

NOTE: A) Chart based on Manning formula $Q=1.49/n \cdot A \cdot R^{2/3} \cdot S^{1/2}$ with $n=0.030$, except D-1C which is based on $n=0.015$. For other values of n , multiply discharge by $0.030/n$

B) 1 indicates a velocity of 1 ft. per sec.

Example: Given- Slope=3.3' per 1000', discharge=6.3 c.f.s., $n=0.025$.

Required- Size of ditch and velocity. Solution- To use chart, multiply discharge, 6.3 by $(.030/.025) = 7.56$ c.f.s. Point satisfying given conditions lies between lines for D-2A and D-2B. Select larger of the two ditches, in this case D-2B. Velocity approx. 2.1 ft. per sec.

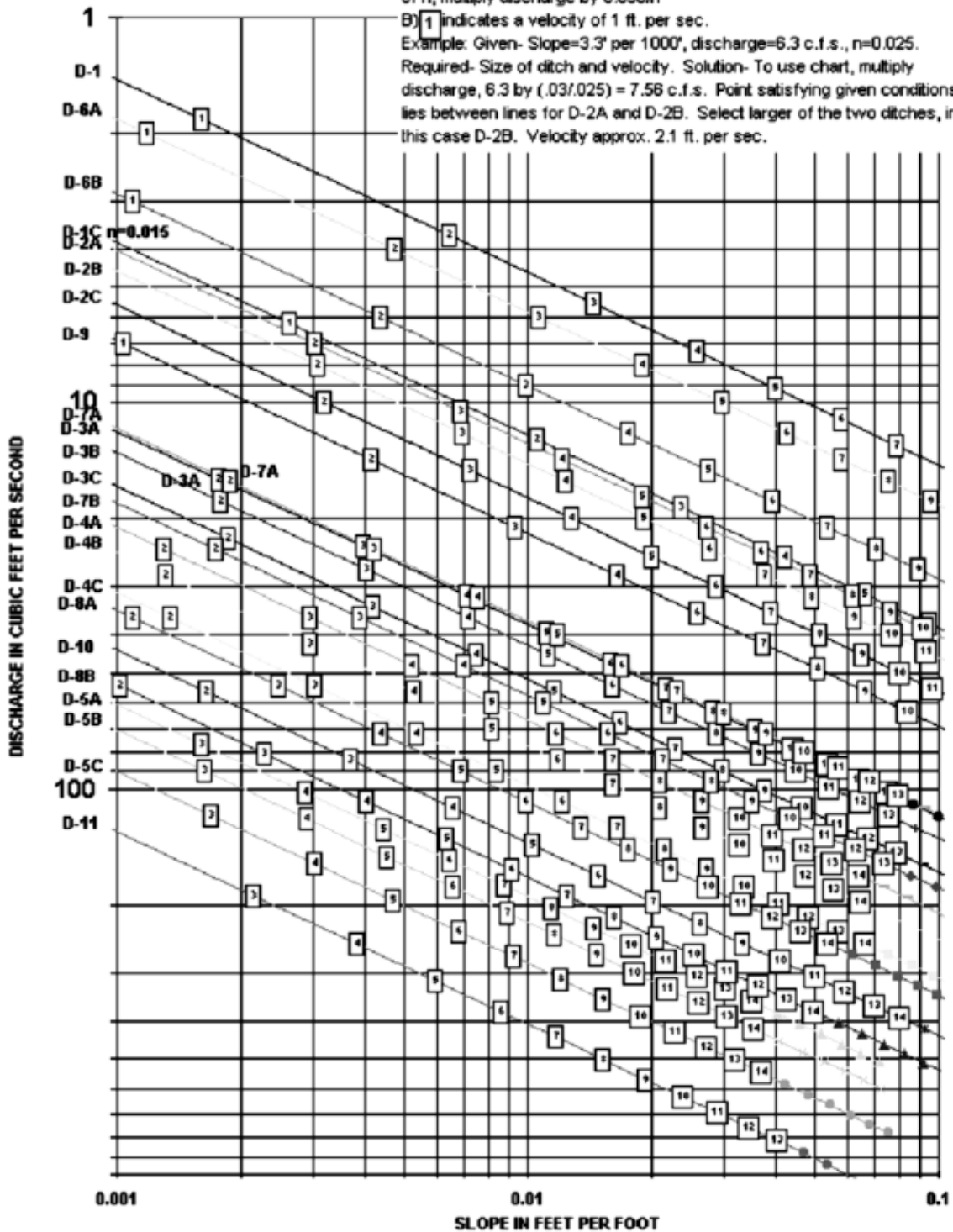


Figure II-4.12. Drainage Ditches — Common Sections