CASM
Trail Condition Assessment Survey Matrix
A Guide to Survey Frequencies, Methods & Accuracies

5/2001

Assessment Factors	Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Condition Assessment Survey Frequency[1] (years)	5	5	5	5	5
Survey Methods[2]	Walk-through & Make Notes on Map or GPS	Cyclometer or GPS	Cyclometer	Cyclometer	Tape or Cyclometer & Hand Level with Digital Readout
Survey Accuracies:					
Measurement Interval[3]	Major Physiographic Changes	Minor Physiographic Changes or ½ Mile	Typical Grade Changes of 10% or 500 Feet	Typical Grade Changes of 10% or 500 Feet	Inter-visible Alignment Changes, 2% Grade Changes, or 25 Feet
Typical Grade[4]	+/- 10%	+/- 10%	+/- 5%	+/- 5%	+/- 1%
Typical Width[5]	Not Measured	Optional +/- 6”	+/- 6”	+/- 6”	+/- 3”
Obstacles[6]	Not Measured	Not Measured	Optional	Formidable Obstacles (eg. narrow width with steep drop off)	All Those Defined as Obstacles
Typical Cross Slope[(7)]	Not Measured	Not Measured	+/- 1%	+/- 1%	+/- 0.1%
Features & Tasks[(8)]	Maximum Grouping of Features & Tasks Optional	Grouping of Features & Tasks Optional	Grouping of Features & Tasks Optional	Each Feature & Task Inventoried & Assessed Individually	Each Feature & Task Inventoried & Assessed Individually

NOTE: This matrix is intended to be a guide for conducting efficient and appropriate trail inventory and condition surveys. The values are intended to minimums. Local managers may select more rigorous frequencies, methods, or accuracies as needed.

[1] Frequencies: Frequency for conducting recurring inventory and condition assessment surveys. (FY01 DM protocol)

[2] Survey Methods: Simplest method that accomplishes the accuracies defined below.

[3] Measurement Interval: Maximum interval between survey points.

[4] Typical Grade: Initiate new survey segment when Typical Grade changes by this amount.

[5] Typical Width: Initiate new survey segment when Typical Width changes by this amount.

[6] Obstacles: For those defined (see FSM/FSH, Infra Business Rules, Universal Access guidelines, etc.)

[7] Typical Cross Slope: Accuracy of Rise-over-Run measurement across Typical Tread Width.

[8] Grouping Features & Tasks: Features and Tasks can be grouped within survey segment.