Poor Low content of organic matter Too clayey	0.00 0.98	Poor Depth to saturated zone Shrink-swell	0.00 0.95	Poor Depth to saturated zone Too Clayey	0.00 0.49
M-W: Miscellaneous Water-	100	Not rated		Not rated		Not rated	
Na: Naron-----	100	Poor Low content of organic matter	0.00	Good		Good	

CONSTRUCTION MATERIALS--Continued
Stafford County, Kansas

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NAA: Naron-----	100	Poor Low content of organic matter	0.00	Good		Good	
NBB: Naron-----	100	Poor Low content of organic matter	0.00	Good		Good	
Nu: Natrustolls-----	100	Poor Droughty Low content of organic matter Too clayey Salinity No water erosion limitation	0.00 0.00 0.00 0.88 0.99	Good		Poor Too Clayey Salinity	0.00 0.00
Pa: Plevna-----	100	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Pc: Plevna-----	100	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Ph: Pratt-----	100	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy	0.00
Po: Pratt-----	100	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy	0.00
Pr: Pratt-----	60	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy	0.00
Carwile-----	40	Poor Low content of organic matter Too clayey Too acid No water erosion limitation	0.00 0.00 0.97 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.17	Poor Depth to saturated zone Too Clayey	0.00 0.00
Pt: Pratt-----	65	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy	0.00
Tivoli-----	35	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.02	Good		Poor Too sandy Slope	0.00 0.84
Ta: Tabler-----	100	Poor Too clayey Low content of organic matter Water erosion	0.00 0.00 0.68	Fair Shrink-swell	0.12	Poor Too Clayey	0.00

CONSTRUCTION MATERIALS--Continued
Stafford County, Kansas

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
TAA: Tabler-----	100	Poor Too clayey Low content of organic matter Water erosion	0.00 0.00 0.90	Fair Shrink-swell	0.12	Poor Too Clayey	0.00
Tv: Tivoli-----	100	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.00	Good		Poor Too sandy Slope	0.00 0.16
W: Water-----	100	Not rated		Not rated		Not rated	
Wa: Waldeck-----	100	Poor Low content of organic matter	0.00	Good		Good	
Za: Zenda-----	80	Poor Low content of organic matter	0.00	Fair Shrink-swell	0.87	Good	
Natrustolls-----	20	Poor Droughty Low content of organic matter Too clayey Salinity No water erosion limitation	0.00 0.00 0.00 0.88 0.99	Good		Poor Too Clayey Salinity	0.00 0.00
ZSS: Drummond-----	50	Poor Low content of organic matter Droughty Too clayey Water erosion Salinity	0.00 0.00 0.00 0.68 0.88	Fair		Poor Too Clayey Salinity	0.00 0.00
Zenda-----	50	Poor Low content of organic matter	0.00	Fair Shrink-swell	0.87	Good	

